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state of utah

ACT/007/023 file



DIVISION OF WILDLIFE RESOURCES

DOUGLAS F. DAY
Director

EQUAL OPPORTUNITY EMPLOYER

1596 West North Temple/Salt Lake City, Utah 84116/801-533-9333

March 16, 1981

Reply To SOUTHEASTERN REGIONAL OFFICE
455 West Railroad Avenue, Box 840, Price, Utah 84501
(801) 637-3310

Mr. Tom Paluso
Soldier Creek Coal Company
P.O. Box I
Price, Utah 84501

Attention: Scott Nordess

Dear Tom:

I want to take this opportunity to extend thanks for the assistance your personnel has provided our staff in becoming familiar with facilities on the area encompassed by Soldier Creek Coal Company's Banning loadout facility. I believe that you will find the enclosed information helpful at filing a mine and reclamation plan.

In response to your request for wildlife resource information (UMC 783.20) the attached data and comments are provided. The wildlife resource information is consistent with the formal guidelines for acquisition of fish, wildlife and habitat information provided your Company by Utah's Division of Oil, Gas and Mining. In instances where your Company was required to provide for study beyond existing information, such findings need be merged with our report.

Please note that the enclosed wildlife plan (UMC 784.21) represents our recommendations; Utah's Division of Oil, Gas and Mining is the regulatory authority for approval of the mining and reclamation plan. Implementation of the recommended wildlife plan should assist the Company in compliance with performance standards UMC 817.97.

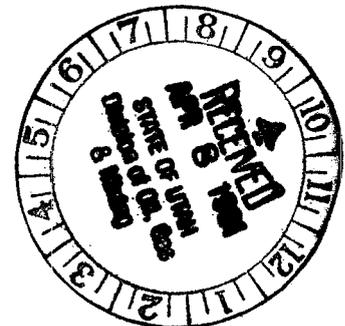
Thank you for an opportunity to assist your Company in complying with the State's permanent program for coal mining and reclamation and the resultant protection of Utah's wildlife resources. If the Division can be of any further service, please coordinate with our Regional Resource Analyst (Larry Dalton, phone 801-637-3310) as appropriate.

Sincerely,

John Livesay
John Livesay, Supervisor
Southeastern Region

JL:LBD:gp

Attachment



cc: Darrell Nish Clark Johnson
Gordon E. Harmston
Exec. Director

WILDLIFE BOARD
Roy L. Young - Chairman
Lewis C. Smith L. S. Skaags
Warren T. Harward Chris P. Joutias

UMC 783.20; FISH AND WILDLIFE RESOURCE INFORMATION
SOLDIER CREEK COAL COMPANY, BANNING LOADOUT SITE

General Wildlife Resource Information--All Species of Vertebrate Wildlife

The mine plan area encompasses a portion of the San Rafael Swell and Desert in Carbon County, Utah. This area drains into Cottonwood Wash which is a tributary to the Price River, which flows into the Green River and ultimately into the Colorado River at a point upstream from Lake Powell. Generally speaking, the San Rafael Swell and Desert are encompassed by cold desert (upper Sonoran life zone), submontane (Transition life zone) and low elevation montane (Canadian life zone) ecological associations. These life zones could be inhabited on occasion and during different seasons of the year by about 336 species of vertebrate wildlife--15 fish species, 7 amphibian species, 14 reptile species, 235 bird species and 65 mammal species. It is interesting to note that 85 percent of these species are protected.

The mine plan area itself is represented by only the upper Sonoran life zone and provides habitat for approximately 142 species of wildlife--no fish species, 4 amphibian species, 14 reptile species, 80 bird species and 44 mammal species. Thirty-eight of these species are of high interest to the State of Utah.

The Division Publication No. 78-16 "Species List of Vertebrate Wildlife that Inhabit Southeastern Utah" is appended (Appendix A) to this report since it represents a low level of study for the wildlife species listed. It identifies those species having potential to inhabit the region as well as those inhabiting the environs of the mine plan area. Appendix A also identifies which species are considered to be of high interest for the habitats and local area represented.

High interest wildlife are defined as all game species; any economically important species; and any species of special aesthetic, scientific or educational

significance. This definition would include all federally listed, threatened and endangered species of wildlife.

A ranking of wildlife habitats relative to high interest species of vertebrate wildlife has been developed (Table 1). Critical wildlife use areas followed in respective importance by high-priority, substantial value and limited value wildlife use areas require various levels of protection from man's activities and developments. Wildlife habitats and use areas ranked as being of critical or high-priority value to wildlife should be protected from surface disturbance, subsidence impacts and human or industrial disturbance. This can be accomplished through development and implementation of a wildlife plan.

Critical wildlife use areas are "sensitive use areas" necessary to sustain the existence and perpetuation of one or more species of wildlife during crucial periods in their life cycles. These areas are restricted in area and lie within high-priority wildlife use areas. All stream sections, reservoirs, lakes and ponds identified by Utah Division of Wildlife Resources as Class 1 or 2 are classified as being critical. Biological intricacies dictate that significant disturbances cannot be tolerated by the members of an ecological assemblage on critical sites. Professional opinion is that disturbance to critical use areas or habitats will result in irreversible changes in species composition and/or biological productivity of an area.

High-priority wildlife use areas are "intensive use areas" for one or more species of wildlife. "Intensive use areas" are not restricted in area and in conjunction with limited value use areas form the substantial value distribution for a wildlife species. All stream sections, reservoirs, lakes and ponds identified by Utah Division of Wildlife Resources as Class 3 are classified as being of high-priority. In addition, wildlife use areas where surface disturbance or underground activities may result in subsidence that could interrupt underground aquifers and result in a potential for local loss of ground water and decreased flows in seeps and springs should be considered as being of high-priority to

wildlife.

Substantial value wildlife use areas are "existence areas" for one or more species of wildlife. "Existence areas" represent a herd or population distribution and are formed by the merging of high-priority and limited value wildlife use areas for a species. All stream sections, reservoirs, lakes and ponds identified by Utah Division of Wildlife Resources as Class 4 are classified as being of substantial value.

Limited value wildlife use areas are "occasional use areas" for one or more species of wildlife. "Occasional use areas" are part of the substantial value wildlife use area for a species. All stream sections, reservoirs, lakes and ponds identified by Utah Division of Wildlife Resources as Class 5 or 6 are classified as being of limited value.

MAPPING

Vegetation and Wildlife Habitats

It is recommended that the Company's primary effort be placed on identifying species of vegetation in each wildlife habitat within the various wildlife use areas for purposes of reclamation. The Division does not have site specific information relative to vegetation types at the mine plan area. However, there are 2 wildlife habitats present--riparian or wetland types and desert scrub. The Company should identify each of these habitat associations on appropriately scaled maps.

It is believed that if satisfactory reclamation is achieved and man's disturbance does not continue or become a factor, that most species of wildlife displaced from the mine plan area will return. Without doubt, the key to success for enhancing or restoring wildlands will be development of habitats so that the postmining condition as compared to the premining condition will have similar species, frequency and distribution of permanent plants in each vegetative type this will allow for natural plant succession. Additionally, other habitat features that represent the various life requirements for local wildlife must be

provided.

Water

Due to demands of state and federal coal mining regulations, the Company will probably be required to identify and appropriately monitor all surface waters for potential impacts from subsidence. This information should be correlated with the wildlife use area information due to the value of water to wildlife.

FISH AND WILDLIFE INVENTORY

Aquatic Use Areas

Macrophytes

From a position of the aquatic wildlife resource it is believed that there is no practicality for information relative to macrophytes to be addressed by the mine permit application.

Macroinvertebrates

The results from studies of macroinvertebrates associated with Cottonwood Wash should not be required for purposes of determining need for stream buffer zones (UMC 817.57). Since the permit application does not identify any plans to discharge polluting effluents into local waters, no data relative to water quality or macroinvertebrates as a pollution index need be presented.

Note, impact avoidance procedures that would protect the integrity of the aquatic resource and associated riparian habitat in Cottonwood Wash need be included with the mine permit application. Of importance would be facility designs that preclude impacts from water pollution on the vegetation community.

Studies relative to macroinvertebrates if desired or needed, must be conducted by a qualified, private consultant.

Fish--Species Occurrence and Use Areas

Aquatic habitats associated with the mine plan area do not support any species of fish.

It is important to note that no species of fish having relative abundances so low as to have caused them to be federally listed as threatened or endangered inhabit the mine plan or adjacent areas. The endangered humpback chub, bonytail chub and Colorado squawfish inhabit the Green and Colorado Rivers. Additionally, the humpback (razorback) sucker also inhabits those rivers; it is likely that this species will one day be federally listed as threatened. It is not believed that implementation and operation of the Company's project will impact any of these species.

Terrestrial Use Areas

Wildlife Habitat Types

Of the two wildlife habitat types present on the mine plan area wetlands and riparian habitats are ranked as being of critical value to all local wildlife. Such zones are normally associated with drainage bottoms (ephemeral or intermittent), or perennial streams (UMC 700.5), seeps and springs within the upper Sonoran, Transition and Canadian life zones. When compared to all other wildlife habitats the aforementioned situations are considered to represent unique habitat associations (Table 1).

Riparian and wetland areas are highly productive in terms of herbage produced and use by wildlife as compared to surrounding areas. Experience has shown that as much as 70 percent of a local wildlife population are dependent upon riparian zones. This unique habitat type must be identified in the permit application and protected due to its high value for all wildlife.

Quantitative (acreage) and qualitative (condition, successional stage and

trend) data concerning the wildlife habitats in each ecological association should be included as part of the mine permit application.

Amphibians--Species Occurrence and Use Areas

Seven species of amphibians, all of which are protected, are known to inhabit the biogeographic area in which the mine plan and adjacent areas are located. It is probable that four of these species inhabit the project area (reference the Division Publication No. 78-16). None of the species of amphibians inhabiting the project area have been determined to be of high interest to the State of Utah (Appendix A).

No amphibians have relative abundances that are so low to have caused the animal to be federally listed as a threatened or endangered species.

Reptiles--Species Occurrence and Use Areas

Fourteen species of reptiles, all of which are protected, are known to inhabit the biogeographic area in which the mine plan and adjacent areas are located. It is probable that all of these species inhabit the project area (Reference the Division Publication No. 78-16). None of the species of reptiles inhabiting the project area have been determined to be of high interest to the State of Utah (Appendix A).

To date snake dens, which are protected and of critical value to snake populations, have not been identified on or adjacent to the project area. It is important to note that inventory for such has not been attempted. If the Company at some later time discovers a den it should be reported to the Utah Division of Wildlife Resources. If a den(s) is currently known, its location must be included with the permit application.

No reptiles have relative abundances that are so low to have caused the animal to be federally listed as a threatened or endangered species.

Birds--Species Occurrence and Use Areas

Two hundred thirty-five species of birds, all of which are protected, are known to inhabit the biogeographic area in which the mine plan and adjacent areas

are located. It is probable that eighty of these species inhabit the project area (reference the Division Publication No. 78-16). Twenty-five species of the birds inhabiting the project area have been determined to be of high interest to the State of Utah (Appendix A).

The great blue heron is a yearlong resident of the environs associated with the local area surrounding the project. The bird's substantial valued use area is always associated with open water where it feeds on aquatic wildlife. Thus, this bird would not be expected to utilize the project area. The great blue heron normally nests in rookeries that are often coinhabited by snowy egrets and black-crowned night herons. The nest may be placed high in a tree along a lake or stream edge, however, they will nest on the ground. The rookery is ranked as being of critical value to herons; it is normally a traditional site and utilized year after year by a nesting colony. It is important to note that rookeries are abandoned if they become vulnerable to predation or experience continual disturbance. No rookeries or habitat suitable for such are associated with the project.

Both adult great blue herons participate in the incubation and rearing process. Three to five eggs are laid with a two or three day period between deposition of each egg. Incubation of each egg lasts about eighteen days; after which the nestlings remain in the nest for about sixty days. This period is crucial to survival of the heron population.

Ducks commonly known as waterfowl are represented by four species that may on occasion or during different seasons of the year utilize the riparian habitat associated with the mine plan area. All of these species are of high interest to the State of Utah (Appendix A). Generally speaking, the riparian and wetland habitats encompassed by the project and adjacent areas provide substantial valued habitats for waterfowl. Each species has different life requirements and makes various uses of the riparian and wetland environs associated with the project.

For those waterfowl that nest locally, the period March 15 through July 15 is ranked as being of crucial value to maintenance of the population. (Note, current management of the proposed project area does not allow for waterfowl nesting) Following incubation, which dependent upon the species may vary between 20 and 28 days and extend up until mid-August, the riparian and wetland habitats represent a high-priority brooding area. Additionally, the wetland habitat (large open water areas or dense marshland) is of high-priority for seclusion and protection of adult waterfowl during their flightless period when they moult. Males may begin the moult in early June and both sexes and the young are capable of flight by mid-August.

It is important to note that agricultural lands producing corn or other small grain crops are of critical value to geese and dabbling duck species on a year-long basis. All wetlands and open water areas can become locally important as high-priority use areas for waterfowl during peak migration periods in the spring (March 15 through May 15) and fall (August 15 through October 15).

The project and adjacent areas provides substantial valued habitat for a multitude of raptors--turkey vulture, bald and golden eagles, five species of falcons (prairie, American peregrine and arctic peregrine falcons; Merlin and American kestrel), five species of hawks (red-tailed, Swainson's, rough-legged, ferruginous and marsh hawks) and four species of owls (barn, great horned, burrowing and short-eared owls). Many of these species are of high federal interest pursuant to 43 CFR, 3461.1 (n-1). All of these species are of high interest to the State of Utah (Appendix A).

Realistically, nesting habitat does not exist on the project or adjacent areas for most, if not all, of these species. However, if a species were to nest on or adjacent to the project area, it would have a specific crucial period during which the aerie would need protection from disturbance; this period of time lies between February 1 and August 15. Generally speaking, aeries represent a critical valued site and need protection from significant or continual disturbance

within a one-half kilometer radius of the nest. This consideration need only be implemented during the period of time that the nest is occupied. Species specific protective stipulations for aeries are available from the Utah Division of Wildlife Resources and the U.S. Fish and Wildlife Service.

The current level of data relative to site specific use of the area by raptors is unsatisfactory. Likely, there are aeries that have not been identified. Many of these species are highly sensitive to man's disturbances. Therefore, it is recommended that intensive surveys be initiated on the mine plan and adjacent areas for determination of locations for raptor aerie territories. Such data needs to be merged with information provided within this report.

Golden eagles are a common yearlong resident of the mine plan area. However, the project area does not provide suitable habitat for an aerie territory. (Note, an aerie territory is utilized by one pair of eagles but may contain several nest sites.)

To date there are no known high-priority concentration areas or critical roost trees for golden eagles on the project area. The mine plan and adjacent areas have been ranked as being of limited value to golden eagles.

The northern bald eagle is an endangered winter resident (November 15 to March 15) of the local area. To date there are no known high-priority concentration areas or critical roost trees for this species on or adjacent to the project. The mine plan area has been ranked as being of limited value to wintering bald eagles. Note that no bald eagles are known to nest in Utah, however, historic data documents nesting activity by these birds in the State. There is no known historic evidence of the northern bald eagle nesting on the mine plan or adjacent areas.

The American peregrine falcon (relative abundance is endangered) and the prairie falcon (relative abundance is common) are yearlong residents of the mine plan and adjacent areas. Each of these species utilizes cliff nesting sites. The project area does not provide aerie sites for cliff nesting falcons.

The endangered arctic peregrine falcon is a winter resident (November 15 through March 15) of the local area. This species has not been observed to utilize the environs on or adjacent to the mine plan area, however, its occasional presence would not be unlikely. Therefore, the project area is ranked as being of limited value to this species.

Agricultural areas and adjoining wildlands that are traversed by coal haulage trucks enroute to the loadout site, provide yearlong, substantial valued habitats for ringnecked pheasants. Due to the pheasants complete dependency on agricultural systems, all cultivated fields are ranked as being of critical importance to this species. Pheasants depend primarily on waste grain, corn and other crops for food. They utilize wild grains and insects to a lesser extent. Croplands can provide for all the life requirements of pheasants. High quality habitat must retain adequate cover and food for the birds use throughout the year.

Pheasants initiate nesting as early as mid-April and continue into mid-July. This period of time and successful nesting activities is of crucial importance to the maintenance of the pheasant population.

Although the snowy plover and common snipe can be found on the mine plan area, the plover is only a transient during spring and fall migrations and habitats on the project are such that the snipe would not likely nest.

Mourning doves normally inhabit the project and adjacent areas, which represents a substantial valued use area for these birds, between May 1 and September 15 each year. They nest throughout most of this period and each pair produces two clutches. However, habitats on the project area are not suitable for nesting doves. Locally, mourning doves show two peaks in on-nest activity--early July and early August. Successful nesting activities and any water sources are critical to maintenance of the mourning dove population.

The western bluebird is an uncommon summer resident known to inhabit the environs of the biogeographic area that surrounds the project site. Where as the mountain bluebird is a common yearlong resident of the area. Both birds are

cavity nesting species. The western bluebird nests from the pinion-juniper habitat of the submontane ecological association up into the lower forest habitats within the Canadian life zone of the montane ecological association. The mountain bluebird utilizes the same continuum of habitats for nesting, but also extends its nesting use across the Canadian and Hudsonian life zones and into the Alpine life zone. During winter both species show elevational and longitudinal migrations; they then utilize all habitats associated with the cold desert ecological association. Therefore, the substantial valued use area for each species spans a broad continuum of habitats. The project area is only of limited value to these two species of bluebirds. It is important to note that trees with cavities can be of critical value to bluebirds.

The grasshopper sparrow is a rare transient species known to inhabit the environs of the biogeographic area that surrounds the project site. It only frequents dry grassland areas in the desert scrub habitat of the cold desert ecological association during spring and fall migration periods. Since its use of such sites is best described as "occasional", those habitats in the region are only ranked as being of limited value to the bird.

Mammals--Species Occurrence and Use Areas

Seventy-five species of mammals, of which 22 percent are protected, are known to inhabit the biogeographic area in which the project and adjacent areas are located. It is probable that forty-four of these species inhabit the project area (Reference the Division Publication No. 78-16). Thirteen species of the mammals inhabiting the project area have been determined to be of high interest to the State of Utah (Appendix A).

The cottontail rabbit (mountain cottontail inhabits sites lying between 7,000 and 9,000 feet in elevation and the desert cottontail inhabits sites lower than 7,000 feet in elevation) is a yearlong resident of the biogeographic area that surrounds the project site. The entire project area represents a substantial valued use area for cottontails. Their young are born between

April and July. This is a crucial period for maintenance of the cottontail population.

Beaver are yearlong inhabitants of the biogeographic area that surrounds the project site. Their substantial valued use area is restricted to riparian habitats in the cold desert, submontane and montane (Canadian life zone) ecological associations. Although beaver may traverse Cottonwood Wash, the project provides no other use for this animal. Thus, beaver are not considered inhabitants of the mine plan area.

The red fox and kit fox are yearlong inhabitants of the biogeographic area that surrounds the project site. The substantial valued use area for the red fox would include all wildlife habitats extending from the cold desert through the montane (Canadian life zone) ecological associations. The substantial valued use area for the kit fox is restricted to all of the habitats of the cold desert ecological association and extends into the sagebrush and pinion-juniper habitats of the submontane ecological association. Almost nothing is known of their population dynamics. Without doubt a crucial period for both species is when they are caring for young in the den. Dens while being inhabited are a critical use area.

Many of the members of the family mustelidae are known to inhabit the biogeographic area that surrounds the project site. They are all protected and classified as furbearers--short-tailed and long-tailed weasels, mink, wolverine, black-footed ferret, marten, badger, striped and spotted skunks and the river otter. Additionally, raccoon and muskrat, although not furbearers, are also inhabitants of the biogeographic area that surrounds the project site. All of these species are of high interest due to their value in the fur market.

The substantial valued use area for long-tailed weasels and the muskrat is the riparian habitat. Weasels, which are inhabitants of the project site, do make some use of other habitats that are proximal to riparian zones. Muskrats are restricted to riparian habitats of the cold desert and submontane ecological association; they may be found in Cottonwood Wash. The long-tailed weasel can

be found from the cold desert up into the montane (Canadian and Hudsonian life zones) ecological associations.

The black-footed ferret is a species primarily dependent upon prairie dogs as a prey source. Currently, the ferret's relative abundance is so low that the animal is endangered with extinction. Utah lies on the western edge of the black-footed ferret's historic range. The substantial value use area for this specie is restricted to prairie dog colonies. Prairie dog colonies are found within a multitude of wildlife habitats within the cold desert, submontane and montane (Canadian life zone) ecological associations. The project site does provide habitat for prairie dogs; thus ferrets may be present.

The substantial valued use area for badger and skunks span all wildlife habitats other than dense forests in the cold desert, submontane and montane (Canadian life zone) ecological associations. Skunks show some affinity for habitats proximal to water. Skunks and badgers both of which inhabit the project area, are dependent upon a suitable prey source.

A crucial period for maintenance of all furbearers and muskrat populations is when they have young in a nest, den or lodge. Such sites are critical for reproductive success.

Mule deer are inhabitants of the biogeographic area that surrounds the project site. Their substantial valued use area spans all wildlife habitats extending from the cold desert through the submontane and montane ecological associations. The mine plan area provides habitats of limited value where low numbers of deer reside on a yearlong basis.

The project site represents yearlong range for mule deer herd Unit 29.

Pronghorn antelope representing the Icelfander herd are inhabitants of the biogeographic area that surrounds the project site. Their substantial valued use area spans all wildlife habitats except urban and park areas in the cold desert and extends up into the pinion-juniper forest of the submontane ecological association. In some situations antelope show longitudinal migrations in response to winter conditions. There are, however, habitats where antelope

reside on a yearlong basis. The project area does support antelope.

During winter and at times of severe snow conditions the portion of the range then inhabited by antelope is ranked as being of critical value. During such a crucial period antelope must be protected from man's disturbance.

Within the yearlong range all riparian habitats are ranked as being of critical value to antelope.

Antelope kid during the month of June. This activity takes place in the area they happen to be when the time for birth occurs. The doe secrets herself from disturbance and predators and drops her kid. The young animal is capable of following the female in a few hours. Protection of the kid antelope from disturbance during the first day following birth is critical for maintenance of antelope populations.

Currently, there are no other known high interest wildlife species or their habitat use areas on or adjacent to the project area. It is not unreasonable to suspect that in the future, some additional species of wildlife may become of high interest to the local area, Utah or the Nation. If such is the case, the required periodic updates of project permits and reclamation plans can be adjusted and appropriate recommendations made.