COLORADO
Parks and Wildlife
Department of Natural Resources

Southeast Region
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November 20, 2024

Ben E. Hammar
Colorado Division of Reclamation, Mining, and Safety
1313 Sherman St., Room 215,
Denver, Colorado 80203

Subject: Consideration of 112c Construction Materials Reclamation Permit Application – Limon Sand & Gravel Resource, File No. M-2024-053

Dear Mr. Hammar,

Thank you for the opportunity to provide input on the proposed Limon Sand & Gravel project in Lincoln County. Colorado Parks and Wildlife (CPW) has a statutory responsibility to manage all wildlife species in Colorado. This responsibility aligns with CPW's mission to protect, preserve, enhance, and manage Colorado's wildlife for the use, benefit, and enjoyment of residents and visitors. CPW encourages Mid-States Materials, LLC, to adopt measures that provide the highest level of protection for Colorado's wildlife and habitats.

Based on our understanding, the project proponent seeks to develop a 1,094.5-acre parcel, located one mile southeast of Limon, Colorado, near the Highway 287 and I-70 interchange, for gravel and sand mining. Mining operations will extract construction materials from 957.5 acres of the parcel, primarily through upland and terrace mining. The project will proceed in phases, exposing three to five acres at a time, with concurrent reclamation to restore the site to agricultural rangeland use.

On November 7, 2024, CPW received notice of the proposed project and reviewed its details. We have evaluated site-specific conditions and reviewed state conservation data. Based on this evaluation, CPW identified the following high-priority habitats, species of conservation concern, and recommendations to avoid or minimize impacts to wildlife.

Species of Conservation Concern and Recommendations

The Importance of High Priority Habitats

High-priority habitats (HPH) are sensitive areas identified using CPW's Species Activity Mapping (SAM) database. SAM maps, updated every four years, incorporate the latest scientific data and field observations on wildlife use. These maps are publicly available for environmental assessments, land-use planning, and scientific research. HPH found within the project area include Native Fish and Aquatic Species Conservation Waters, Mule Deer Severe Winter Range,

and Mule Deer Winter Concentration Areas. Other species of conservation concern include Golden Eagles, Ferruginous Hawks, Swainson's Hawks, and Prairie Falcons. Below, CPW details habitat characteristics, potential impacts, and best management practice recommendations.

Native Fish and Aquatic Species Conservation Waters
Native species conservation waters are lakes and river segments containing species under population conservation and recovery management. In eastern plains parcels, native fish species of concern include the Arkansas darter, brassy minnow, common shiner, flathead chub, Iowa darter, northern and southern red-belly dace, plains minnow, plains orangethroat darter, plains topminnow, stonecat, and suckermouth minnow. These fish are state-listed as species of special concern, threatened, or endangered.

Big Sandy Creek, located in the center of the project area, is mapped by CPW as an HPH for native fish and aquatic species. While the creek is ephemeral and flows only during large precipitation events or snowmelt, these periods are critical for native fish migration between pool refugia. Seasonal connectivity is paramount for the persistence of these species. Additionally, the creek provides crucial breeding and foraging habitat for amphibians such as the Northern Leopard Frog, Plains Leopard Frog, Woodhouse's Toad, Western Chorus Frog, Great Plains Toad, and Plains Spadefoot Toad during wet periods.

To avoid or minimize impacts to native fish and aquatic species, CPW recommends the following:

- Limit development and mining to upland areas away from drainages by incorporating a minimum buffer of 500 feet extending from the ordinary high-water mark of the creek. Because mapped buffers are based on aerial imagery, prior to project initiation, CPW recommends establishing buffers based on field observations of the ordinary high-water mark of the creek.
- Avoid impact to the stream bed during construction, mine development, and after reclamation. The stream bed should be handled as a stream crossing whether or not water is present at the time of construction. Minimizing impact to stream beds is a priority for CPW, and avoidance is best whenever possible to protect seasonally wet sections of the creek that provide native fish and amphibians with important breeding and foraging habitats in the spring and summer months.
- Ensure stream crossings are perpendicular to reduce habitat disruption and use structures outside riparian zones where possible. CPW further recommends avoiding treed areas of cottonwood and willow, as these areas provide bird and wildlife habitat. During construction, stream crossing by vehicles should be avoided. CPW requests that any new service roads proposed for construction in conjunction with the project avoid crossing creeks or stream beds to prevent impacts to wildlife and habitat.
- If any new access or maintenance roads are constructed that cross stream habitat, CPW requests consultation on best management practices and options for construction to minimize impacts. A construction design for any new or reconstructed riparian crossing that actively minimizes barriers to fish passage at all water levels and mitigates existing barriers would further reduce negative impacts to native fish species.
- Implement erosion and sediment control measures to prevent deposition into waterways.

Mule Deer Severe Winter Range and Mule Deer Winter Concentration Area
Mule Deer Severe Winter Ranges are defined as the parts of the overall winter range where 90% of the population is located when the annual snowpack is at its maximum and/or temperatures are at their minimum during the two worst winters out of ten. Mule Deer Winter Concentration Areas are defined as areas where densities are at least 200% greater than the surrounding winter range density. Crucial winter habitats and migratory corridors are known to be limiting factors for big game populations in Colorado and other mountainous areas of the western United States (Sawyer et al. 2009, Bishop et al. 2009, Bartman et al. 1992). Disturbances during winter can lead to poor body condition and displacement to suboptimal habitats, reducing adult survival and neo-natal survival rates (Ciuti et al. 2012).

CPW has observed that the project area experiences heavy use by local mule deer and pronghorn populations. The phased approach of the project proposal specifies that the site will be developed in three- to five-acre units with reclamation occurring following extraction completion in each unit. CPW supports this phased approach and believes that ongoing reclamation of mining units not in exploration and development phases will help minimize impacts to mule deer populations in the area.

To avoid or minimize impacts to mule deer and big game species, CPW recommends the following:

- Avoid initial ground disturbance between December 1 and April 30 to protect mule deer during critical winter periods.
- Maintain phased reclamation to reduce habitat disruption.

Golden Eagle, Migratory Birds, and Raptors
The project location is identified as suitable habitat for Golden Eagles and other migratory birds. All migratory birds are protected under the Migratory Bird Treaty Act, and the removal or disturbance of any migratory bird nest would require consultation with CPW and the U.S. Fish and Wildlife Service (USFWS) prior to disturbance.

No active nests are mapped within the proposed project area, however, CPW recommends the following measures to avoid or minimize impacts to golden eagles and other migratory birds:

- Conduct preconstruction surveys to identify active nests. If nests are present, avoid construction during the breeding season (March 15–August 31).
- Consult with the U.S. Fish and Wildlife Service (USFWS) to ensure compliance with the Migratory Bird Treaty Act and Bald and Golden Eagle Act.
- For raptors, CPW recommends similar measures, including preconstruction surveys, adherence to recommended buffer distances, and seasonal restrictions outlined in CPW's Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors. If nests are discovered during construction, work should cease, and CPW and USFWS should be consulted for further guidance.

OTHER RECOMMENDATIONS

Fencing
CPW is concerned about the safety of mule deer in the project area in units undergoing development and initial reclamation. If fencing (perimeter or internal) is erected during or after the project, it should allow free passage for wildlife. Fencing plans should avoid woven-wire fences, which can trap or restrict wildlife movement. Instead, CPW recommends:

- Using three- or four-strand smooth-wire fencing, with the bottom strand at least 17 inches above ground level and the top strand no higher than 42 inches.
- Installing double stays between posts for added flexibility.
- Please refer to CPW's "Fencing with Wildlife in Mind" brochure for additional details.

Lighting
Nighttime artificial lighting can adversely affect wildlife species of all sizes, from small macroinvertebrates to large mammals. Impacts include disorientation, increased predation risks, and behavioral disruptions, particularly for nocturnal species. To limit potential impacts of project lighting, CPW recommends:

- Installing down-shielded fixtures to minimize light pollution.
- Using warm-colored lighting (2200–2700 Kelvin) with longer wavelengths to reduce ecological impacts, as suggested by the U.S. Fish and Wildlife Service and the American Bird Conservancy.
- Dimming lights when possible to reduce disturbance.

Noxious Weed Management
Timely reclamation and weed management will facilitate return of the parcel to usable wildlife habitat. Consistent and long-term monitoring is essential to ensure the establishment of adequate vegetative cover. The phased approach to reclamation, as well as the weed control subsection of the permit, will support the suppression and/or eradication of invasive and Listed Noxious Weeds. Vegetative communities within the project area are susceptible to encroachment by Russian Olive, Canada thistle, Musk thistle, and Tamarisk. Once established, these Listed Noxious species can be difficult to eradicate.

The current plan indicates that vegetative monitoring will be conducted annually to identify treatment areas and deploy weed suppression management. However, due to the nature of seed dispersal of these Noxious species, CPW believes that more frequent vegetative monitoring and weed management will improve revegetation efforts and help accomplish the land use objectives of the mine. To better manage invasive and Noxious species, CPW recommends the following:

- Increase the frequency of weed surveys from once per year to a spring, summer, and fall monitoring schedule. All disturbed soils should be monitored for noxious weeds, and active control should continue until native plant revegetation and reclamation are achieved.
- Take precautions to prevent the spread of noxious weeds. All construction equipment should be thoroughly cleaned before leaving the site.
- Retain native vegetation on-site during the operational lifespan of the project to the extent feasible. This approach provides critical habitat for wildlife and ensures

successful reclamation of the project area. Proper reclamation, from a wildlife perspective, involves not only stabilizing the soil and establishing ground cover but also fostering plant communities with a diversity of species and plant types, including grasses, woody plants, and broadleaf forbs to meet the nutritional needs of wildlife. Strict adherence to the recommendations of the Natural Resources Conservation Service is advised.

CPW appreciates this opportunity to review the proposed Gaede Pit expansion development project. Provided that CPW recommendations are adopted before and during mine operation, CPW believes impacts to wildlife from the proposed mineral development are likely to be temporary in nature and highest during the time of disturbance. If the timing or scope of this project changes and/or if you have any questions, comments, or concerns, please contact Carolyn Craveiro de Sá at 719-747-3838 or carolyn.craveirodesa@state.co.us.

Sincerely,

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