

OTTER CREEK MINE

EXHIBIT 312A: FISH AND WILDLIFE PLAN

1.0 Introduction

This Fish and Wildlife Plan has been prepared in accordance with ARM 17.24.312 and describes how disturbances and potential adverse impacts to fish and wildlife resources caused by mine-related activities will be minimized, and how fish and wildlife resources in the permit area will be enhanced, where practicable, during operation and reclamation of the Otter Creek Mine. This plan addresses the fish and wildlife species and habitats that were identified during the baseline survey per ARM 17.24.304(1)(j)(i) and (iii). Wildlife species and habitats within the Study Area are described in Baseline Report 304K – Fish and Wildlife Resources of the Otter Creek Mine Area 2010-2011. This plan was also prepared in accordance with ARM 17.24.751, i.e., protection and enhancement of fish, wildlife and related environmental values including compliance with the Endangered Species Act of 1973, as amended.

2.0 Protection and Enhancement of Fish and Wildlife Resources

Protection and enhancement of fish and wildlife resources in the permit area has five components:

- Avoiding, to the extent practicable, existing wildlife habitats of unusually high value;
- Minimizing impacts to wildlife from mine operations;
- Reclaiming wildlife habitat, including installing Wildlife Habitat Enhancement Features (WHEF), and replacing habitats of unusually high value at a ratio of 1:1 or greater;
- Implementation of a wildlife conservation plan to address threatened and endangered species and Montana Species of Concern; and
- Monitoring wildlife use of the reclaimed area and surrounding habitat to ensure that reclamation provides effective habitat.

2.1 Habitats of Unusually High Value

For the purposes of this plan, habitats of unusually high value were considered to be those whose wildlife species richness (i.e., the number of wildlife species recorded in these habitats) was substantially larger than might be expected, when compared to their availability (i.e., acreage).

As discussed in Baseline Report 304K – Fish and Wildlife Resources of the Otter Creek Mine Area 2010-2011, three wildlife habitat subtypes/complexes met this criterion: subtype 002 (pond/impoundment/stream), the riparian complex (subtypes 110 (riparian tree) and 413 (riparian grass)) and the conifer complex (subtypes 123 (ponderosa pine/grass), 124 (ponderosa pine/shrub) and 130 (juniper)). The location and extent of these habitats within the disturbance area are shown on the revised Plate 1 of Baseline Report 304K – Fish and Wildlife Resources of the Otter Creek Mine Area 2010-2011.

- In accordance with ARM 17.24.751(2)(f), OCC will restore, mitigate or avoid disturbance to wetlands and riparian vegetation along streams and bordering ponds. The proposed disturbance boundary avoids most riparian vegetation adjacent to Otter Creek and its tributaries. The design of the Otter Creek Mine minimizes and mitigates disturbance of stream channels and impacts to aquatic communities, as specified in ARM 17.24.751(2)(g). In addition, OCC will integrate WHEF RW (riparian wetland) to reestablish these habitat components during reclamation of the mining area.
- OCC will also integrate several WHEFs (P (ponds), B/B (breaks/badlands), TP (tree plantings) and TF (topographic features – steep slopes, rock outcrops and bluffs)) into reclamation of the upland mining area. These WHEFs are designed to reestablish the pond habitats and the conifer complex habitat components that are present in the pre-mine landscape and include water sources, tree stands, rock outcrops, steep slopes, and badlands and breaks. These WHEFs will create specialized habitat components that contribute to habitat diversity in the permit area and provide for specific wildlife uses such as forage diversity, thermal protection, concealment, water sources and nesting as required in ARM 17.24.751(2)(e). The WHEFs that will be integrated into reclaimed areas are described in Appendix 313G-1 of Exhibit 313G – Revegetation Plan.

2.2 Minimizing Impacts to Wildlife from Mine Operations

Mining operations may temporarily impact wildlife within and adjacent to the mine area. OCC will minimize these impacts through the following actions:

- In accordance with ARM 17.24.751(1), no surface mining activity will occur that is likely to jeopardize the continued existence of endangered or threatened species listed by the

U.S. Fish and Wildlife Service (USFWS) or that is likely to result in the destruction or adverse modification of designated critical habitats of those species in violation of the Endangered Species Act of 1973, as amended. As discussed in Baseline Report 304K – Fish and Wildlife Resources of the Otter Creek Mine Area 2010-2011, the USFWS has identified three listed, proposed, or candidate species for Powder River County: black-footed ferret (listed endangered), greater sage-grouse (candidate) and Sprague’s pipit (candidate). Habitat for black-footed ferrets is considered to be prairie dog colonies; although there are black-tailed prairie dog colonies in and near the permit area, ferrets are no longer known to occur in Powder River County, and as discussed in Baseline Report 304K – Fish and Wildlife Resources of the Otter Creek Mine Area 2010-2011, the USFWS did not require ferret surveys of the Study Area during the baseline study. There are no known greater sage-grouse leks (display sites) in or near the permit area. There was only one sighting of greater sage-grouse during the baseline study, during mid-summer. Sprague’s pipits prefer large blocks of native, intermediate-height grasses, very little bare ground, few shrubs and no trees. Suitable habitat is limited in the permit area, and no pipits were observed during the baseline study. In accordance with ARM 17.24.751(1), OCC will immediately report the presence in the permit area of any state or federally listed endangered or threatened species of which OCC becomes aware to the Montana Department of Environmental Quality (MDEQ) and the USFWS.

- In accordance with ARM 17.24.751(2)(a), electric transmission power lines or other transmission facilities used for or incidental to activities in the permit area will be designed and constructed to follow “Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996 (Avian Power Line Interaction Committee, 1996) or alternative guidance manuals approved by MDEQ.
- In accordance with ARM 17.24.751(2)(b), haul and access roads will be located and operated to avoid or minimize impacts to important fish and wildlife species or other species protected by state or federal law. Speed limits established and posted for safety purposes will also reduce the potential for collisions with wildlife.

- In accordance with ARM 17.24.751(2)(c), the Otter Creek Mine will design and construct fences, overland conveyers, and other structures to permit passage of large mammals, unless MDEQ determines that such measures are unnecessary.
- Installing wildlife friendly fencing will reduce barriers to deer, elk and pronghorn movement through the permit area, and reduce the potential for injury or fatality due to fence entanglement. Wire fencing is the most appropriate type for the post-mine land use. Wire spacing will be based on published recommendations. All fencing will be wildlife friendly, except fences that are designed to prevent wildlife, livestock or human access to an area.
- It is not anticipated that ponds created as part of the Surface Water Management Plan or as WHEF will contain hazardous concentrations of toxic-forming materials. As described in Exhibit 314B – Hydrologic Monitoring, water quality monitoring will be conducted in compliance with applicable permits and in accordance with ARM 17.24.723. If hazardous concentrations of toxic-forming materials are present in any pond(s), wildlife will be excluded from the pond(s) by fencing or other appropriate methods in accordance with ARM 17.24.751(2)(d).
- In accordance with ARM 17.24.751(2)(e), OCC will consult with appropriate state and federal fish, wildlife, and land management agencies to ensure that reclamation will provide for the habitat needs of the primary wildlife species within the permit area in accordance with the approved post-mining land use. Special attention will be given to important wildlife features, such as the WHEFs described in Section 2.1 above, to inanimate elements, and to plants with proven nutritional and cover value for wildlife.
- In accordance with ARM 17.24.751(2)(f), OCC will restore, mitigate or avoid disturbance to wetlands and riparian vegetation along streams and bordering ponds. The proposed disturbance boundary avoids most riparian vegetation adjacent to Otter Creek and its tributaries. The design of the Otter Creek Mine minimizes and mitigates disturbance of stream channels and impacts to aquatic communities, as specified in ARM 17.24.751(2)(g).

- In accordance with the Bald and Golden Eagle Protection Act, no surface mining activity will occur in a manner that would result in the unlawful taking of a bald or golden eagle, its nest, or any of its eggs. As described in Baseline Report 304K – Fish and Wildlife Resources of the Otter Creek Mine Area 2010-2011, bald eagles are migrants/winter residents in the Study Area, but do not nest there. Two golden eagle nests are located outside the mining area. One of these nests was active in 2013. Mining operations will not result in the removal of either nest. Should removal of an active nest become necessary in the future, OCC will consult with the USFWS to obtain a nest removal permit, if necessary. Important habitat for bald and golden eagles, such as winter concentration or communal roost sites, was not identified within the Study Area during the baseline survey. Therefore it is considered unlikely that mining operations will negatively impact either species. In accordance with ARM 17.24.751(1), OCC will immediately report to MDEQ and the USFWS the presence of any bald or golden eagle consistently used roost, seasonal concentration area, or breeding area of which OCC becomes aware.
- In accordance with ARM 17.24.312(1)(d)(ii) OCC will implement impact control measures and management techniques to protect migratory birds. Three documents provide guidance to develop a strategy to avoid and minimize impacts to migratory birds: 1) Executive Order 13186; 2) the Memorandum of Understanding between the U.S. Department of Interior Bureau of Land Management and the U.S. Fish and Wildlife Service to Promote the Conservation of Migratory Birds; and 3) the Migratory Bird Treaty Act Draft Instruction Memorandum No. MT-2012 that provides Guidance for the Montana/Dakotas Bureau of Land Management to Meet Responsibilities under the Migratory Bird Treaty Act and Executive Order 13186. In particular, the following strategies are stressed in each document:
 - Minimize or prevent the pollution or detrimental alteration of the environments used by migratory birds whenever practical.
 - Implement conservation measures to minimize, reduce, or avoid unintentional take.
 - Restore and enhance migratory bird habitat as practicable.

- Evaluate the effects of management activities on habitats and populations of migratory birds, focusing first on Species of Concern, priority habitats, and key risk factors.

OCC has utilized this strategy to develop the following impact control measures and management techniques to protect migratory birds per ARM 17.24.312(1)(d)(ii):

- OCC will minimize or prevent pollution or detrimental alteration of the environment through implementation of various mitigation plans, including Protection of the Hydrologic Balance (Exhibit 314A), Air Pollution Control Plan (Exhibit 311A), Waste Handling and Disposal (Exhibit 308D), and reclamation plans described in Backfilling and Grading (Exhibit 313C), Soil Handling (Exhibit 313E) and Revegetation (Exhibit 313G).
- OCC will implement measures to minimize, reduce, or avoid unintentional take of a migratory bird through the following measures:
 1. Electric transmission lines or other transmission facilities used for or incidental to activities in the permit area will be designed and constructed to follow “Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996 (Avian Power Line Interaction Committee, 1996) or alternative guidance manuals approved by the Department.
 2. Speed limits established and posted on haul and access roads for safety purposes will also reduce the potential for collisions with migratory birds.
 3. Escape ramps or similar features will be installed in any water tanks to provide an escape for birds and other wildlife that are inadvertently trapped in the tank.
- OCC will restore and enhance migratory bird habitat as practicable by reclaiming habitat types consistent with the post-mining land use and by integrating WHEFs into the reclaimed landscape as described in Section 2.1.
- OCC will evaluate the effects of management activities on habitats and populations of migratory birds in the permit area by implementing Appendix B - Fish and Wildlife Resources Monitoring Plan, and will identify if mine activities

may have a measurable negative effect on migratory bird populations, focusing first on Species of Concern, priority habitats, and key risk factors.

2.3 Wildlife Habitat Reclamation

Reclamation within the permit area is designed to meet the post-mining land use, comply with revegetation standards described in ARM 17.24.711, and provide for the habitat needs of various wildlife in the permit area per ARM 17.24.751(2)(e). Reclamation specifics including seed mixes and WHEFs are described in Exhibit 313G – Revegetation Plan. Wildlife and wildlife habitat in the permit area were identified during baseline surveys and are described in Baseline Report 304K – Fish and Wildlife Resources of the Otter Creek Mine Area 2010-2011. The wildlife species of primary interest are several species of raptors (golden eagle, bald eagle, red-tailed hawk, American kestrel, prairie falcon and burrowing owl), upland game birds (sharp-tailed grouse and ring-necked pheasant), migratory birds including the great blue heron and sandhill crane, big game (particularly mule deer and pronghorn, but also white-tailed deer and elk), black-tailed prairie dog, bats, amphibians and reptiles. The primary habitats that support those species within the permit area include: native grassland, shrubland/grassland, breaks, coniferous forest (ponderosa pine and Rocky Mountain juniper), ponds and small wetlands, and drainage bottoms dominated by herbaceous, mesic shrub or deciduous tree communities. Of these habitats, native grassland, shrubland/grassland, breaks, and coniferous forest are the primary types within the affected area.

Reclaiming mined areas to a post-mine grazing land and pastureland uses will provide habitat for many of the wildlife species and species groups described above in a manner that is consistent with pre-mine habitats. Grazing land will be diverse, effective and permanent, and will be compatible with animal species in the mine area pursuant to ARM 17.24.711. Consequently it will provide foraging habitat for mule deer, pronghorn and elk, as well as habitat for small mammals, amphibians and reptiles that will contribute to wildlife diversity in reclaimed areas and serve as a prey base for raptors and other predators. Reclaimed grassland habitat will also provide suitable habitat for black-tailed prairie dogs and associated burrowing owls, and sharp-tailed grouse.

In addition to wildlife habitat that will be provided by the primary post-mine land uses, OCC will integrate WHEFs into reclamation of the mining area. These WHEFs are designed to reestablish wildlife habitat components, as described in ARM 17.24.312 (1)(d)(iii), that are present in the pre-mine landscape and include shrub and tree stands, water sources, rock outcrops, steep slopes, and badlands and breaks. These WHEFs will create specialized habitat components that contribute to habitat diversity in the permit area and provide for specific wildlife use such as forage diversity, thermal protection, concealment, water sources and nesting as required in 17.24.751(2)(e). The WHEFs that will be integrated into reclaimed areas are described in Appendix 313G of Exhibit 313G – Revegetation Plan.

2.4 Wildlife Conservation Plan

Appendix A – Fish and Wildlife Resources Conservation Plan has been developed to ensure that, when implemented in conjunction with the measures discussed previously in this Fish and Wildlife Plan, potential risks to endangered or threatened species, and Montana Species of Concern, have been avoided, minimized and mitigated to the extent practicable.

2.5 Wildlife Monitoring

Monitoring will be conducted in order to protect and enhance particular wildlife resources as required by ARM 17.24.312(1)(d) and ARM 17.24.723. Monitoring methodologies are described in detail in Appendix B – Fish and Wildlife Monitoring Plan, and will focus on the following wildlife resources:

- In accordance with ARM 17.24.312(1)(d)(i), OCC will monitor threatened or endangered species listed under the Endangered Species Act of 1973, as amended, should these species be documented in the permit area.
- In accordance with ARM 17.24.312(1)(d)(ii), OCC will monitor raptor, eagle, and migratory bird use of the permit area. Monitoring will focus on determining the effectiveness of WHEFs and conservation measures. In particular, monitoring will focus on bird populations, Species of Concern, priority habitats and key risk factors.
- In accordance with ARM 17.24.312(1)(d)(iii), OCC will monitor WHEFs to document wildlife use of habitats of unusually high value.

3.0 ARM 17.24.751 Protection and Enhancement Of Fish, Wildlife, And Related Environmental Values

The preceding sections describe specific measures to be taken to comply with this rule:

(1) Operations at the Otter Creek Mine will be planned and conducted so as not to jeopardize the continued existence of endangered or threatened species listed by the secretary of the interior or which is likely to result in the destruction or adverse modification of designated critical habitat of such species in violation of the Endangered Species Act of 1973, as amended (16 USC 1531, et seq.), or which would result in the unlawful taking of a bald or golden eagle, its nest, or any of its eggs, as a result of the mining operation. The operator will promptly report to the department and the U.S. fish and wildlife service the presence in the permit area of any listed threatened or endangered species or critical habitat thereof, any plant or animal listed as threatened or endangered by Montana, or any bald or golden eagle roost site, seasonal concentration area, or breeding territory of which the operator becomes aware and which was not previously reported to the department.

(2) In addition to the requirements of 82-4-231(10)(j), MCA, the OCC will:

- (a) ensure that the design and construction of electric powerlines and other transmission facilities used for or incidental to the strip or underground mining operations on the permit area are adequate to minimize collisions and electrocutions of raptors, waterfowl, and other wildlife species. All powerlines will be constructed in accordance with "Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996 (Avian Power Line Interaction Committee, 1996)", or alternative guidance manuals approved by the department;
- (b) locate and operate haul and access roads to avoid or minimize impacts to important fish and wildlife species or other species protected by state or federal law;
- (c) design and construct fences, overland conveyers, and other potential structures to permit passage of large mammals, except where the department determines that such requirements are unnecessary;
- (d) fence, cover, or use other appropriate methods to exclude wildlife from ponds that contain hazardous concentrations of toxic-forming materials;

(e) consult with appropriate state and federal fish and wildlife and land management agencies to ensure that reclamation will provide for habitat needs of various wildlife species in accordance with the approved postmining land use. Pursuant to 82-4-231(10)(j) and 82-4-232(9), MCA, special attention will be given to inanimate elements such as rock outcrops, boulders, rubble, dead trees, etc., that may have existed on the surface prior to mining, and to plant species with proven nutritional and cover value for fish and wildlife. Plant groupings and water sources will be distributed to fulfill the requirements of fish and wildlife;

(f) restore, consistent with 82-4-231(10)(j), 82-4-232(9), and 82-4-233, MCA, or avoid disturbance to wetlands, riparian vegetation along rivers and streams and bordering ponds and lakes, and other habitats of unusually high value for fish and wildlife, and, where practicable, enhance such habitats; and

(g) afford protection to aquatic communities by avoiding stream channels (see ARM 17.24.651) or by restoring stream channels as required in ARM 17.24.634.