



SCI ENGINEERING, INC.

EARTH • SCIENCE • SOLUTIONS

GEOTECHNICAL
ENVIRONMENTAL
NATURAL RESOURCES
CULTURAL RESOURCES
CONSTRUCTION SERVICES

March 25, 2019

Mr. Joe Kraig
S&K NO1, LLC
P.O. Box 49681
Colorado Springs, Colorado 80949

RE: Wildlife Assessment Report
Hale Sand Pit
Calhan, Colorado
SCI No. 2019-0173.3B

Dear Mr. Kraig:

SCI Engineering, Inc. (SCI) has completed an evaluation of federally and state listed threatened and endangered flora and fauna species that have the potential to occur within the project site. The approximate 52-acre project site is located at 10675 McClelland Road in Calhan, Colorado. SCI understands that the overall property currently hosts an approximate 10-acre sand and gravel mine and that you desire to expand the mining operations onto an additional approximate 52 acres. A copy of the U.S. Geological Survey Topographic Quadrangle Map (with the site location) is enclosed as Figure 1.

SCI has initiated the Endangered Species Act (ESA) technical assistance consultation process by obtaining a threatened and endangered species list from the United States Fish and Wildlife Service (USFWS). The Information, Planning, and Conservation (IPaC) tool was utilized on March 8, 2018 to obtain an official species list for the project. Additionally, the Biodiversity Tracking and Conservation System (BIOTICS) report through the Colorado Natural Heritage Program (CNHP) was obtained and reviewed to evaluate the projects for potential impacts to rare and endangered State resources. Both reports are enclosed and should be read in their entirety.

According to information compiled by the USFWS IPaC, there are two federally-listed threatened and/or endangered mammals, four birds, two fishes, and two flowering plants that have the potential to occur within the site boundaries and/or may be affected by the proposed project. These species include: North American wolverine (*Gulo gulo luscus*), Preble's meadow jumping mouse (*Zapus hudsonius preblei*), least tern (*Sterna antillarum*), Mexican spotted owl (*Strix occidentalis lucida*), piping plover (*Charadrius melodus*), whooping crane (*Grus americana*), greenback cutthroat trout (*Oncorhynchus clarkia stomias*), pallid sturgeon (*Scaphirhynchus albus*), Ute ladies'-tresses (*Spiranthes diluvialis*), and Western prairie fringed orchid (*Platanthera praeclara*). The IPaC tool also provides information on migratory birds and other protected areas. The lark bunting is listed as protected under the Migratory Bird Treaty Act (MBTA). Regarding protected areas, there are no critical habitats, refuge lands, or fish hatcheries within the project boundary.

An assessment of each of the species, including a description of the preferred habitat for each species, per the USFWS webpage (<https://www.fws.gov/mountain-prairie/es/endangered.php>), and our assessment of the current site conditions follows:

- North American wolverine (*Gulo gulo luscus*) – Wolverines occur within a wide variety of habitats, primarily boreal forests, tundra, and western mountains throughout North America. Wolverines often move long distances in short periods of time when dispersing from natal ranges, making it difficult or impossible to distinguish with confidence between occurrence records that represent established populations and those that represent short-term occupancy without the potential for establishment of home ranges and reproduction. Female wolverines use natal (birthing) dens that are excavated in snow. Persistent, stable snow greater than 1.5 meters (5 feet) deep appears to be a requirement for natal denning, because it provides security for offspring and buffers cold winter temperatures. **The occurrence of resident wolverines is unlikely within the project area, given the transient nature of the species and the need for persistent snowpack.**
- Preble's meadow jumping mouse (*Zapus hudsonius preblei*) - This largely nocturnal mouse lives primarily in heavily vegetated, shrub dominated riparian (streamside) habitats and immediately adjacent upland habitats along the foothills of southeastern Wyoming south to Colorado Springs along the eastern edge of the Front Range of Colorado. The Preble's mouse enters hibernation in September or October and doesn't emerge until May. Its diet changes seasonally and consists of insects, seeds, fungus, fruit, and more. **The subject site is primarily comprised of short grasslands with no dense or heavily vegetated shrubland. As such, this species is unlikely to inhabit or utilize the project site.**
- Least tern (*Sterna antillarum*): - The least tern utilizes sparsely vegetated sandbars along major river systems such as the Missouri, Rio Grande, and Yellowstone Rivers. Birds nest, raise young, and relax on barren river sandbars. Terns forage for small fish in the river and nearby wetlands. **Based on our site visit and review of resource maps, there are no major river systems with gravel bars on the site. The drainageways located adjacent to the project site are seasonal and dominated by grasses. As such, this species is unlikely to inhabit or utilize the project site.**
- Mexican spotted owl (*Strix occidentalis lucida*): - The nesting habitat for this species is typically in areas with complex forest structure or rocky canyons and contains mature or old growth stands which are uneven-aged, multistoried, and have high canopy closure. In the northern portion of the range (southern Utah and Colorado), most nests are in caves or on cliff ledges in steep-walled canyons. Mexican spotted owls generally forage in a broader array of habitats than they use for roosting, and most commonly in Douglas fir or mixed-conifer forests. **The subject site is primarily comprised of arid grasslands with no complex forest's structures or rock canyons. As such, this species is unlikely to inhabit or utilize the project site.**
- Piping plover (*Charadrius melodus*): - The piping plover is a migratory species that has separate wintering and breeding habitats. Piping plovers occur in three disjunct populations in North America: Northern Great Plains, Great Lakes, and Atlantic Coast. Piping plovers usually migrate as individuals or small groups and may be seen along sandbars of major rivers, salt flats, and mudflats of reservoirs for foraging and breeding habitats. **Based on our site visit and review of resource maps, there are no major river systems with gravel or sandbars or mudflats on the site. The drainageways located adjacent to the project site are seasonal and dominated by grasses. As such, this species is unlikely to inhabit or utilize the project site.**

- Whooping crane (*Grus americana*): - Whooping cranes return to the same breeding territory in Wood Buffalo National Park, Canada, in April and nest in the same general area each year. Autumn migration begins in mid-September, and most birds arrive on the wintering grounds of Aransas National Wildlife Refuge on the Texas Gulf Coast by late-October to mid-November. The nesting area in Wood Buffalo National Park is a poorly drained region interspersed with numerous potholes. Bulrush is the dominant emergent in the potholes used for nesting. On the wintering grounds at Aransas National Wildlife Refuge in Texas, whooping cranes use the salt marshes that are dominated by salt grass, saltwort, smooth cordgrass, glasswort, and sea ox-eye. They also forage in the interior portions of the refuge, which are gently rolling, sandy, and are characterized by oak brush, grassland, swales, and ponds. **The project area is within the migratory path of the whooping crane. However, based on the site characteristics, there are not sufficient water resources to support the vegetation preferred by whooping cranes. Therefore, it is unlikely that the whooping crane would utilize the project site for stopover habitat during their migration.**
- Greenback cutthroat trout (*Oncorhynchus clarkia stomias*): - The greenback cutthroat trout is endemic to the headwaters of the South Platte and Arkansas River drainages on the eastern slope of the Rocky Mountains (primarily in Colorado). They have been reintroduced to many stream systems through introduction programs by various hatcheries. **Due to the lack of perennial, freshwater streams, the project site does not contain suitable habitat for the greenback cutthroat trout.**
- Pallid sturgeon (*Scaphirhynchus albus*): - These species have evolved and adapted to living close to the bottom of large, silty rivers with natural a hydrograph. Their preferred habitat has a diversity of depths and velocities formed by braided channels, sand bars, sand flats, and gravel bars. **Due to the lack of large, silty rivers, the project site does not contain suitable habitat for the Pallid sturgeon.**
- Ute ladies'-tresses (*Spiranthes diluvialis*): - Ute ladies'-tresses is an obligate mesophyte, usually growing in the cobbly sand, shingly sand, gravelly sand or sandy loam of wet meadows, stream or lake margins, abandoned stream meanders, riparian sandbars and subirrigated springs and seeps. Occasionally it may grow in moist swales within *Populus angustifolia* – *Cornus sericea* woodlands, or even in irrigated pastureland. It avoids the shade of woody shrubs and trees, especially *Tamarix*-dominated sites, and prefers open, sunny forb/graminoid-dominated habitats instead. Elevational amplitude is between 4,400 and 6,810 feet above mean sea level (msl). **The project site is primarily comprised of arid short grasses. As such, it is unlikely that this species would be found on the project site.**
- Western prairie fringed orchid (*Platanthera praeclara*): - Similar to its Eastern U.S. relative, this species is most often found in mesic to wet unplowed tallgrass prairies and meadows but have been also found in old fields and roadside ditches. **The project site is primarily comprised of arid short grasslands. As such, it is unlikely that this species would inhabit the project site.**
- Lark bunting (*Calamospiza melanocorys*): - Lark Buntings are endemic to the grasslands and shrub steppe of North America—they occur nowhere else. When breeding, they are most likely to be found in large areas of native grassland vegetation, especially wheatgrass, blue grama grass, needle-and-thread grass, and big sagebrush. Lark Buntings live among many species of prairie vegetation, including red triple-awn grass, four-winged saltbush, cottonthorn hornbush, and green-plumed rabbitbrush, all plants in which the birds may nest. Lark Buntings avoid bare ground when

nesting (Horned Larks are often found there), preferring shortgrass and taller habitats. They usually nest at the base of a small shrub or cactus, so pure grassland is usually not suitable for breeding habitat. Heavily grazed shortgrass habitats, prairie dog towns, and recently burned fields are not generally used. Wintering and migrating Lark Buntings usually occur in flocks, sometimes with other sparrows, in many types of open habitats, including dry lake beds (playas) at times. Across large areas of their wintering range, abundant natural food is available chiefly where erratic summer rains have fallen. This unpredictability means that Lark Buntings are nomadic during winter, and they frequently show up in human-modified habitats such as cattle feedlots and weedy roadside edges. **The project site is primarily comprised of arid short grasslands with no shrubland to be utilized for nesting. In addition, animal burrows typical of prairie dog towns were observed. As such, this species is unlikely to utilize or inhabit the project site.**

In addition, a BIOTICS report from the CNHP was obtained for the project. The BIOTICS report identified two State listed species and one Natural Community that is known to occur or is likely to occur within a two-miles radius of the project site. Those species or habitats include the following: Greater Sandhill Crane (*Grus canadensis tabida*), narrow- paniced rush (*Juncus brevicadatus*), and Xeric Tallgrass Prairies. Per the BIOTICS report, the identified species and natural areas were all found outside of the project boundary but within the 2-mile search radius. It should also be noted, that the most current observation of these species or natural areas was over approximately 20 years ago. As such, the above-referenced species and natural areas are not likely to be impacted by the proposed mining activities.

SCI has reviewed the above state or federally listed threatened and endangered species and their preferred habitats and determined that the project site is unlikely to contain areas considered to be suitable habitat. As such, further consultation with the USFWS and/or the Colorado Parks and Wildlife (CPW) is not likely to be necessary. However, should the limits of the proposed project change, SCI recommends a reassessment of the project site to determine if any of the above listed species would be impacted by project activities.

SCI understands that this report has been requested by El Paso County as part of a mineral extraction permit application. As such, we recommend that this report be submitted to the County for their review and approval prior to initiating mining activities on the site. Although we have provided our professional opinion regarding the potential impacts to the above-referenced species and their preferred habitats, the USFWS and the CPW have the sole authority to regulate any action which may affect a listed threatened or endangered species. SCI in no way guarantees the acquisition of a mining permit from El Paso County. The decision to issue or deny a permit is the sole authority of El Paso County. The intent of this report is to provide you with the information regulatory agencies typically request when reviewing a permit application.

Please feel free to contact me at 618-206-3038 or sbillings@sciengineering.com should you have any questions or concerns.

Respectfully,

SCI ENGINEERING, INC.



Rick J. Gundlach, PWS
Project Scientist



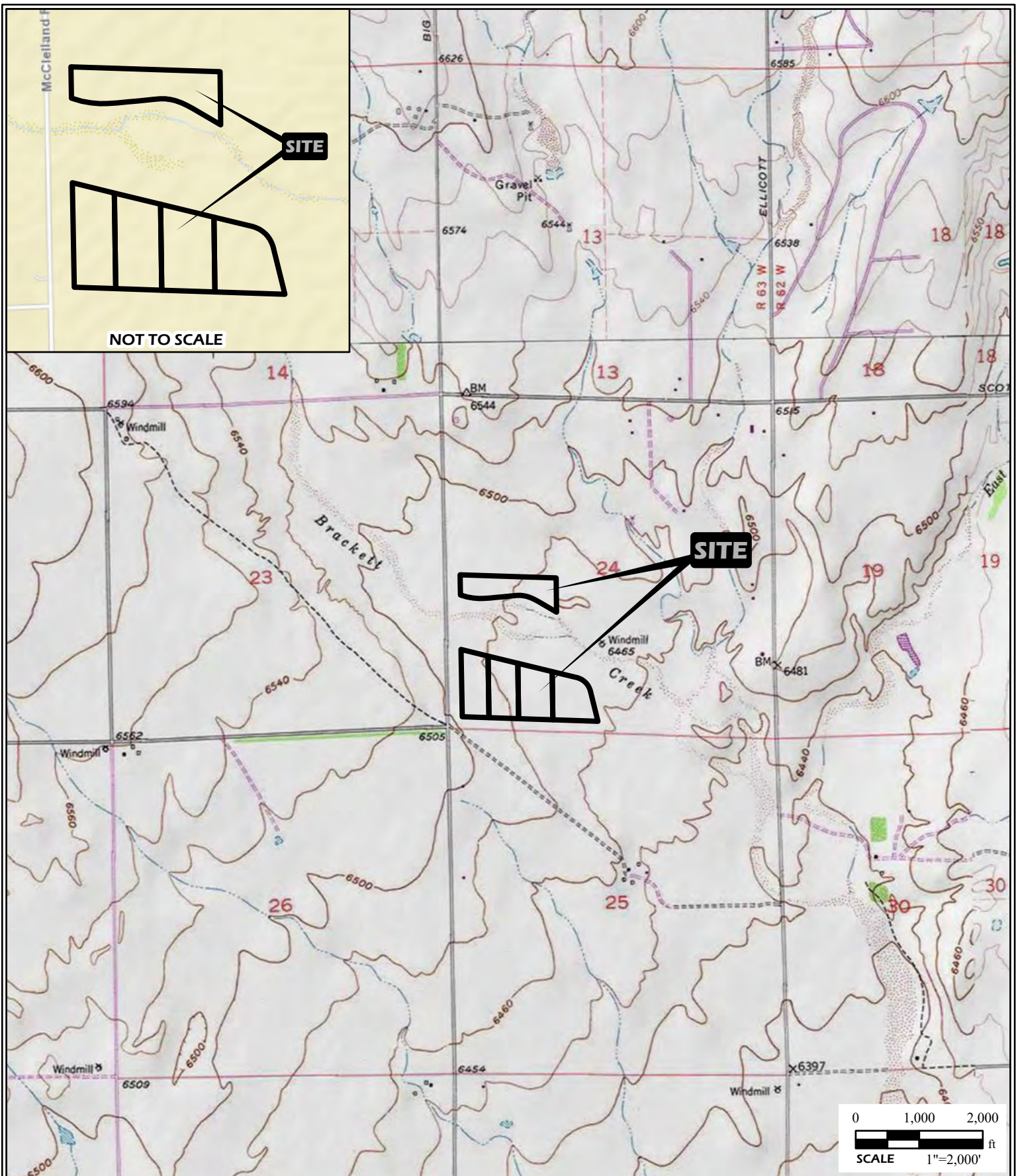
Scott E. Billings
Senior Project Scientist


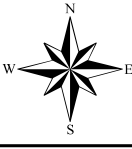
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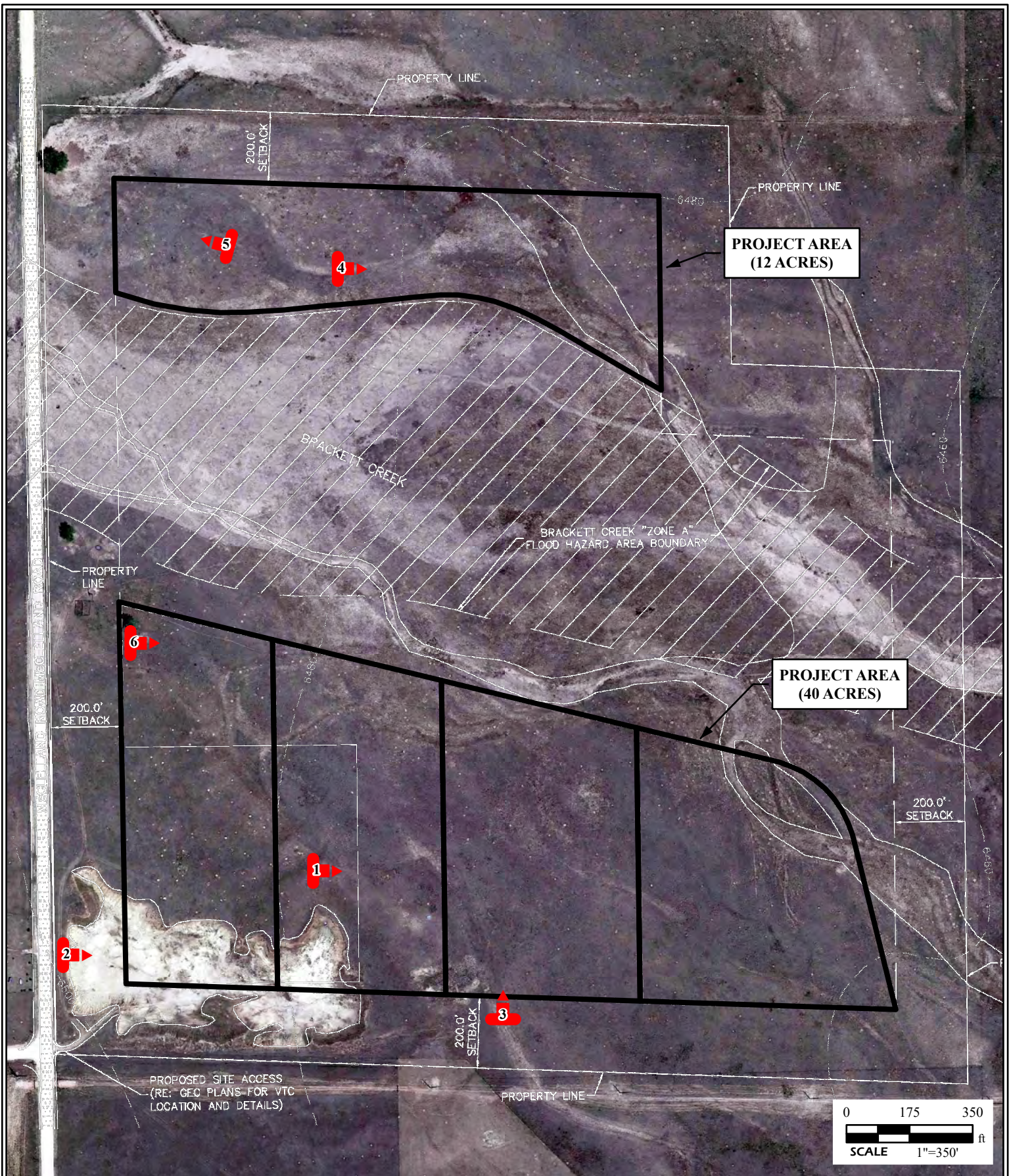
Enclosures


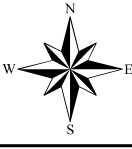
- Figure 1 - Vicinity and Topographic
- Figure 2 - Aerial Photograph
- Appendix A - Photographic Documentation
- Appendix B - USFWS IPAC Report
- Appendix C - CNHP Biotics Report

C: Mr. John R. Heiberger, P.E.; Kimley-Horn



	PROJECT NAME HALE SAND PIT EL PASO COUNTY, COLORADO			GENERAL NOTES/LEGEND USGS TOPOGRAPHIC MAP PEYTON, COLORADO QUADRANGLE DATED 1970 CALHAN, COLORADO QUADRANGLE DATED 1970 HAEGLER RANCH, COLORADO QUADRANGLE DATED 1954 HOLCOLM HILLS, COLORADO QUADRANGLE DATED 1973 20' CONTOURS STREET MAP HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_STREET_MAP	 FIGURE 1
	VICINITY AND TOPOGRAPHIC MAP				
	DRAWN BY BDG CHECKED BY RJG	DATE 03/2019	JOB NUMBER 2019-0173.3B		



	PROJECT NAME HALE SAND PIT EL PASO COUNTY, COLORADO			GENERAL NOTES/LEGEND AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH, DATED 06/2017. PLAN DATED 10/24/2018 BY KIMLEY HORN.		 FIGURE 2
	AERIAL PHOTOGRAPH			DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ACTUAL MAY VARY. DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT FOR WHICH IT WAS GENERATED.		
	DRAWN BY	BDG	DATE	03/2019	JOB NUMBER	2019-0173.3B
	CHECKED BY	RJG				

Appendix A



Photo 1. View to the east/southeast across the southern portion of the site.



Photo 2. View to the east along the southern portion of the site.



Photo 3. View of drainage area on the southern portion of the site.



Photo 4. View of northern project area, facing east



Photo 5. Overview of the western portion of the northern part of the site.



Photo 6. View to the east across the northern portion of the southern-half of the site.

Appendix B



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Colorado Ecological Services Field Office
Denver Federal Center
P.O. Box 25486
Denver, CO 80225-0486
Phone: (303) 236-4773 Fax: (303) 236-4005
<http://www.fws.gov/coloradoES>
<http://www.fws.gov/platteriver>

In Reply Refer To:

March 08, 2019

Consultation Code: 06E24000-2019-SLI-0546

Event Code: 06E24000-2019-E-01719

Project Name: Hale Sand Pit

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Migratory Birds
 - Wetlands
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Colorado Ecological Services Field Office

Denver Federal Center

P.O. Box 25486

Denver, CO 80225-0486

(303) 236-4773

Project Summary

Consultation Code: 06E24000-2019-SLI-0546

Event Code: 06E24000-2019-E-01719

Project Name: Hale Sand Pit

Project Type: MINING

Project Description: The approximate 55-acre project site is located at 10675 McClelland Road in Calhan, Colorado. SCI understands that the overall property currently hosts an approximately 10-acre sand and gravel mine and the client wishes to expand its mining operations onto an additional 55 acres. The project area is broken into two segments. The proposed 40-acre mining area (Segment 1) along the south border will be mined prior to the 12.5 acre (Segment 2) to the north

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/38.98669228358436N104.40099933947343W>



Counties: El Paso, CO

Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 5 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
North American Wolverine <i>Gulo gulo luscus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5123	Proposed Threatened
Preble's Meadow Jumping Mouse <i>Zapus hudsonius preblei</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4090	Threatened

Birds

NAME	STATUS
<p>Least Tern <i>Sterna antillarum</i></p> <p>Population: interior pop.</p> <p>No critical habitat has been designated for this species.</p> <p>This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. <p>Species profile: https://ecos.fws.gov/ecp/species/8505</p>	Endangered
<p>Mexican Spotted Owl <i>Strix occidentalis lucida</i></p> <p>There is final critical habitat for this species. Your location is outside the critical habitat.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/8196</p>	Threatened
<p>Piping Plover <i>Charadrius melodus</i></p> <p>Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered.</p> <p>There is final critical habitat for this species. Your location is outside the critical habitat.</p> <p>This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. <p>Species profile: https://ecos.fws.gov/ecp/species/6039</p>	Threatened
<p>Whooping Crane <i>Grus americana</i></p> <p>Population: Wherever found, except where listed as an experimental population</p> <p>There is final critical habitat for this species. The location of the critical habitat is not available.</p> <p>This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. <p>Species profile: https://ecos.fws.gov/ecp/species/758</p>	Endangered

Fishes

NAME	STATUS
<p>Greenback Cutthroat Trout <i>Oncorhynchus clarkii stomias</i></p> <p>No critical habitat has been designated for this species.</p> <p>Species profile: https://ecos.fws.gov/ecp/species/2775</p>	Threatened
<p>Pallid Sturgeon <i>Scaphirhynchus albus</i></p> <p>No critical habitat has been designated for this species.</p> <p>This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. <p>Species profile: https://ecos.fws.gov/ecp/species/7162</p>	Endangered

Flowering Plants

NAME	STATUS
Ute Ladies'-tresses <i>Spiranthes diluvialis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2159	Threatened
Western Prairie Fringed Orchid <i>Platanthera praeclara</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none">▪ Water-related activities/use in the N. Platte, S. Platte and Laramie River Basins may affect listed species in Nebraska. Species profile: https://ecos.fws.gov/ecp/species/1669	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Lark Bunting <i>Calamospiza melanocorys</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 10 to Aug 15

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the

FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

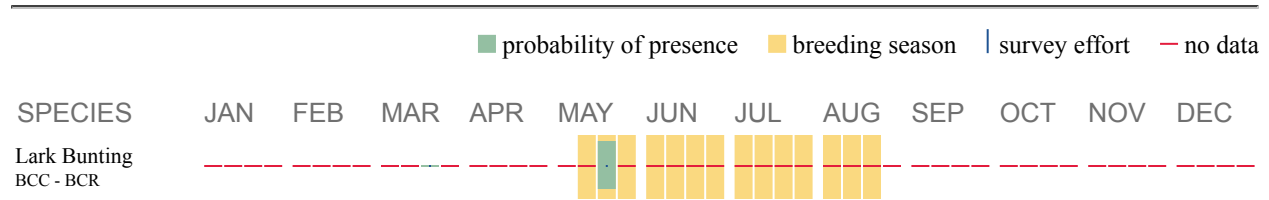
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT [HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML](https://www.fws.gov/wetlands/data/mapper.html) OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

Appendix C



WARNER COLLEGE OF Natural Resources



Colorado State University

Colorado Natural Heritage Program
1475 Campus Delivery
Colorado State University
Fort Collins, CO 80523-1475

March 20, 2019

PHONE: (970) 491-6891

FAX: (970) 491-3349

www.cnhp.colostate.edu

Rick Gundlach, PWS
SCI Engineering, Inc.
130 Point West Boulevard
St Charles, MO 63301

Dear Rick:

The Colorado Natural Heritage Program (CNHP) is in receipt of your request for information regarding the SCI Engineering, Inc. Project Area of Interest in El Paso County, Colorado. In response, I have searched our Biodiversity Tracking and Conservation System (BIOTICS) for natural heritage elements (occurrences of significant natural communities and rare, threatened or endangered plants and animals) documented from the vicinity of the area specified in your request, specifically within a two-mile radius of the boundaries of the shapefile that SCI Engineering, Inc. provided to CNHP in order to outline this request.

The enclosed report describes natural heritage resources known from this area and gives location (by Township, Range, and Section), precision information, and the date of last observation of the element at that location. This report includes elements known to occur within the specified project site, as well as elements known from similar landscapes near the site. Please note that "precision" reflects the resolution of original data. For example, an herbarium record from "4 miles east of Colorado Springs" provides much less spatial information than a topographic map showing the exact location of the occurrence. "Precision" codes of Seconds, Minutes, and General are defined in the footer of the enclosed report.

The report also outlines the status of known elements. We have included status according to Natural Heritage Program methodology and legal status under state and federal statutes. Natural Heritage ranks are standardized across the Heritage Program network, and are assigned for global and state levels of rarity. They range from "1" for critically imperiled or extremely rare elements, to "5" for those that are demonstrably secure.

You may notice that some occurrences do not have sections listed. Those species have been designated as "sensitive" due to their rarity and threats by human activity. Peregrine falcons, for example, are susceptible to human breeders removing falcon eggs from their nests. For these species, CNHP does not normally provide location information beyond township and range. Please contact us should you require more detailed information for sensitive occurrences.

There are NO CNHP designated Potential Conservation Areas (PCAs) and NO Network of Conservation Areas (NCAs) overlapping the search area. In order to successfully protect populations

or occurrences, it is necessary to delineate conservation areas. These conservation areas focus on capturing the ecological processes that are necessary to support the continued existence of a particular element of natural heritage significance. Conservation areas may include a single occurrence of a rare element or a suite of rare elements or significant features.

The goal of the process is to identify a land area that can provide the habitat and ecological processes upon which a particular element or suite of elements depends for their continued existence. The best available knowledge of each species' life history is used in conjunction with information about topographic, geomorphic, and hydrologic features, vegetative cover, as well as current and potential land uses. The proposed boundary does not automatically exclude all activity. It is hypothesized that some activities will cause degradation to the element or the process on which they depend, while others will not. Consideration of specific activities or land use changes proposed within or adjacent to the preliminary conservation planning boundary should be carefully considered and evaluated for their consequences to the element on which the conservation unit is based.

The Colorado Division of Wildlife has legal authority over wildlife in the state. CDOW would therefore be responsible for the evaluation of and final decisions regarding any potential effects a proposed project may have on wildlife. If you would like more specific information regarding these or other vertebrate species in the vicinity of the area of interest, please contact the Colorado Division of Wildlife.

The information contained herein represents the results of a search of Colorado Natural Heritage Program's (CNHP) Biodiversity Tracking and Conservation System (BIOTICS), and can be used as notice to anticipate possible impacts or identify areas of interest. Care should be taken in interpreting these data. **Sensitive element records were found within the two-mile search buffer but no elements directly overlapped with the project boundary file provided to CNHP (see enclosed PDF species report). We also searched our watch-listed species and found NO additional records within the search buffer.** Please note that the absence of data for a particular area, species, or habitat does not necessarily mean that these natural heritage resources do not occur on or adjacent to the project site; rather that our files do not currently contain information to document their presence. CNHP information should not replace field studies necessary for more localized planning efforts, especially if impacts to wildlife habitat are possible.

Although every attempt is made to provide the most current and precise information possible, please be aware that some of our sources provide a higher level of accuracy than others, and some interpretation may be required. CNHP's data system is constantly updated and revised. Please contact CNHP for an update or assistance with interpretation of this natural heritage information.

The data contained in the report is the product and property of the Colorado Natural Heritage Program (CNHP), a sponsored program at Colorado State University (CSU). The data contained herein are provided on an as is, as available basis without warranties of any kind, expressed or implied, including (but not limited to) warranties of merchantability, fitness for a particular purpose, and non-infringement. CNHP, CSU and the state of Colorado further expressly disclaim any warranty that the data are error free or current as of the date supplied.

Sincerely,

A handwritten signature in black ink that reads "Michael Menefee". The signature is fluid and cursive, with the first name "Michael" and last name "Menefee" clearly distinguishable.

Michael Menefee
Environmental Review Coordinator
Enc.



Locations and Status of Rare and/or Imperiled Species and Natural Communities known from or likely to occur within a two-mile radius of the SCI Engineering, Inc. Project Area in El Paso County, CO (all records found were outside of the project boundary provided to CNHP but within a two-mile search radius)

Report generated: 20 March 2019

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EO_ID	major group	scientific name	common name	Prec	last obs	Town/ Range	Sec	TRS Note	grank	srank	eo- rank	ESA	fed stat	st stat
8,196	Birds	<i>Grus canadensis tabida</i>	Greater Sandhill Crane	S	1999-11-13	012S063W	35		G5T5	S2B,S4N	E	-	SWAP Tie	SC
3,434	Natural Communities	<i>Andropogon gerardii</i> - <i>Sporobolus heterolepis</i> Western <i>Foothills Grassland</i>	Xeric Tallgrass Prairie	M	1947-99-99	012S062W	31		G2	S1	H	-		
						012S063W	35							
						012S063W	36							
						013S062W	06							
						013S062W	07							
						013S063W	01							
						013S063W	02							
						013S063W	11							
						013S063W	12							
8,766	Vascular Plants	<i>Juncus brevicaudatus</i>	narrow-panicled rush	G	1957-08-25	012S064W	24		G5	S1	H	-		