Souder, Miller & Associates ♦ 3500 Sedona Hills Parkway ♦ Las Cruces, NM 88011
(575) 647-0799 ♦ (800) 647-0799 ♦ fax (575) 647-0680

September 25, 2023 #9332273

Mr. Matthew Wunder
Division Chief
N.M. Department of Game & Fish, Conservation Services Division
P.O. Box 25112
Santa Fe, New Mexico 87504
(505) 476-8101
matthew.wunder@state.nm.us *Sent via email, USPS and Online Submission*

RE: Request for Information/Concurrence- Spaceport Technology and Reception Center
Sierra County, New Mexico

Mr. Matthew Wunder:

Souder, Miller & Associates (SMA), on behalf of our client, Buffalo Design Architects, is preparing an Environmental Information Report pursuant to the National Environmental Policy Act (NEPA). Buffalo Design Architects has designed a multi-purpose Spaceport Technology and Reception Center (STARC) for Spaceport America (Proposed Action). The site is within the greater area included in the *Final Environmental Impact Statement for the Spaceport America Commercial Launch Site, Sierra County, New Mexico* (FAA, 2008). SMA is requesting consultation from your office regarding the potential impacts to environmental resources under your stewardship from the Proposed Action.

The Proposed Action is located in Sierra County, approximately 19 miles bearing 120° off North (i.e. southeast) from Truth or Consequences, New Mexico at latitude 32.988255, longitude -106.982347 (Figure 1). The site is accessed from Interstate 25, via County Road E071/Upham Road. Traveling north on Upham road for 24 miles and east to County Road AO39 to the intersection of Road A021/Spaceport America Blvd and Discovery Road (Figure 2). The site is approximately 4,625 feet amsl and locally slopes southward toward the Aleman Draw to the south and west, Jornada Draw to the east and their confluence to the south.

The Proposed action is to construct one, 3-story 30,000 ft^2 multi-use facility and two potential parking lots totaling up to approximately 14 acres (608,669 ft^2) for overflow parking on previously disturbed land. The proposed action includes onsite water impoundment/retention and rainwater harvesting. The Spaceport Technology and Reception Center will house the Spaceport's core IT server center, staff offices and conference rooms, an Auditorium, food preparation and dining area, virtual experience center, and 2nd and 3rd floor lounge and viewing areas.

Currently the site is occupied by asphalt paved parking areas, water impoundments and "green space". The area surrounding the proposed action includes undeveloped native desert with other Spaceport America facilities and infrastructure located within 0.4 miles to the east.

SMA opines that there will be no significant impact to biological resources from the Proposed Action based on the attached biological report; assuming best management practices are implemented. No Threatened & Endangered species, migratory birds, or their critical habitat were observed within the project area.

SMA would appreciate any information or feedback to be provided at your earliest possible convenience. If you need any further information or wish to discuss the project, please feel free to contact me by phone at 800-647-0799, or by email at niki.harings@soudermiller.com.

Sincerely,

MILLER ENGINEERS, INC. D/B/A
SOUDER, MILLER & ASSOCIATES

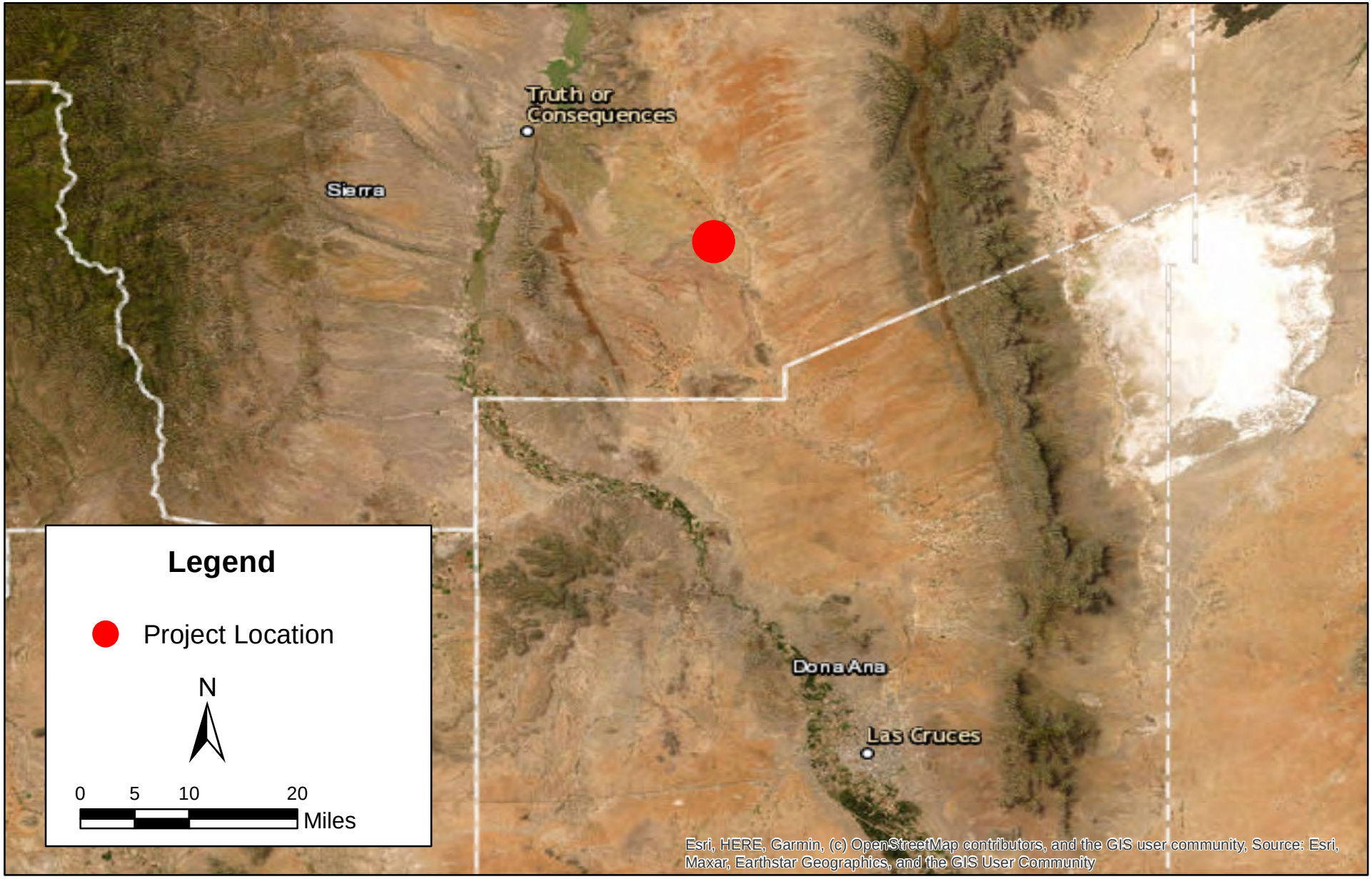
Niki Harings, Ph.D.
Senior Biologist

Figure 1. Project Location
Figure 2. Project Area Map

Attachment A. Biological Resources Report

ATTACHMENT A -

FIGURES



Project Location
Spaceport Tech and Reception Center, Phase I
Truth or Consequences, New Mexico

Figure 1

Document: P:\9-Spaceport Tech and Reception Ctr Ph 1 (9332273)\GIS\MAPS\Figure 1-Project Location.mxd

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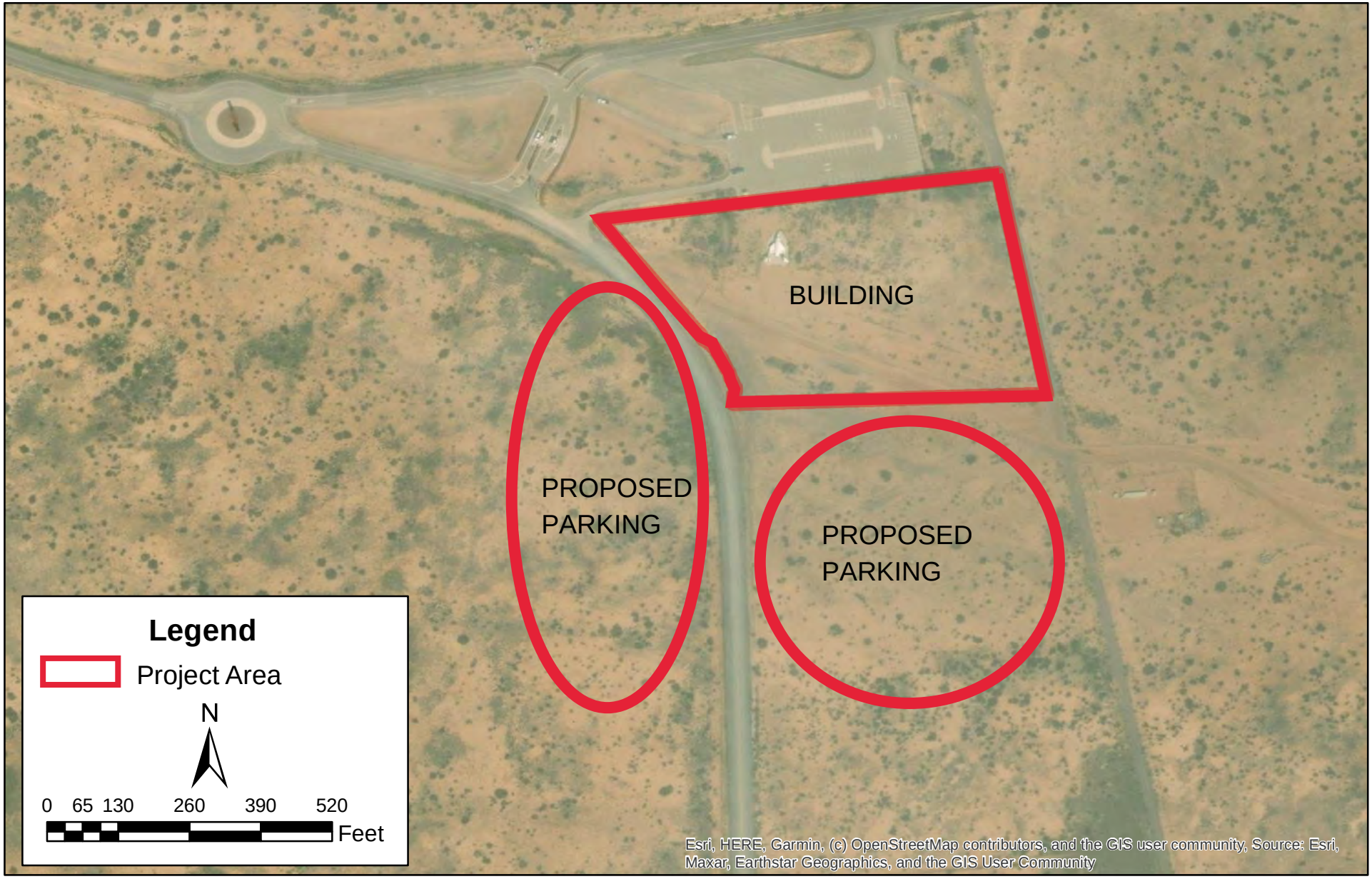

Project Area
Spaceport Tech and Reception Center, Phase I
Truth or Consequences, New Mexico

Figure 2

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ATTACHMENT B -

BIOLOGICAL RESOURCES REPORT

Souder, Miller & Associates ♦ 3500 Sedona Hills Parkway ♦ Las Cruces, NM 88011
(575) 647-0799 ♦ (800) 647-0799 ♦ fax (575) 647-0680

August 25, 2023 #9332273

Mr. Marc Gonzales, AIA, NCARB
Buffalo Design Architects
10899 Montgomery, Boulevard, NE, Suite A
Albuquerque, New Mexico 87111
mgonzales@buffaloarch.com

RE: Biological Resource Report for Spaceport Technology and Reception Center (STARC) Project in Sierra County, New Mexico

Dear Mr. Gonzales,

SUMMARY

This Biological Resource Report was prepared for Buffalo Design Architects (Project Proponent) for their STARC Site project to construct a multi-purpose, 2-story visitor center (30,000 sq ft) and two potential parking lots for overflow parking, one lot to the south and one lot to the southwest of the STARC building site, including associated roadways and drainages (Proposed Project). This Resource Report is intended to meet the requirements for a biological review of Threatened and Endangered (T&E) Species and observed flora and fauna. This report is comprised of project location, project description (status and plan); study methods; and findings.

In summary, the Endangered Species Act of 1973 requires the evaluation of potential impacts on federally listed species and their critical habitat for projects involving federal funding. On behalf of the Project Proponent, Souder, Miller and Associates (SMA) conducted this biological resource survey of T&E Species, and observed flora and fauna, to evaluate the potential environmental impacts of the Proposed Project and mitigation measures to reduce or eliminate any adverse effects on the presence of T&E Species and existing flora and fauna in the project area.

To complete this biological resource report SMA undertook desktop studies and a site reconnaissance. Although several T&E species were noted as potentially present in Sierra County based on desktop studies, no T&E species, migratory birds, or critical habitat were observed within the project area; therefore, SMA opines that the proposed project will not have a negative net impact on the presence of T&E species or their critical habitat. No wetlands or habitat characteristic of jurisdictional wetlands were observed within or adjacent to the project boundaries.

PROJECT LOCATION

The Spaceport America STARC Site project (Proposed Project) is within the Jornada del Muerte Desert Basin, northeast of Upham, New Mexico in Sierra County. For the purposes of this study, the subject property and adjoining properties comprise the "project area". The Proposed Project location is along County Road A021. Access is via Interstate 25, exiting onto County Road E071/Upham Road for 24 miles and east to County Road AO39/Spaceport America Blvd (Figure 1). The approximate elevation of the project area is 4,625 feet, with a southward gradient. The approximate location of the STARC site building is latitude 32.988255, longitude -106.982347 (Figure 2).

PROJECT DESCRIPTION

The Proposed Project is Phase 1 of a larger proposed plan set forth by the New Mexico Spaceport Authority. The existing Spaceport America complex includes Horizontal and Vertical Launch facilities, an Advanced Technology Area, a 2.5-mile-long runway, Spacecraft & Mothership hangar, and rocket launch pad. The proposed 30,000 sq

ft STARC building will be a multi-use facility; it will house the Spaceport's core IT server 2 center, staff offices and conference rooms, an Auditorium, food preparation and dining area, virtual experience center, and 2nd and 3rd floor lounge and viewing areas. The new building will provide modern, comfortable work and meeting spaces for NMSA staff and a means to receive, entertain and educate groups of visitors and/or potential customers. In addition, to accommodate overflow parking, boring locations have been identified for two proposed parking lots; one directly south and one southwest of the STARC building site.

STUDY METHODS

The Endangered Species Act of 1973 requires the evaluation of potential impacts on federally listed species and their critical habitat for projects involving federal funding. On behalf of the Project Proponent, SMA conducted this biological survey of T&E Species, and observed flora and fauna, to evaluate the potential environmental impacts of the Proposed Project and mitigation measures to reduce or eliminate any adverse effects. As part of the evaluation of flora and fauna, SMA also evaluated the presence and potential presence of critical habitat, migratory birds, and wetlands, and provided a general description of the flora and fauna observed on the subject and adjoining properties. This biological resource study included a desktop study and a field reconnaissance survey.

Desktop Studies

The desktop studies conducted by SMA included searching the US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database and the New Mexico Department of Game and Fish (NMDGF) Biota Information System of New Mexico (BISON-M) database to identify T&E flora and fauna that may be present in the vicinity of surveyed area. Additionally, SMA accessed the National Wetlands Inventory database to identify the presence of potential wetlands.

USFWS IPaC

The USFWS IPaC system is used to generate project-specific lists of T&E species and migratory birds that may occur within the Proposed Project area. A formal electronic request for an official list of T&E species, critical habitat and migratory bird listing was obtained from USFWS via the automated IPaC system on July 26, 2023 (Attachment 1), which includes:

- Four Birds: Mexican Spotted Owl (*Strix occidentalis lucida*); Northern Aplomado Falcon (*Falco femoralis septentrionalis*); Southwestern Willow Flycatcher (*Empidonax traillii extimus*); Yellow-billed Cuckoo (*Coccyzus americanus*)
- One Frog: Chiricahua Leopard Frog (*Rana chiricahuensis*)
- Two Fish: Rio Grande Cutthroat Trout (*Oncorhynchus clarkii virginalis*); Rio Grande Silvery Minnow (*Hybognathus amarus*)
- One Insect: Monarch Butterfly (*Danaus plexippus*)
- One Flowering Plant: Todsen's Pennyroyal (*Hedeoma todsenii*)
- No Migratory Birds of conservation concern expected to occur
- No Critical Habitat
- No Refuge Lands
- No Fish Hatcheries
- No Wetlands indicated

NMDGF BISON-M

SMA accessed the NMDGF automated BISON-M system on August 9, 2023 (Attachment 2); this system is used to generate county-specific lists of animal and plant species, including T&E species, that may occur within the surveyed area. The automated list from the BISON-M system listed a total of 747 animal species in Sierra County, including 27 T&E species:

- Two Mammals: Mexican Gray Wolf (Canis lupis baileyi); Penasco Least Chipmunk (*Neotamias minimus atristriatus*)
- Nineteen Birds: Common Ground Dove (*Columbina passerina*); Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*); Lucifer Humingbird (*Calothorax lucifer*); Costa's Hummingbird (*Calypte costae*); Broad-billed Hummingbird (*Cynanthus latirostris*); Least Tern (*Sternula antillarum*); Neotropic Cormorant (*Phalacrocorax brasilianus*); Bald Eagle (*Haliaeetus leucocephalus*); Common Black Hawk (*Buteogallus anthracinus*); Mexican Spotted Owl (*Strix occidentalis lucida*); Elegant Trogon (*Trogon elegans*); Aplomado Falcon (*Falco femoralis*); Peregrine Falcon (*Falco peregrinus*); Thick-billed Kingbird (*Tyrannus crassirostris*); Southwestern Willow Flycatcher (*Empidonax traillii extimus*); Bell's Vireo (*Vireo bellii*); Gray Vireo (*Vireo vicinior*); Baird's Sparrow (*Centronyx bairdii*); Varied Bunting (*Passerina versicolor*)
- One Reptile: Mottled Rock Rattlesnake (*Crotalus lepidus lepidus*)
- One Amphibian: Chiricahua Leopard Frog (*Rana chiricahuensis*)
- Three Fish: Roundtail Chub (*Gila robusta*); Gila Trout (*Oncorhynchus gilae*); White Sands Pupfish (*Cyprinodon tularosa*)
- One Mollusk: Mineral Creek Mountainsnail (*Oreohelix pilsbryi*)

Wetlands

SMA used the National Wetland Inventory (NWI) database and Google Images to evaluate the presence of wetlands on the subject and adjoining properties. The NWI database was consulted on July 3, 2023. The information contained therein revealed no evidence of wetland habitat in or within the vicinity of the project area (Attachment 3). In addition, Google Earth imagery did not reveal wetland data (Attachment 4). There are drainages as evidenced by culverts to the west of the existing parking lot where water drains down gradient towards the western portion of project area. Although there is evidence of water drainage, no hydrophytic vegetation or hydric soils were observed during the site visit. In addition, the area has been previously disturbed. SMA opines that there are no jurisdictional wetlands in the project area and this project will have no negative impact on aquatic resources.

Field Reconnaissance

The field reconnaissance was conducted on August 8, 2023. SMA physically walked most of the subject property with NMSA Project Manager, Roberto Canales; first viewing the northern portion of the STARC building site, then the southern portion and western portion for potential parking lots. Adjoining properties were observed from the subject property boundaries and/or public rights-of-way. Site reconnaissance notes and photographs were collected for positive identification to adequately describe the flora and fauna observed in the project area (Attachment 5). The field reconnaissance was performed under the direction of Dr. Niki Harings, a biologist.

In general, the subject property is sparsely vegetated with shrubs and grasses. SMA did not observe any evidence of T&E species, migratory birds, nests, or roosts in the project area. There was also no evidence of jurisdictional wetlands within the project area. Common desert flora and fauna were observed as described below.

Vegetation observed within the survey area during the site visit include:

Common Name	Scientific Name
Honey Mesquite	*Prosopis glandulosa*
Yucca	*Yucca elata*
Wild Sunflower/Golden Crownbeard	*Verbesina encelioides*
Mullein	*Verbascum thapsus*
Snakeweed	*Gutierrezia sp.*
Silverleaf Nightshade	*Solanum elaeagnifolium*
Four-wing Saltbush	*Atriplex canescens*
Bunchgrass	*Unknown sp.*
Other Grasses	*Unknown sp.*

Animals or evidence of animals observed within the survey area during the site visit include:

Common Name	Scientific Name
Turkey Vulture	*Cathartes aura*
Desert Cottontail Rabbit (scat)	*Sylvilagus audubonii*
Checkered Whiptail Lizard	*Aspidoscelis tesselata*
Tarantula Hawk	*Pepsis grossa*
Dragonfly	Odonata Order *Unknown sp.*
Deer Fly	Diptera Order *Unknown sp.*
Harvester Ants	*Pogonomermyx* sp.
Ants (Unknown)	*Unknown sp.*

- Noxious weeds – No noxious weeds listed by the NM Department of Agriculture's Noxious Weed List were observed within the project area (Attachment 6).

- Rare Plants - No plants listed on the NM Rare Plant List maintained by the NMRPTC were observed within the project area (Attachment 7).

- There were undefined ephemeral ponding areas in the southwestern portion of the project area. Soils in the survey area are not classified as hydric (Attachment 8).

FINDINGS

The USFWS automated IPaC system and NMGF BISON-M system identified several T&E species. During the field reconnaissance SMA did not observe any individual federal or state-listed T&E species, migratory birds, or critical habitats within or near the project area. Furthermore, the IPaC system did not identify any critical habitats or fish hatcheries, nor were any physically observed. Based on the foregoing information, SMA opines that there are no threatened or endangered species present, nor is there habitat critical to the existence of T&E species; therefore, the Proposed Project is unlikely to significantly impact T&E species or habitat critical to their existence.

RECOMMENDATIONS

Regardless of the outcomes of this biological resource survey or any other environmental study, SMA recommends undertaking certain protective measures during construction:

- Ground and vegetation-disturbing activities be conducted outside of the bird breeding season to minimize potential impacts to bird species that may utilize the survey area. Disturbance activities are not limited for this project, however if active nests were present, preconstruction nesting surveys should be conducted by qualified personnel.

- Open trenches and ditches associated with construction of maintenance of underground or other features can trap small mammals, amphibians, and reptiles, and can cause injury to large mammals. High levels of mortality for these wildlife species are possible. Periods of highest activity for many of these species include nighttime, summer months and wet weather. For open trenches, even for temporary periods, best management practices should be implemented.

● ● ●

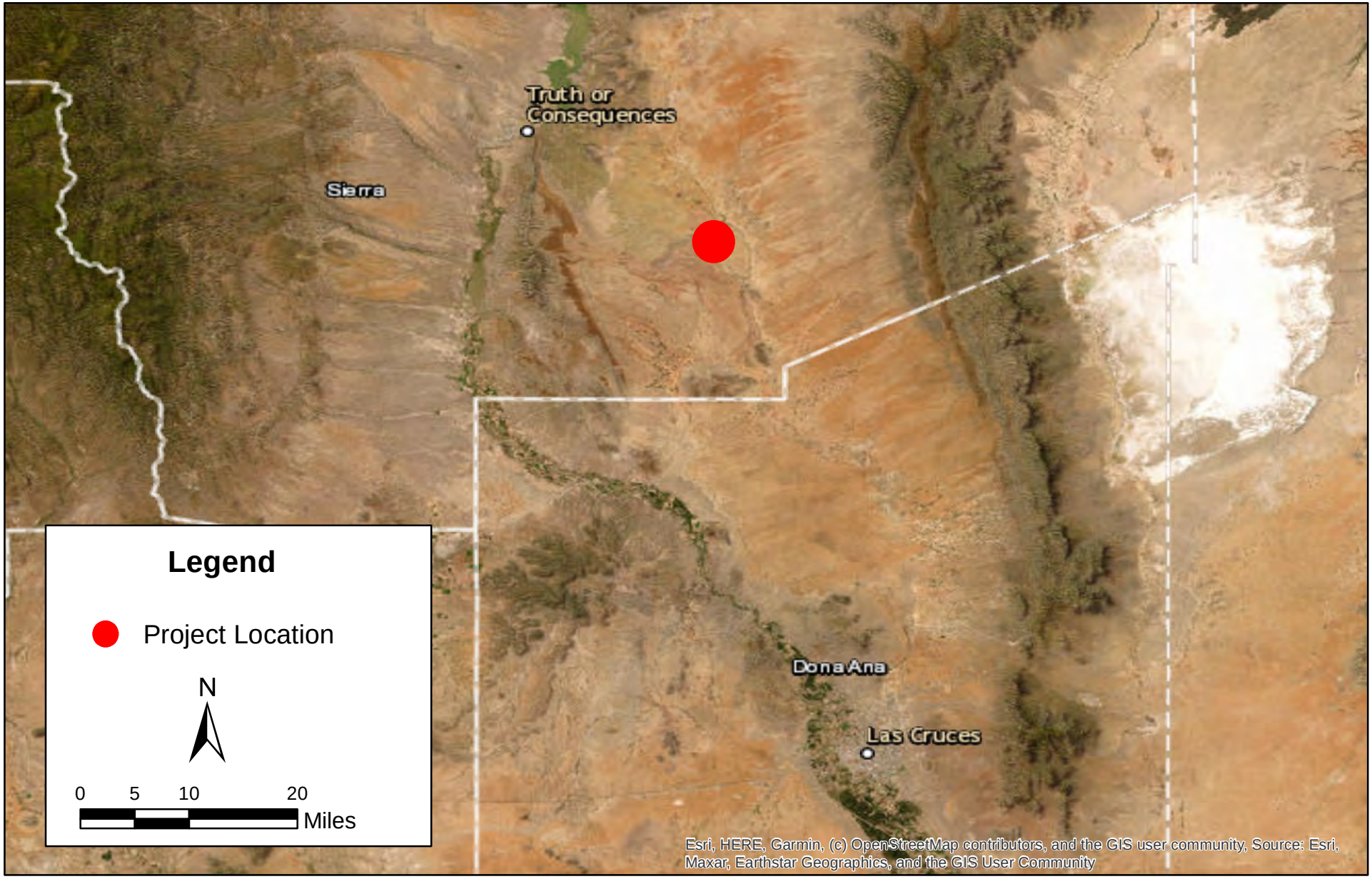
SMA appreciates the opportunity to provide professional consulting services to you. If you have any questions or comments concerning this report, please feel free to call me at (575) 647-0799 or contact me via e-mail.

Sincerely,

MILLER ENGINEERS, INC. D/B/A
SOUDER, MILLER & ASSOCIATES

Nicole Harings, PhD
Senior Scientist
niki.harings@soudermiller.com

Figures	1	Project Location Map
	2	Project Area Map
Attachments:	*1*	*United States Fish and Wildlife Service, IPaC Output*
	2	*New Mexico Fish and Game, BISON-M Output*
	3	*National Wetland Inventory*
	4	*Google Earth Image*
	5	*Field Reconnaissance Notes and Photographs*
	6	*Noxious Weeds List*
	7	*Rare Plants List*
	8	*USDA Web Soil Survey*



Project Location
Spaceport Tech and Reception Center, Phase I
Truth or Consequences, New Mexico

Figure 1

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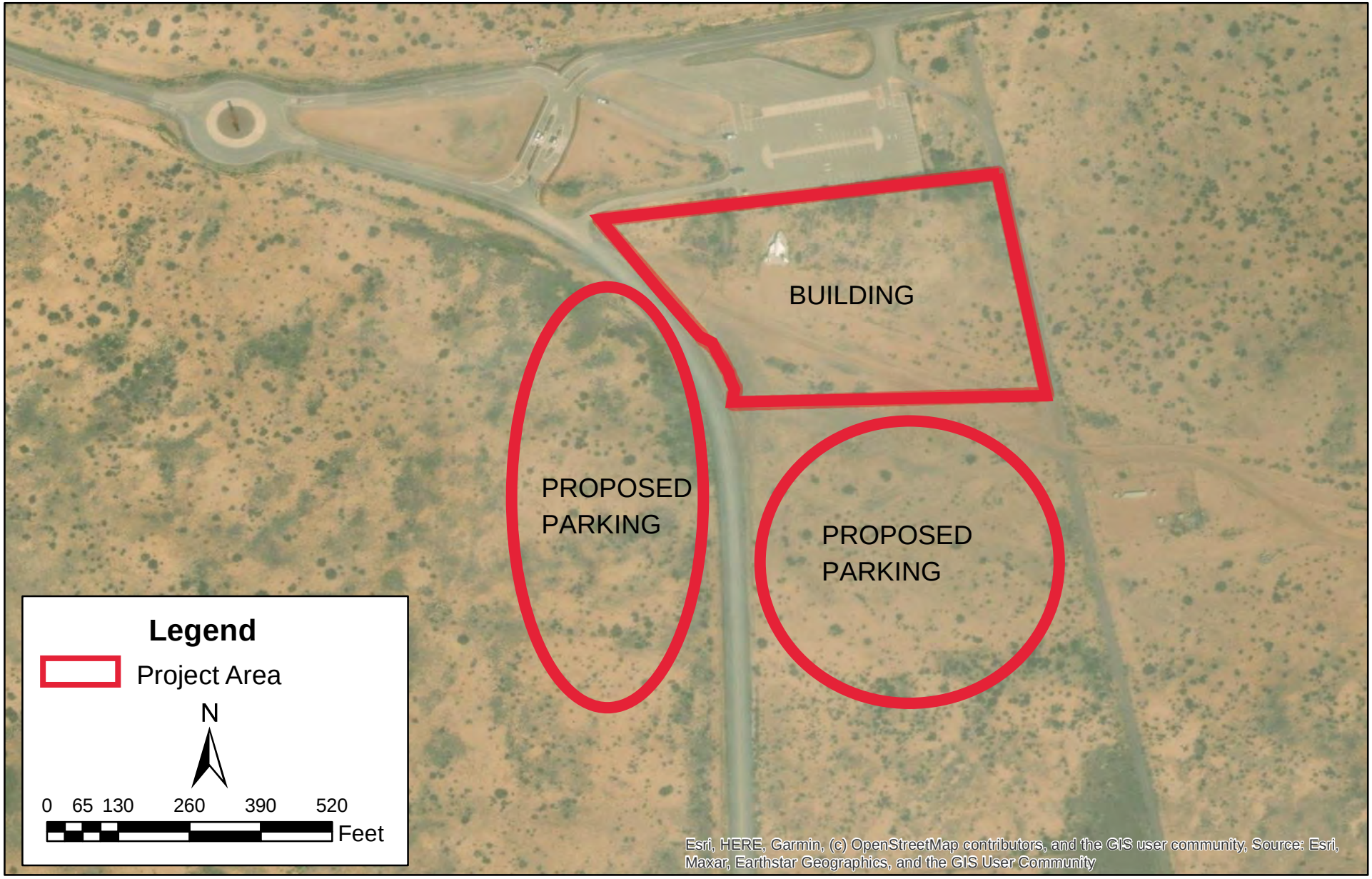

Project Area
Spaceport Tech and Reception Center, Phase I
Truth or Consequences, New Mexico

Figure 2

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ATTACHMENT 1
United States Fish and Wildlife Service, IPaC Output

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Sierra County, New Mexico

Local office

New Mexico Ecological Services Field Office

(505) 346-2525
(505) 346-2542

2105 Osuna Road Ne
Albuquerque, NM 87113-1001

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. 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.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
Mexican Spotted Owl Strix occidentalis lucida Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8196	Threatened
Northern Aplomado Falcon Falco femoralis septentrionalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1923	EXPN
Southwestern Willow Flycatcher Empidonax traillii extimus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6749	Endangered
Yellow-billed Cuckoo Coccyzus americanus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Amphibians

NAME	STATUS
Chiricahua Leopard Frog Rana chiricahuensis Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1516	Threatened

Fishes

NAME	STATUS
Rio Grande Cutthroat Trout Oncorhynchus clarkii virginalis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/920	Candidate
Rio Grande Silvery Minnow Hybognathus amarus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1391	Endangered

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS
Todsen's Pennyroyal Hedeoma todsenii Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1081	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

There are no documented cases of eagles being present at this location. However, if you believe eagles may be using your site, please reach out to the local Fish and Wildlife Service office.

Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence 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). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles 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 Rapid Avian Information Locator (RAIL) Tool.

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. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

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.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The data in this location indicates there are no migratory birds of conservation concern expected to occur in this area.

There may be migratory birds in your project area, but we don❓❓❓t have any survey data available to provide further direction. For additional information, please refer to the links above for recommendations to minimize impacts to migratory birds or contact your local FWS office.

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 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 list of migratory birds that potentially occur 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 Rapid Avian Information Locator (RAIL) 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 or migrating in my 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 query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. 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.

Facilities

National Wildlife Refuge lands

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 at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

ATTACHMENT 2
New Mexico Fish and Game, BISON-M Output

Species of Greatest Conservation Need and Federal or State Threatened/Endangered

Sierra

Taxonomic Group	# Species	Taxonomic Group	# Species
Amphibians	1	Birds	19
Fish	3	Mammals	2
Molluscs	1	Reptiles	1

TOTAL SPECIES: 27

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Mexican Gray Wolf	Canis lupus baileyi	E	E		Y	View
Penasco Least Chipmunk	Neotamias minimus atristriatus	E	P		Y	View
Common Ground Dove	Columbina passerina	E			Y	View
Yellow-billed Cuckoo (western pop)	Coccyzus americanus occidentalis		T	Y	Y	View
Lucifer Hummingbird	Calothorax lucifer	T			Y	View
Costa's Hummingbird	Calypte costae	T			Y	View
Broad-billed Hummingbird	Cynanthus latirostris	T			Y	View
Least Tern	Sternula antillarum	E			Y	View
Neotropic Cormorant	Phalacrocorax brasilianus	T			Y	View
Bald Eagle	Haliaeetus leucocephalus	T			Y	View
Common Black Hawk	Buteogallus anthracinus	T			Y	View
Mexican Spotted Owl	Strix occidentalis lucida		T	Y	Y	View
Elegant Trogon	Trogon elegans	E			Y	View
Aplomado Falcon	Falco femoralis	E	E		Y	View
Peregrine Falcon	Falco peregrinus	T			Y	View
Thick-billed Kingbird	Tyrannus crassirostris	E			Y	View
Southwestern Willow Flycatcher	Empidonax traillii extimus	E	E	Y	Y	View
Bell's Vireo	Vireo bellii	T			Y	View
Gray Vireo	Vireo vicinior	T			Y	View
Baird's Sparrow	Centronyx bairdii	T			Y	View
Varied Bunting	Passerina versicolor	T			Y	View
Mottled Rock Rattlesnake	Crotalus lepidus lepidus	T			Y	View
Chiricahua Leopard Frog	Lithobates chiricahuensis		T	Y	Y	View
Roundtail Chub (lower Colorado River populations)	Gila robusta	E	C		Y	View

Species of Greatest Conservation Need and Federal or State Threatened/Endangered
Sierra

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Gila Trout	Oncorhynchus gilae	T	T		Y	View
White Sands Pupfish	Cyprinodon tularosa	T			Y	View
Mineral Creek Mountainsnail	Oreohelix pilsbryi	T			Y	No Photo

ATTACHMENT 3
National Wetland Inventory on Google Earth Image

U.S. Fish and Wildlife Service
National Wetlands Inventory

Spaceport America NWI Map

July 26, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

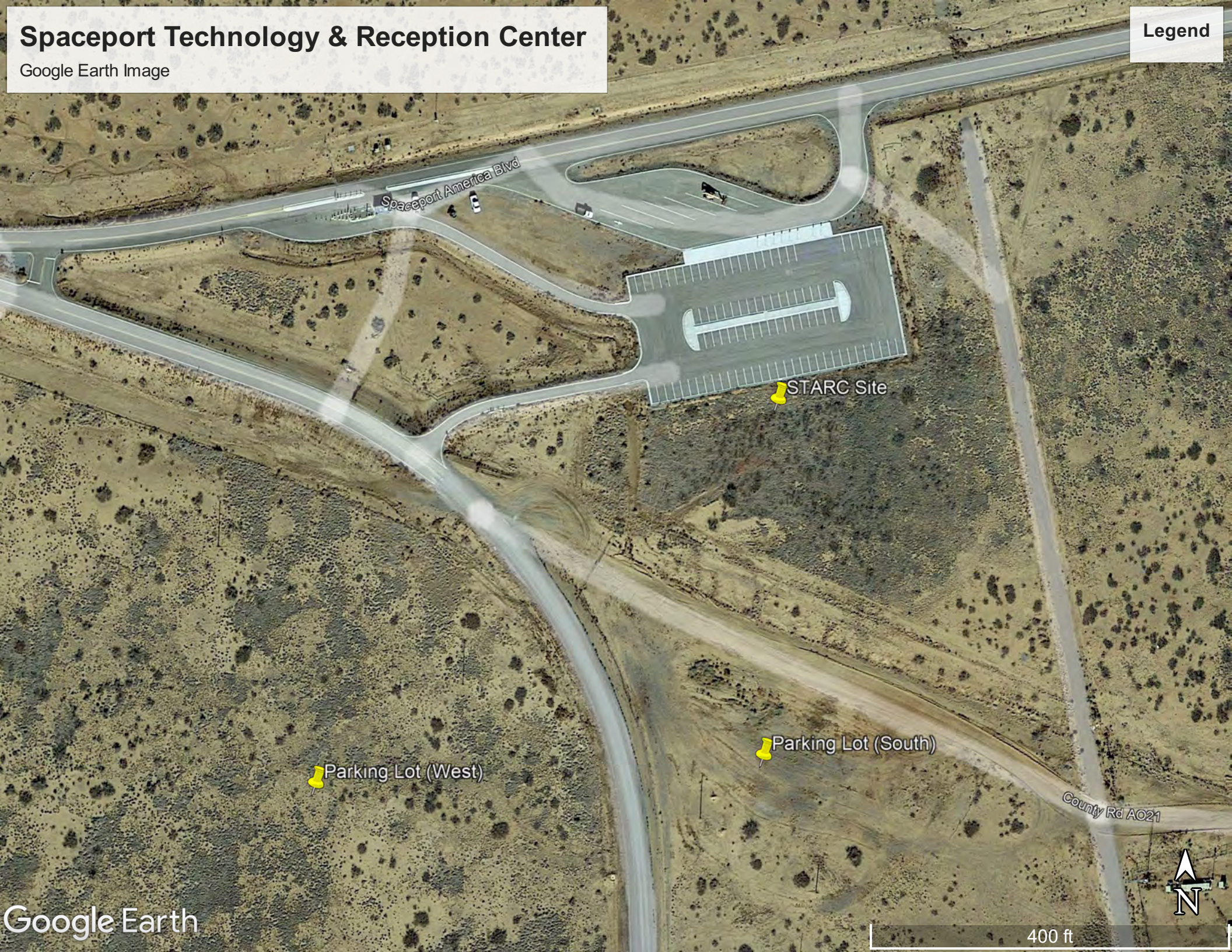
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

ATTACHMENT 4
Google Earth Image

Spaceport Technology & Reception Center

Google Earth Image



ATTACHMENT 5
Field Reconnaissance Notes and Photographs

Figure 1. View of small culvert southwest of existing parking lot and vegetated area next to culvert.

Figure 2. View of fenced area southwest of parking lot and connecting access road.

Figure 3. View of access road between the proposed parking lots, facing south and facing north.

Figure 4. View from northern extent of proposed parking, southwest of STARC site.

Figure 5. View from middle extent of proposed parking lot, southwest of STARC site.

Figure 6. View from southern extent of proposed parking lot, southwest of STARC site.

Figure 7. View of maintenance hole cover and landscape along access road between proposed parking lots.

Figure 8. View from southern boundary of existing parking lot and northern boundary of proposed STARC site, facing north.

Figure 9. View from proposed parking lot south of proposed STARC site, facing south.

Figure 10. View from northern extent of proposed parking south of STARC site, facing northeast and facing north.

ATTACHMENT 6
Noxious Weeds List

NEW MEXICO DEPARTMENT OF AGRICULTURE
Office of the Director/Secretary
MSC 3189
New Mexico State University
P.O. Box 30005
Las Cruces, NM 88003-8005
Phone: (575) 646-3007

July 2, 2020

MEMORANDUM

TO: General Public

FROM: Director/Secretary Jeff Witte

SUBJECT: New Mexico Noxious Weed List Update

Petitions to add new plant species to the state noxious weed list were solicited and received by the New Mexico Department of Agriculture (NMDA) from Cooperative Weed Management Areas, individuals, agencies and organizations. The petitions were reviewed by the New Mexico Weed List Advisory Committee using ecological, distribution, impact, and legal status criteria within the State of New Mexico and adjoining states.

This list does not include every plant species with the potential to negatively impact the state's environment or economy. Landowners and land managers are encouraged to recognize plant species listed on the federal noxious weed list and other western states' noxious weed lists as potentially having negative impacts and to manage them accordingly.

As required by the Noxious Weed Management Act of 1998, the following plant species *(see attached New Mexico Noxious Weed List)* are designated as noxious weeds to be targeted for control or eradication. Thank you to the Cooperative Weed Management Areas, individuals, agencies and organizations who participated in this process.

attachment: New Mexico Noxious Weed List

IMG/jm/jw

New Mexico Noxious Weed List

Updated June 2020

Class A Species

Class A species are currently not present in New Mexico or have limited distribution. Preventing new infestations of these species and eradicating existing infestations is the highest priority.

Common Name	Scientific Name
Black henbane	*Hyoscyamus niger*
Camelthorn	*Alhagi psuedalhagi*
Canada thistle	*Cirsium arvense*
Dalmation toadflax	*Linaria dalmatica*
Diffuse knapweed	*Centaurea diffusa*
Dyer's woad	*Isatis tinctoria*
Giant salvinia	*Salvinia molesta*
Hoary cress	*Cardaria spp.*
Leafy spurge	*Euphorbia esula*
Oxeye daisy	*Leucanthemum vulgare*
Purple loosestrife	*Lythrum salicaria*
Purple starthistle	*Centaurea calcitrapa*
Ravenna grass	*Saccharum ravennae*
Scentless chamomile	*Matricaria perforata*
Scotch thistle	*Onopordum acanthium*
Spotted knapweed	*Centaurea biebersteinii*
Yellow starthistle	*Centaurea solstitialis*
Yellow toadflax	*Linaria vulgaris*

Class B Species

Class B species are limited to portions of the state. In areas with severe infestations, management should be designed to contain the infestation and stop any further spread.

Common Name	Scientific Name
African rue	*Peganum harmala*
Bull thistle	*Cirsium vulgare*
Chicory	*Cichorium intybus*
Halogeton	*Halogeton glomeratus*
Malta starthistle	*Centaurea melitensis*
Perennial pepperweed	*Lepidium latifolium*
Poison hemlock	*Conium maculatum*
Quackgrass	*Elytrigia repens*
Spiny cocklebur	*Xanthium spinosum*
Teasel	*Dipsacus fullonum*

Class C Species

Class C species are widespread in the state. Management decisions for these species should be determined at the local level, based on feasibility of control and level of infestation.

Common Name	Scientific Name
Cheatgrass	*Bromus tectorum*
Curlyleaf pondweed	*Potamogeton crispus*
Eurasian watermilfoil	*Myriophyllum spicatum*
Giant cane	*Arundo donax*
Hydrilla	*Hydrilla verticllata*
Jointed goatgrass	*Aegilops cylindrica*
Musk thistle	*Carduus nutans*
Parrotfeather	*Myriophyllum aquaticum*
Russian knapweed	*Acroptilon repans*
Russian olive	*Elaeagnus angustifolia*
Saltcedar	*Tamarix spp.*
Siberian elm	*Ulmus pumila*
Tree of heaven	*Ailanthus altissima*

Watch List Species

Watch List species are species of concern in the state. These species have the potential to become problematic. More data is needed to determine if these species should be listed. When these species are encountered, please document their location and contact appropriate authorities.

Common Name	Scientific Name
Buffelgrass	*Pennisetum ciliaris*
Crimson fountaingrass	*Pennisetum setaceum*
Meadow knapweed	*Centaurea pratensis*
Myrtle spurge	*Euphorbia myrsinites*
Pampas grass	*Cortaderia sellonana*
Yellow bluestem	*Bothriochloa ischaemum*

ATTACHMENT 7
Rare Plants List

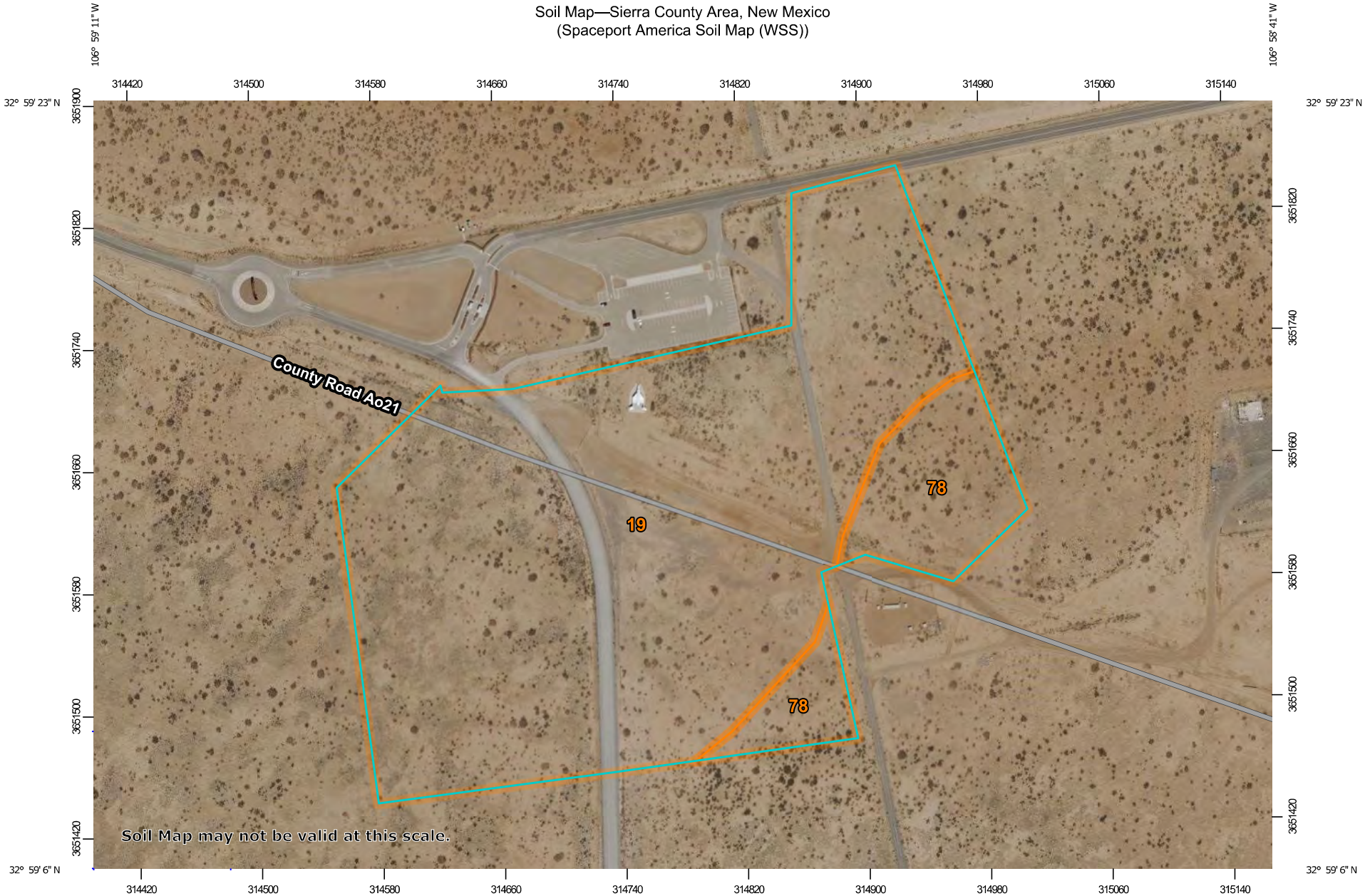
New Mexico Rare Plants - Otero County July 26, 2023

Scientific Name	NMRPTC	FWS	State of NM	USFS	BLM
Anulocaulis leiosolenus var. howardii	R				SEN
Aquilegia chaplinei	R				SEN
Argemone pinnatisecta	R	E	E	SEN	
Astragalus altus	R			SEN	
Astragalus neomexicanus	R				
Astragalus waterfallii	D				
Boechera zephyra	R				SEN
Bouteloua breviseta	D				
Carex lativena					
Carex mckittrickensis					
Cirsium inornatum	R				
Cirsium vinaceum	R	T	E		
Cirsium wrightii	R		E	SEN	SEN
Cladium californicum	D				
Delphinium novomexicanum	R				
Dermatophyllum guadalupense	R			SEN	SEN
Draba standleyi	R				
Echinocereus fendleri var. kuenzleri	R	E	E		
Epipactis gigantea	D				
Ericameria nauseosa var. texensis	R			SEN	
Erigeron rybius	R				
Eriogonum wootonii	R				
Escobaria villardii	R		E	SEN	SEN
Hedeoma pulcherrima	R				
Hedeoma todsenii	R	E	E		
Heuchera wootonii	R			SEN	
Hexalectris arizonica	R		E	SEN	
Hexalectris nitida	R		E		
Lepidospartum burgessii	R		E		SEN
Lilium philadelphicum var. andinum			E		
Lupinus sierrae-blancae	R				
Lupinus sierrae-blancae ssp. aquilinus	D				
Mentzelia humilis var. guadalupensis	R				SEN

Microthelys rubrocallosa	R	SEN	
Muhlenbergia villiflora var. villosa	R		
Nama xylopodum	R		
Nerisyrenia hypercorax	R		SEN
Paronychia wilkinsonii	R		SEN
Penstemon alamosensis	R	SEN	SEN
Penstemon cardinalis ssp. cardinalis	R		
Penstemon cardinalis ssp. regalis	R	SEN	SEN
Penstemon neomexicanus	R		
Perityle staurophylla var. staurophylla	R		
Phacelia cloudcroftensis	R	SEN	
Philadelphus microphyllus var. argyrocalyx	R		
Physaria aurea	R		
Potentilla sierrae-blancae	R	SEN	
Ribes mescalerium	R		
Rumex orthoneurus	D	SEN	
Sclerocactus papyracanthus	D		
Sedum integrifolium ssp. neomexicanum	R	SEN	
Senecio sacramentanus	R		
Senecio warnockii	R		
Synthyris oblongifolia	R	SEN	
Valeriana texana	R		
Viola calcicola	R		

ATTACHMENT 8
USDA Web Soil Survey

Soil Map—Sierra County Area, New Mexico
(Spaceport America Soil Map (WSS))



Map Scale: 1:3,550 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:48,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sierra County Area, New Mexico
Survey Area Data: Version 18, Sep 8, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 3, 2021—Apr 4, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
19	Berino-Dona Ana association, gently sloping	23.4	86.9%
78	Stellar-Continental association, gently sloping	3.5	13.1%
Totals for Area of Interest		**26.9**	**100.0%**