

- (1) FISH AND WILDLIFE PLAN. Additional wildlife plans are presented as Wildlife Resource Volumes (Section 17.24.723, monitoring and Section 17.24.751, protection and enhancement) in the SCM State Mining Permit.
- (1)(a) Plan to Minimize Disturbances and Adverse Impacts on Fish, Wildlife, and Related Environmental Values; How Enhancement of These Resources will be Achieved; and how Compliance With the Endangered Species Act will be Achieved.

The recovery of coal and its ancillary support activities (e.g., road construction) should cause only temporary and/or localized disturbances to wildlife species indigenous to the area. Post-mine reclamation is expected to provide habitats for most wildlife species that are comparable to or enhanced from conditions present prior to mine-related disturbance.

Wildlife monitoring is designed to detect and report on species' presence/absence in the survey area, identify and address potential conflicts between mine operations and wildlife, and identify important wildlife habitats or regular use areas before, during, and after mining and reclamation activities. As part of its commitment to responsible resource extraction, SCM has agreed to contact and collaborate with the Montana Department of Environmental Quality (MDEQ) and other appropriate State and/or Federal agencies on all wildlife issues that arise and require special guidance, including official Section 7 consultations with the U.S. Fish and Wildlife Service (USFWS) in regard to federally listed species, as needed.

Impacts to wildlife during the life-of-mine will be minimized by adhering to this Fish and Wildlife Plan, as well as the Monitoring Plan (Section 17.24.723) and the Protection and Enhancement of Fish, Wildlife, and Related Environmental Values Plan (Section 17.24.751). To further enhance protection for species covered by the Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act (BGEPA), Endangered Species Act (ESA), and other Federal or State regulations, SCM has developed additional internal guidance documents such as a Species of Interest Monitoring and Management Plan for all wildlife and a Habitat Recovery and Replacement Plan (HRRP) specifically for the greater sage-grouse (*Centrocercus urophasianus*) (hereafter, sage-grouse). Habitat restoration and reclamation will follow the approaches outlined in Section 17.24.313 (Reclamation Plan). The actions and commitments described in these documents support a variety of other conservation planning efforts in the region, including the Montana Governor's Executive Order (State of Montana 2014) regarding sage-grouse, the Bureau of Land Management (BLM) Miles City, Montana, Field Office's recent proposed revision to its Resource Management Plan (BLM 2015), and SCM's voluntary participation in a landscape-scale Conservation Strategy intended to benefit a suite of species associated with sagebrush-steppe and short-grass prairie habitats in the region (more details on the latter provided below), among others.

SCM's wildlife plans outline a variety of additional efforts and actions to reduce or eliminate impacts to wildlife species in the annual monitoring area, in keeping

with State and Federal regulations and policies. For example, SCM also will minimize surface disturbance activities (e.g., soil salvage, road construction, grubbing, logging, exploratory drilling, etc.) to the extent practicable during the primary breeding season for most species in the region (i.e., April 1 through July 31). When activities must occur during the primary breeding season, SCM will ensure that those areas are either made unsuitable for nesting (e.g., by mowing, blading, tree removal, etc.) prior to the breeding season or searched via a clearance survey for avian nests prior to initiating the disturbance. The timeline for clearance surveys may be extended to account for early or late-nesting species if appropriate habitats will be affected. Searches will be limited to the proposed disturbance area and a surrounding perimeter, which will be based on one or more of the following:

- Species likely to be present based on long-term wildlife monitoring.
- Species' ecology.
- The location, timing, type, acreage, and/or duration of disturbance.
- The habitat(s) to be impacted.
- The presence/absence of visual barriers such as topography, vegetative structure, etc.
- The species' relative sensitivity (including habituation) to disturbance activities
- Other USFWS recommendations.

Disturbance should occur immediately following the clearance survey, but no more than 14 days afterward. If disturbance has not been initiated within the allotted timeline, the survey will be repeated prior to initial disturbance. However, surveys will not be conducted sooner than 7 days from the previous survey to minimize risks to nesting birds. Regardless of its timing, the amount of habitat to be disturbed will be limited to the extent feasible to minimize negative impacts to species throughout the year, as well as to topsoil recovery and revegetation efforts.

If an active nest is located, SCM will delay activities within the appropriate buffer around the nest until it has reached its natural conclusion (i.e., young fledge or failure due to natural causes) whenever possible. If such delays are not possible, the USFWS and appropriate State agencies will be contacted for guidance such as:

- The potential to obtain authorization for incidental take of migratory birds under the MBTA, should the USFWS proceed with its proposed rule-making on this matter in the future.
- Potential authorization for a qualified biologist to monitor the nest to determine the potential for acclimation if the activity will be near but will not physically remove the nest during the breeding season.
- Potential authorization to remove the nest and/or use appropriate licensed facilities to address any eggs or young that might be present.

In accordance with the USFWS' (2003) "Migratory Bird Permit Memorandum," inactive, non-eagle raptor nests may be removed from areas likely to be impacted to discourage nesting of migratory birds in potential disturbance areas.

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- When possible, such nests will be mitigated through the use of artificial platforms or other appropriate measures to maintain the territory (for raptors) and provide alternate nesting habitat to minimize the rebuilding of nest(s) in the former location.
- Requests to mitigate eagle nests (whether active or not) will be directed to the USFWS and appropriate State agencies, as needed.

No current species listed as threatened or endangered under the ESA have been documented within the mine permit boundary or annual monitoring area. Should such federally listed species be encountered, SCM will immediately contact the MDEQ and USFWS to determine the need for official Section 7 consultation. This approach, in concert with continued annual wildlife monitoring and reporting requirements, ensures compliance with the ESA. On March 23, 2010, the USFWS determined that the sage-grouse was warranted for listing as threatened under the ESA, but that listing was precluded by higher priority listing actions (75 Federal Registrar 13910). That decision rendered the sage-grouse as a candidate species under the ESA, though management authority continued to rest with State wildlife agencies. On September 22, 2015, the USFWS determined that listing the sage-grouse as an endangered or threatened species under the ESA was not warranted (USFWS 2015c). However, existing management and conservation strategies, such as Montana's Executive Order 10-2014 for sage-grouse core areas, remain in effect. Refer to Section 17.24.304 and current Annual Wildlife Monitoring Reports (and maps) for more detailed information regarding historical and recent use of the wildlife monitoring area by sage-grouse.

One sage-grouse lek has been eclipsed by mine operations since the early 1980s. No additional known leks will be physically impacted within the current permit area during the life-of-mine. Two portions of sage-grouse Core Area 12 overlapped the SCM annual monitoring area through 2014 (most recent annual reporting period): PRB-1 (south area) and PRB-2 (north area) (Figure 312). The remainder of the annual monitoring area is considered sage-grouse "general" habitat. Much of the annual monitoring area also has been identified as high value winter sage-grouse habitat by recent (2008) BLM habitat models; those areas essentially overlap the sage-grouse core areas. However, these core and modeled winter habitat areas also have many characteristics that are not considered favorable to sage-grouse use, such as relatively rugged terrain, highly fragmented sagebrush stands due to infrastructure (e.g., roads, fences, pipelines), conifer encroachment, various forms of regular human disturbance (i.e., energy extraction and ranching), etc.

SCM has developed multiple strategies for minimizing impacts to sage-grouse and enhancing sage-grouse habitat, particularly sagebrush-steppe communities. As noted, SCM has an approved wildlife monitoring plan, as well as the HRRP developed specifically to address potential impacts to sage-grouse. In addition, SCM is voluntarily participating in a regional, landscape-scale Conservation Strategy comprised of a combined Candidate Conservation Agreement with Assurances (CCAA), Candidate Conservation Agreement (CCA), and Conservation Agreement (CA) to address mixed-ownership properties and the potential for future energy development within the coverage area of northeast Wyoming and southeast Montana, including lands associated with SCM. The CA

component is consistent with Montana Executive Order 10-2014 (State of Montana 2014), which states that:

- Existing valid mineral rights shall be recognized and respected on private and State lands (#16).
- Existing land uses and activities shall be recognized and respected by State agencies (#23).
- Reasonable exceptions to the State program's stipulations may be necessary for new land uses or activities associated with valid rights, or for expansions of existing uses and activities not otherwise subject to those stipulations (#25).

Importantly, #23 further states that land uses and activities existing prior to the effective date of the State's sage-grouse conservation program and within a defined project boundary (e.g., a mine permit area) are not subject to stipulations under that program and may continue within the existing boundary even if they exceed stipulations outlined in the program. The formal process for requesting exceptions to stipulations and other important aspects of the State's program also are outlined in the State of Montana's (2014) Executive Order and its attachments.

The Conservation Strategy was developed in collaboration with the USFWS and other State and Federal agencies in the region, with additional input solicited from experts on the covered species, potential participants in the effort, non-governmental organizations (e.g., The Nature Conservancy, etc.), Tribal representatives, and other interested stakeholders. This large-scale effort will provide long-term benefits to sage-grouse and numerous other species of interest associated with sagebrush-steppe and short-grass prairie habitats by implementing a variety of conservation measures both on and off-property, with special emphases in habitats identified as Conservation Priority Areas (CPAs, e.g., sage-grouse core areas, occupied short-grass prairie habitats, etc.) throughout the coverage area. Focusing conservation efforts in CPAs and allowing for off-site conservation efforts are consistent with provisions in Montana Executive Order 10-2014 (State of Montana 2014). Among other things, these provisions direct State agencies to give priority to the maintenance and enhancement of sage-grouse habitats in core and connectivity areas (#9), and to develop a comprehensive program that includes off-site conservation options (#13) and collaboration with partners such as private landowners and local governments (#17).

All conservation measures under the regional Conservation Strategy were fully vetted and approved by the USFWS, as well as other pertinent Federal and State agency personnel and stakeholders, as appropriate for the targeted species and likely to succeed. Furthermore, the State of Montana (2014) recognized the value of cooperative agreements (i.e., CCAA, CCA, CA) such as those to be employed by SCM in addressing the conservation needs of sage-grouse (and other species) by stating that such formal, voluntary agreements shall be entitled to deference (Montana Executive Order 10-2014 #19). The regional Conservation Strategy also supports other conservation objectives and efforts in the area, including those outlined in the following documents: Montana Executive Order (State of Montana

2014) regarding sage-grouse; Miles City, Montana BLM Field Office's proposed revision to its Resource Management Plan (BLM 2015); USFWS' (2013) Conservation Objectives Team (COT) final report on sage-grouse; sage-grouse National Technical Team (NTT 2011) report; and the Natural Resources Conservation Service's programs such as Working Lands for Wildlife and Sage Grouse Initiative, among others.

The Conservation Strategy, in concert with other regional efforts, also helps address the "regulatory mechanism" component of the USFWS's 2010 listing decision for sage-grouse (75 FR 13910). The effectiveness of the conservation measures will be addressed through oversight by a Conservation Advisory Committee comprised of regional experts, as well as annual monitoring and reporting requirements for participants in the Conservation Strategy, with adaptive management options available, as needed, to revise measures to enhance their results. These approaches are consistent with #21 and #22 in the Montana Executive Order (State of Montana 2014), which address the potential need for periodic adjustments to and regular evaluation of efforts, respectively. Due to requirements of the CCAA process, all measures to be implemented by SCM will be above and beyond those required under its State Mining Permit. The complete list of potential land management actions from which to choose is available on the website for the Thunder Basin Grasslands Prairie Ecosystem Association, which is administering the Conservation Strategy with support from the USFWS:

<http://www.tbgspea.org/index.php/resources/document-library>.

SCM also has a number of other practices, protocols, and policies in place that meet or exceed current MDEQ wildlife monitoring, mitigation, and reclamation requirements and demonstrate its commitment to minimize or alleviate potential impacts to wildlife species protected under the MBTA, BGEPA, ESA, as well as other relevant Federal or State laws and regulations. To further enhance protection for wildlife species of interest, SCM will use the following best practices to the extent possible:

- Develop a separate Species of Interest Monitoring and Management Plan to serve as an overall guidance document for minimizing impacts to wildlife and wildlife habitats during the life-of-mine.
- Honor raptor nest buffers to the extent practicable except when birds clearly demonstrate tolerance by nesting near ongoing mine operations.
- Honor grouse lek buffers to the extent practicable and schedule disturbance activities near active leks to occur outside the breeding season.
- Complete reclamation contemporaneously to minimize the disturbance footprint of the mine (See Plate 6 in Volume 3).
- Design and construct all electric power lines and other associated transmission facilities in the permit area in accordance with guidelines set forth by the most current recommendations from the Avian Power Line Interaction Committee and/or USFWS to minimize collisions and electrocutions of raptors, waterfowl, and other wildlife species.
- Construct temporary ponds and traps to provide resources for wildlife during mining; include escape ramps, as appropriate.
- Use proper stream crossing, culvert designs, erosion control, and sediment control features (i.e., Best Management Practices) to minimize impacts to

stream crossings, aquatic species and habitats, and watersheds. Culvert crossings of minor drainages or super-span arch crossings of all major drainages will be engineered and installed to not impede natural flow once completed. These crossings will assure continuity of flow for wildlife uses and appropriators downstream.

- Use proper designs for fences, above-ground conveyors, and above-ground creek crossings to allow big game to pass unimpeded across or under roads and railways, per current Montana Fish, Wildlife and Parks (MFWP), BLM, or other agency guidelines for such structures.
- Consolidate infrastructure such as roads, overhead power lines, etc. when feasible to minimize habitat fragmentation and avoid sensitive habitats, when possible.
- Conduct regular training sessions and/or communication with equipment operators, supervisors, and contractors to maintain awareness of the importance of wildlife in the environment at SCM, potential wildlife concerns, and the need for all personnel to be committed to minimizing impacts to wildlife resources to the extent practicable, particularly during the breeding season and harsh winter conditions when species are most vulnerable.
- Continue to provide nesting sites for resident and seasonally present raptors; construct scarps or steep-sloped areas designed to replace existing cliff habitat in the post-mining landscape to mitigate losses of potential raptor nesting sites within the affected area.
- Prevent disturbance in the dense sagebrush bench area between Pits 1 and 4.
- Regularly review and analyze wildlife monitoring information and attempt to schedule mining activity around potential nesting/rearing seasons when possible.
- Monitor all environmental variables, including vegetation, soils, wildlife (terrestrial and aquatic, as warranted), water, and air quality/meteorology to proactively mitigate mine related impacts.
- Follow the approved Reclamation Plan in 17.24.313 to establish the desired post-mining habitats and land uses, per Administrative Rules of Montana (ARM) 17.24.313(h) (see [1][b], below).

Historical Lease Commitments Related to Wildlife

The following discussion describes commitments made by SCM as a result of previous specific coal leasing actions.

The original 1965 mining lease MTM-69782 required SCM to work with local land owners to establish a Wildlife Mitigation Area adjacent to the approved Mine Permit boundary in 1980. The fenced area, comprising approximately 540 acres, lies northwest of Pit 4. The area was fenced to exclude livestock; enhancement features also were constructed in the area, including raptor nest boxes and construction of small on-channel ponds. In an effort to mitigate the loss of lands designated as unsuitable for mining due to their classification as mule deer and pronghorn winter range, SCM initiated hunter access (Block Management Area) on lands owned and controlled by SCM in 1991. The Block Management Area (4,206 acres) encompassed the 540 acres of the Wildlife Mitigation Area northwest of Pit 4. The Block Management Area was established as mitigation

for Federal lease MTM 069782 (Addendum 303T). However, hunting was discontinued in this area after 1999 when plans were submitted for mining development of this property; those plans were determined to be incompatible with hunting. In 2000, the lease was modified and a lease stipulation was added which, among other things, required SCM to “restore disturbed lands to their full potential as mule deer winter range” as outlined in letters dated 1-7-92 from the MFWP to the BLM and dated 10-31-91 from SCM to the MFWP. This stipulation affected approximately 2,505 acres. SCM has committed to reclaiming 2,505 acres of wildlife habitat, as discussed in Section 17.24.313.

In 2001, SCM worked with the BLM and MFWP to permit mining in Pit 4. Mitigation for Federal Lease MTM 88405 (Addendum 303U) included funding \$175,000 towards off-site mitigation in exchange for mining this area. In addition, the Finding of No Significant Impact Decision Record (FONSI/DR) included a stipulation for 150 acres of wildlife habitat reclamation. Reclamation of wildlife habitat for the 150 acres is discussed in Volume 17.24.313.

In 2007, SCM leased additional coal reserves through Federal Lease MTM-94378 (Addendum 303R). This lease added additional mining blocks to Pits 1, 2, and 4. A cliff site near Pit 4 included an historic prairie falcon (PF) eyrie and petroglyphs. The BLM designated this cliff area as “unsuitable for lease without exception” and the environmental assessment (EA) included a prairie falcon mitigation plan (Appendix C of the EA) and a petroglyph mitigation plan (Appendix D of the EA). The FONSI/DR from the EA required SCM to construct three artificial eyries before the 2008 breeding season, with at least two in post-mine reclamation and at least one on a native cliff/bluff. The artificial eyrie at the native cliff/bluff site was initially planned to be built near documented nest site PF1a (T8S, R39E, Section 5) and two artificial eyries in final reclamation are planned to be built near the documented PF1b nest site (T8S, R39E, Section 14) as reclamation is completed in that area. In a letter dated June 4, 2007, SCM received BLM approval to extend construction of the native area eyrie to the 2011 breeding season; the artificial eyrie was constructed in early fall 2011 near the PF1 territory (T8S, R38E, Section 14). Because the “unsuitable for lease without exception” designation for the original cliff area remains, neither the PF1b nest site nor the cultural resource site will be disturbed during the life-of-mine. The FONSI/DR also revised the allowed disturbance boundary as shown on the mining plan (Plate 5). The FONSI/DR stipulates that SCM will reclaim habitats within the lease areas designated as unsuitable for lease with exceptions (42.9 acres) and suitable with stipulations (439.3 acres) back to wildlife habitat as outlined in the reclamation requirements of State and Federal mine permits. As a result, SCM has committed to establishing 482.2 acres of wildlife habitat, per the discussion in Section 17.24.313.

In 2007, SCM also applied for Lease by Modification (LBM) to Federal Lease MTM-69782 and to amend Land Use Lease (LUL) 74913 as part of the Pearson Creek Permit Amendment (Application 183). Both leases overlap areas currently identified as sage-grouse core population areas, as shown in Figure 312 and Figure 304A in Section 17.24.304. As a result, BLM Unsuitability Criterion 15 was applied to the leases, which protects habitats considered essential for maintaining species of high interest. Sage-grouse have not been observed in the

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LBM area since at least 1976, despite regular monitoring in that area. Nevertheless, SCM worked with the MDEQ, BLM, and MFWP to develop its HRRP for sage-grouse as mitigation for the pending lease changes. The projected mining areas for the lease modifications are indicated on the mining plan (Plate 5). The HRRP includes commitments to the following.

- Continue to investigate several methods of sagebrush establishment in reclamation including chemically fallowing narrow strips of reclamation as described in Section 17.24.313(1)(h)(v).
- Revise the Reclamation Plan to revegetate 440 acres identified in the baseline as Pastureland with a native seed mix. Removal of the Pastureland seed mix was approved under minor revision 8-12-09. The Pearson Creek Permit Amendment (Application 183) includes a land use acreage adjustment resulting from the removal of the Pastureland seed mix.
- Revise the Reclamation Plan to include a sagebrush-grassland seed mix. A sagebrush-forb seed mix (known as Seed Mix 17) was approved under minor revision 8-12-09 allowing up to 9 pounds of pure live seed of sagebrush to be seeded. The mix also includes several forb species to provide anticipated forage for sage-grouse.
- Support the Land Owner Incentive Program (LIP) by providing funding in the amount of \$12 per acre for each acre to be disturbed and by providing a list of landowners either within the lands identified as sage-grouse core area or having similar habitat characteristics who may be interested in participating in the LIP program.
- SCM will provide the MFWP with the list of landowners at least 1 year prior to disturbing sage-grouse core area habitat within the LBM.
- SCM has prepared and submitted to the MFWP and BLM a vegetation manipulation study plan defining the treatment areas, methods of manipulation, and monitoring methods. The study plan has been approved by the MFWP, BLM, and MDEQ and is currently undergoing implementation.
- SCM will remove unnecessary fencing between T9S, R40E, Section 36 and T8S, R40E, Section 31, per discussion with and guidance from the appropriate agencies. SCM removed 14,490 feet of unused fence in Pit #2 (LBM Area).
- Upon the grazing renewal cycle, SCM will revise applicable grazing agreements to ensure that they provide livestock forage while also enhancing the composition and structure of sagebrush-grassland and other vegetation communities in the LBM. In 2012 SCM became the landowner and grazing lease holder and thus has more control/influence in how the lands in and around the LBM area are grazed.

In addition to the HRRP, the FONSI/DR requires SCM to reclaim 848 acres of wildlife habitat. However, the Pearson Creek Permit Amendment (Application 183) will only disturb 108 of the 848 acres of sage-grouse core habitat. The major permit revision which includes mining the LBM MTM-069782 will disturb the remaining 740 acres. As a result, SCM has committed to reclaiming 848 acres of wildlife habitat, as discussed in Section 17.24.313.

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Approximately 265 acres of State land associated with coal lease C-1088-05 (1965) lies within sage-grouse core area in T8S, R39E Section 36, as shown in Figure 312 and Figure 304A in Section 17.24.304. As a result, SCM has committed to reclaim the area associated with the 265 acres, as discussed in Section 17.24.313 through the Pearson Creek Permit Amendment (Application 183). The major permit revision includes mining additional cuts in the state lease area adding 8 acres. As a result, SCM has committed to reclaiming 273 acres of wildlife habitat as discussed in Section 313.

Permit revision MR235 is an incidental boundary change located on the north side of Pit #4. This area is within designated general sage-grouse habitat. Because the MR235 application occurred after January 1, 2016, the MT Montana Governor's Executive Order (State of Montana 2014) applies. The revision disturbs 60 acres of a flat area managed as Pastureland. SCM has committed to revegetate this area as Wildlife Habitat as a mitigation measure to provide improved habitat for sage-grouse compared to pre-mine conditions. MR235 is Project 2647 under the Montana Sage Grouse Habitat Conservation Program. Their December 18, 2017 approval letter accepting the proposed mitigation measure is included in the Fish and Wildlife Plan section of the electronic permit.

(1)(b) Description of the Wildlife Habitat Enhancement Features to be Integrated with Other Land Uses.

Comprehensive revegetation plans developed to achieve post-mine land uses and replace pre-mine vegetative communities and wildlife habitat are discussed in Section 17.24.313(1)(h)(i). Wildlife considerations have been incorporated into the revegetation plans to assure the re-establishment of important forage and cover plant species in the post-mine landscape to benefit wildlife. These efforts include the use of planting and seeding schedules that incorporate native grasses, forbs, shrubs, and trees that will result in a mosaic of wildlife habitats. All vegetative species and seed mixes used in the revegetation efforts have been approved by the MDEQ and the MFWP. The reclamation approaches outlined in Section 17.24.313 support the Montana Executive Order (State of Montana 2014, #24) for sage-grouse, which calls for new disturbance permitted or authorized in suitable habitat within both core areas and general sage-grouse habitat to be reclaimed and restored. Normal husbandry practices such as mowing, herbicide application, interseeding, burning, and grazing, as well as other management activities (e.g., conifer removal, consolidation of overhead power lines, etc.), will be utilized to further enhance wildlife use of both unmined and post-mine lands (including croplands and pasturelands) when deemed needed and feasible, in compliance with ARM 17.24.725 and 17.24.751.

Section 17.24.313(1)(d)(v) provides detailed descriptions of wildlife enhancement features that SCM commits to constructing in the post-mining landscape. Some features are part of SCM's general reclamation plan for the mine. For example, the re-contoured surface will consist of varied terrain that recreates topo-edaphic (i.e., hillslope topography and soil properties) characteristics similar to pre-mining environmental conditions. The re-contouring plan provides a diversity of aspects and slopes on ridges, hills, swales, and intermittent drainage channels. Judicious

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selection of these varying aspects and slopes, in conjunction with selective placement of particular substrate and/or soils, will improve revegetation success of specific communities (e.g., coarse soils for tree plantings) and help achieve the designated post-mine land uses while increasing the effectiveness of the reclamation plan for wildlife utilization consistent with those land uses.

One critical environmental factor often limiting wildlife distributions in and around the SCM area is the availability of surface water, particularly during late summer and fall. As part of its general reclamation plan, all main drainages impacted by mine operations will be replaced. As listed under (1)(a) above, SCM has developed temporary ponds and traps throughout the mine which provide a water source for wildlife during mining. In one instance, shorelines along Pond 7 (adjacent to PAR 1 and near native Spring Creek) were planted to prevent erosion and enhance wildlife values by creating new habitat. In addition to emergent aquatic vegetation, phreatophytic shrub and tree species were transplanted.

Different seeding mixtures are proposed for use in the revegetation effort (Section 17.24.313). As noted, all vegetative species and seed mixes have been approved by the MDEQ and MFWP. Each seed mix correlates with different land use emphases and plant habitats. All approved seed mixes contain numerous species beneficial to wildlife. For example, shrub species will provide browse, cover, and nest sites for numerous wildlife species, and shrub mosaics will further enhance habitat interspersation. In addition, the expected greater availability of desirable forage species, such as winterfat, will enhance the quality of forage in reclamation for both wildlife and livestock.

Other options to enhance wildlife habitat will be considered and incorporated into reclamation when and where appropriate field conditions are favorable, and when justified to and approved by the MDEQ. As described in Section 17.24.313(1)(d)(v), post-mine habitat enhancements may be opportunistic in nature and may include, but not be limited to, bird nests (raptors) and singing posts (songbirds), wetland areas, cliff and bluff features, and rockland areas. For example, construction of rock/boulder areas will be determined to some degree by the availability of appropriate equipment and adequate rock (e.g., large boulders, etc.). A combination of brush piles and living shrub areas will provide suitable conditions for an even greater number and variety of wildlife. Increased numbers of small wildlife provide additional food resources for predatory species, thus, further enhancing the area for these larger carnivore and raptor species.

(1)(c) Inability to Enhance Fish and Wildlife Resources

SCM commits to establishing, through the reclamation process, habitat of a quality that will enhance fish and wildlife resources. The approved Reclamation Plan incorporates a variety of plant species and physical features suitable for a wide array of wildlife species, as described in Section 17.24.313(d)(v).

(1)(d) Impact Control Methods, Management Techniques and Monitoring Methods Used to Protect or Enhance the Following:

(1)(d)(i) Threatened or Endangered Species and Their Critical Habitats

As noted in (1)(a) above, no current species listed as threatened or endangered (T&E) by the U.S. Secretary of Interior under the ESA have been documented within the mine permit boundary or annual monitoring area, and no critical habitats for current T&E species have been designated in that area (USFWS 2015a). SCM reviews and conducts monitoring for the current list of T&E species each year throughout the monitoring area (Section 17.24.723). Current lists and details describing any sightings of these species are included in each year's Annual Wildlife Monitoring Report to the MDEQ. Should any federally listed species be encountered, SCM will immediately contact the MDEQ and USFWS to determine the need for official Section 7 consultation. This approach, in concert with continued annual wildlife monitoring and reporting requirements, ensures compliance with the ESA.

The Spring Creek area has limited potential to support the endangered black-footed ferret (*Mustela nigripes*) due to small, widely spaced black-tailed prairie dog (*Cynomys ludovicianus*) colonies. Formal surveys are not conducted for ferrets unless prairie dog colonies are disturbed by mining activities. The USFWS (2015b) recently determined that black-footed ferret surveys should not be necessary in at least the northern half of the annual monitoring area based on the lack of planned or anticipated ferret reintroduction efforts in the area and the substantive background information provided by SCM regarding potential habitat (prairie dog colonies) conditions and the lack of historical sightings of this species in the area. However, annual wildlife monitoring activities include general reconnaissance for mammalian species and vigilance for characteristic evidence (i.e., trenching, etc.) of black-footed ferrets within prairie dog colonies.

The sage-grouse is currently considered a candidate species for listing under the ESA (75 FR 13910; March 23, 2010), though management authority continues to rest with State wildlife agencies. The USFWS is expected to issue another determination regarding the status of this species in September 2015. Refer to Section 17.24.304 and current Annual Wildlife Monitoring Reports (and maps) for more detailed information regarding historical and recent use of the wildlife monitoring area by sage-grouse.

(1)(d)(ii) Other Species of Interest

Annual wildlife surveys are designed to monitor eagles, other migratory birds, and other animals protected by State or Federal law, and their habitats (refer to Section 17.24.723). Results of all monitoring efforts are provided in each year's Annual Wildlife Monitoring Report submitted to the MDEQ. These field monitoring and reporting efforts provide the information needed to design and implement impact control and mitigation measures. Wildlife management techniques that will protect or enhance wildlife and plant resources are employed on a case-by-case basis (refer to [1][a], above), with details of any actions taken described in the appropriate Annual Wildlife Monitoring Report. Management and mitigation activities for specific species of interest will be developed and implemented through communication and collaboration with the MDEQ and other appropriate State and/or Federal agencies, as needed.

(1)(d)(iii) Habitats of Unusually High Value for Fish and Wildlife

Habitats of unusually high value for wildlife identified in mine reclamation, such as wetlands, riparian areas, and cliffs are shown on the Site Reclamation Map submitted to the MDEQ within the SCM Annual Mining Report each year. Areas subject to periodic revision by managing agencies, such as high value big game winter range boundaries, sage-grouse core areas, and other wildlife features, are shown in Section 17.24.304 Figure 304A and/or on Figure 312, and in each year's Annual Wildlife Monitoring Report submitted to the MDEQ. No big game migration corridors have been identified in the annual monitoring area. SCM will strive to create a diversity of habitats in the post-mine reclamation landscape. These efforts will include soliciting input from the MDEQ, MFWP, and USFWS. Newly developed techniques and expertise will be incorporated into this plan to enhance its effectiveness for the area's wildlife resource.

Upland and alluvial shrub-steppe habitats were prevalent in the pre-mine landscape, although the value of such habitats for wildlife varied by species. Recognizing the desirability of rather dense shrub patches throughout the landscape in a variety of land uses, SCM intends to create shrub mosaics on at least 5 percent of areas where the post-mine land use is Livestock Grazing.

One specific example of providing high-value wildlife habitat is recreating sage-grouse wintering habitat along the North and South Forks and Main Fork of Spring Creek, as well as along Pearson Creek. In these areas:

- The alluvial drainage zone will be seeded with the Alluvial Shrub-Steppe seed mix containing three species of *Artemisia* (Seed Mix 10).
- Within the alluvial zone, shrub mosaics with a much higher amount of silver sagebrush and fewer competitive grasses will be seeded (Seed Mix 10b).
- The main land use in gentle terrain near the South Fork will emphasize Livestock Grazing with designated areas targeted for sage-grouse habitat (Plate 4a). At least 5 percent of this land use will have shrub or shrub-forb mosaics. The exact location of the shrub mosaics will be determined when fields are reclaimed, but most will be located near South Fork alluvial channels.
- Alfalfa can be an important forb for both sage-grouse and sharp-tailed grouse yearlong, although more important in seasons other than winter. The most drought-tolerant alfalfa subspecies is being planted in alluvial shrub-steppe (Seed Mix 10), upland shrub-steppe in lowlands (Seed Mix 13a), steppe (Seed Mix 15), and sagebrush-forb (Seed Mix 17).

In addition, Plate 4a shows projected Wildlife Habitat areas on benches throughout the post-mine topography.

References:

Bureau of Land Management (BLM). 2013. Miles City, Montana Field Office Draft Wildlife Survey Dates and Restrictions (provided by BLM staff via email April 2013).

_____. 2015. Miles City Field Office Proposed Resource Management Plan and Final Environmental Impact Statement (PRMP/FEIS). June 2015. Available at: http://www.blm.gov/mt/st/en/fo/miles_city_field_office/rmp/proposed_rmp.html

Sage-grouse National Technical Team (NTT). 2011. A Report on National Greater Sage-grouse Conservation Measures. December 21, 2011. Available at: <http://www.blm.gov/style/medialib/blm/co/programs/wildlife.Par.73607.File.dat/GrSG%20Tech%20Team%20Report.pdf>

State of Montana: Office of the Governor. 2014. Executive Order: 10-2014. Executive order creating the Montana Sage Grouse Oversight Team and the Montana Sage Grouse Habitat Conservation Program. Available at: https://governor.mt.gov/Portals/16/docs/2014EOs/EO_10_2014_SageGrouse.pdf

U.S. Fish and Wildlife Service (USFWS). 2003. Migratory Bird Permit Memorandum MBPM-2. Subject: Nest Destruction. April 15, 2003.

_____. 2013. Greater Sage-grouse (*Centrocercus urophasianus*) Conservation Objectives: Final Report. U.S. Fish and Wildlife Service, Denver, CO. February 2013. Available at: <http://www.fws.gov/greatersagegrouse/documents/COT-Report-with-Dear-Interested-Reader-Letter.pdf>

_____. 2015a. Endangered, threatened, proposed and candidate species Montana Counties. April 2015. Available at http://www.fws.gov/montanafieldoffice/Endangered_Species/Listed_Species/countylist.pdf

_____. 2015b. Letter to Cloud Peak Energy Resources LLC regarding a waiver request for black-footed ferret surveys for the LBAII and LBMII lease applications. File M.29 Public, dated March 2, 2015.

_____. 2015c. Endangered and Threatened Wildlife and Plants: 12-Month Finding on a Petition to List Greater Sage-grouse (*Centrocercus urophasianus*) as an Endangered or Threatened Species. Available at: <http://www.regulations.gov> at Docket Number FWS-R6-ES-2015-0146.