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## PROJECT INFORMATION

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**Project Title:** Area 19  
**Project Type:** ENERGY DEVELOPMENT, SOLAR  
**Latitude/Longitude (DMS):** 34.479125 / -106.569302  
**County(s):** SOCORRO; VALENCIA  
**Project Description:** Arevon Energy (Arevon) to support the development of the TG16 Solar and Storage Project (Project) a 371MWac PV and 371MWac BESS project located in Socorro County, New Mexico. We understand the challenges associated with a project of this type and know that ERM is the right partner for the job to reach a December 30, 2030 Commercial Operation Date (COD). ERM's team structure and approach have been tailored to address critical success factors, such as proposing a local New Mexico team of relevant specialists and permitted biologists and a management team that are prepared to prioritize this effort. We are excited to have the opportunity to help Arevon move this project forward with speed and care, and have identified the following ways we can bring value:

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## REQUESTOR INFORMATION

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**Project Organization:**  
**Contact Name:** James McCarron  
**Email Address:** james.mccarron@erm.com  
**Organization:** ERM  
**Address:** 1200 17th St 10th Floor, Denver CO 80202  
**Phone:** 8042057737

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## OVERALL STATUS

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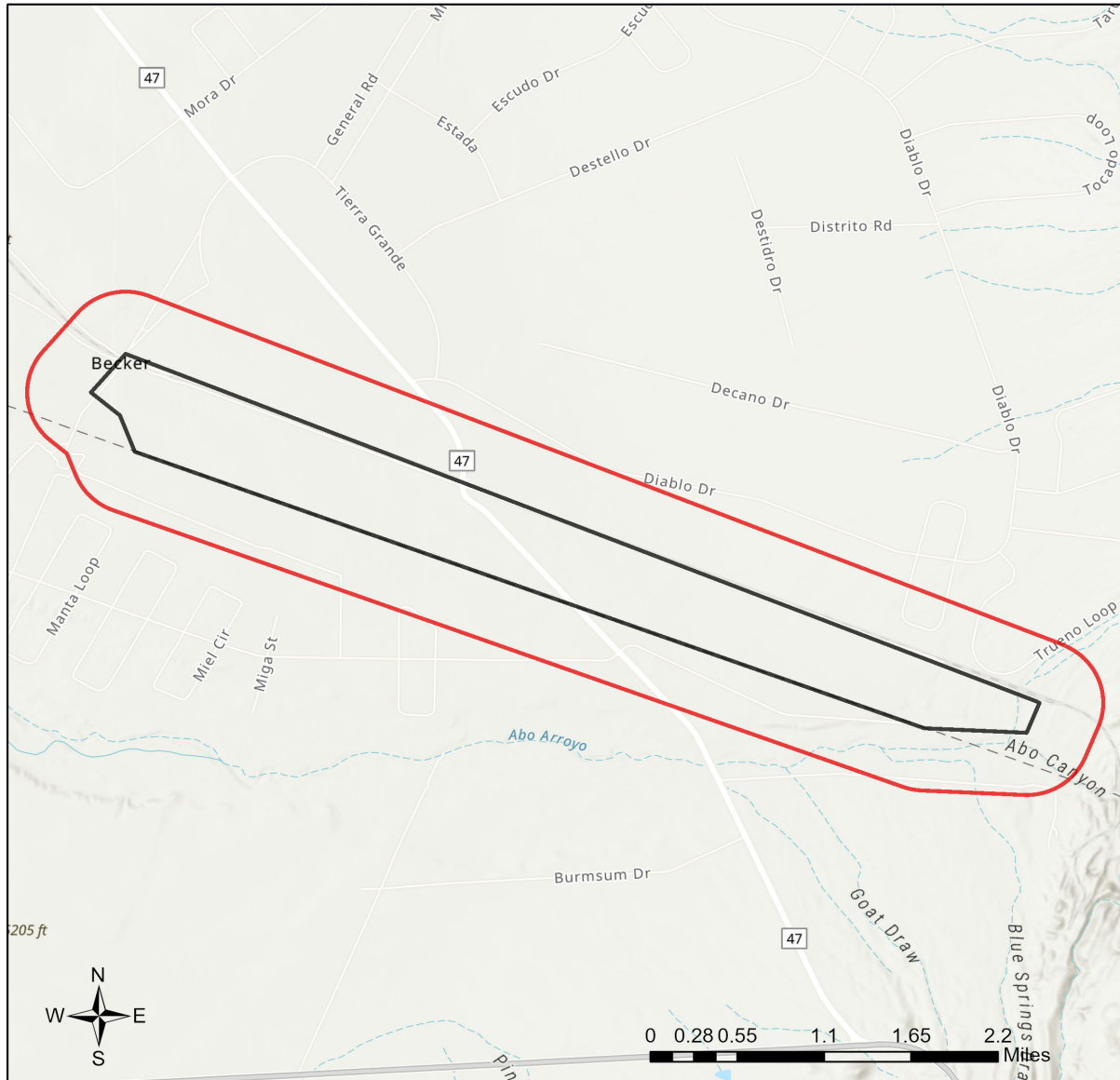
This report contains an initial list of recommendations regarding potential impacts to wildlife or wildlife habitats from the proposed project; see the Project Recommendations section below for further details. Your project proposal is being forwarded to a New Mexico Department of Game and Fish (Department) biologist for review to determine whether there are any additional recommendations regarding the proposed actions. A Department biologist will be in touch within 30 days if there are further recommendations regarding this project proposal.

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**About this report:**

- This environmental review is based on the project description and location that was entered. The report must be updated if the project type, area, or operational components are modified.
- This is a preliminary environmental screening assessment and report. It is not a substitute for the potential wildlife knowledge gained by having a biologist conduct a field survey of the project area. Federal status and plant data are provided as a courtesy to users. The review is also not intended to replace consultation required under the federal Endangered Species Act (ESA), including impact analyses for federal resources from the U.S. Fish and Wildlife Service (USFWS) using their [Information for Planning and Consultation tool](#).
- This report contains information on wildlife species protected under the ESA and the [Wildlife Conservation Act \(WCA\)](#), [Species of Greatest Conservation Need \(SGCN\)](#), and Species of Economic and Recreational Importance (SERI). Species listed under the ESA are protected from take at the federal level and under the WCA are protected from take at the state level. SGCN are identified in the [State Wildlife Action Plan \(SWAP\) for New Mexico](#); all of these species are considered to be of conservation concern but not all of them are protected from take at the state or federal level. The harvest of all SERI is regulated at the state level. The Department has no authority to designate critical habitat for species listed under the WCA; only the USFWS can designate critical habitat for species listed under the ESA.
- The New Mexico Environmental Review Tool (ERT) utilizes species observation locations and species habitat suitability models, both of which are subject to ongoing change and refinement. Inclusion or omission of a species within a report cannot guarantee species presence or absence within your project area. To determine occurrence of any species listed in this report, or other wildlife that may be present within your project area, onsite surveys conducted by a qualified biologist during appropriate, species-specific survey timelines may be necessary.
- The Department encourages use of the ERT to modify proposed projects for avoidance, minimization, or mitigation of wildlife impacts. However, the ERT is not intended to be used in a repeatedly iterative fashion to adjust project attributes until a previously determined recommendation is generated. The ERT serves to assess impacts once project details are developed. The [New Mexico Crucial Habitat Assessment Tool](#), the data layers from which are included in the ERT, is the appropriate system for advising early-stage project planning and design to avoid areas of anticipated wildlife concerns and associated regulatory requirements.

## Area 19



NHNM, USGS, USFS, US Census Bureau, NMDGF  
Texas Parks & Wildlife, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, USFWS  
Esri, NASA, NGA, USGS

**Special Status Animal Species Potentially within 650 Meters of Project Area**

| Common Name                                 | Scientific Name                             | USFWS (ESA) | NMDGF (WCA) | NMDGF<br>SGCN/SERI | USFS                 | USFS SCC       | BLM              |
|---------------------------------------------|---------------------------------------------|-------------|-------------|--------------------|----------------------|----------------|------------------|
| <a href="#">Boreal Chorus Frog</a>          | <a href="#">Pseudacris maculata</a>         |             |             | SGCN               |                      |                |                  |
| <a href="#">American Bittern</a>            | <a href="#">Botaurus lentiginosus</a>       |             |             | SGCN               |                      |                | BLM WATCH        |
| <a href="#">Aplomado Falcon</a>             | <a href="#">Falco femoralis</a>             |             | E           | SGCN               |                      |                |                  |
| <a href="#">Mountain Plover</a>             | <a href="#">Charadrius montanus</a>         |             |             | SGCN               | Sensitive<br>Species |                | BLM WATCH        |
| <a href="#">Flammulated Owl</a>             | <a href="#">Otus flammeolus</a>             |             |             | SGCN               |                      |                | BLM WATCH        |
| <a href="#">Western Burrowing Owl</a>       | <a href="#">Athene cunicularia hypugaea</a> |             |             | SGCN               | Sensitive<br>Species | USFS R3<br>SCC | BLM<br>SENSITIVE |
| <a href="#">Common Nighthawk</a>            | <a href="#">Chordeiles minor</a>            |             |             | SGCN               |                      |                |                  |
| <a href="#">Lewis's Woodpecker</a>          | <a href="#">Melanerpes lewis</a>            |             |             | SGCN               |                      | USFS R3<br>SCC | BLM WATCH        |
| <a href="#">Red-Headed Woodpecker</a>       | <a href="#">Melanerpes erythrocephalus</a>  |             |             | SGCN               |                      |                |                  |
| <a href="#">Williamson's Sapsucker</a>      | <a href="#">Sphyrapicus thyroideus</a>      |             |             | SGCN               |                      |                |                  |
| <a href="#">Olive-Sided Flycatcher</a>      | <a href="#">Contopus cooperi</a>            |             |             | SGCN               |                      |                |                  |
| <a href="#">Bank Swallow</a>                | <a href="#">Riparia riparia</a>             |             |             | SGCN               |                      |                |                  |
| <a href="#">Pinyon Jay</a>                  | <a href="#">Gymnorhinus cyanocephalus</a>   |             |             | SGCN               |                      | USFS R3<br>SCC | BLM<br>SENSITIVE |
| <a href="#">Juniper Titmouse</a>            | <a href="#">Baeolophus ridgwayi</a>         |             |             | SGCN               |                      | USFS R3<br>SCC | BLM WATCH        |
| <a href="#">Pygmy Nuthatch</a>              | <a href="#">Sitta pygmaea</a>               |             |             | SGCN               |                      |                |                  |
| <a href="#">Western Bluebird</a>            | <a href="#">Sialia mexicana</a>             |             |             | SGCN               |                      |                |                  |
| <a href="#">Mountain Bluebird</a>           | <a href="#">Sialia currucoides</a>          |             |             | SGCN               |                      |                |                  |
| <a href="#">Bendire's Thrasher</a>          | <a href="#">Toxostoma bendirei</a>          |             |             | SGCN               |                      | USFS R3<br>SCC | BLM<br>SENSITIVE |
| <a href="#">Loggerhead Shrike</a>           | <a href="#">Lanius ludovicianus</a>         |             |             | SGCN               |                      | USFS R3<br>SCC | BLM WATCH        |
| <a href="#">Gray Vireo</a>                  | <a href="#">Vireo vicinior</a>              |             | T           | SGCN               | Sensitive<br>Species | USFS R3<br>SCC | BLM WATCH        |
| <a href="#">Black-Throated Gray Warbler</a> | <a href="#">Setophaga nigrescens</a>        |             |             | SGCN               |                      |                | BLM WATCH        |
| <a href="#">Painted Redstart</a>            | <a href="#">Myioborus pictus</a>            |             |             | SGCN               |                      |                |                  |
| <a href="#">Black-Chinned Sparrow</a>       | <a href="#">Spizella atrogularis</a>        |             |             | SGCN               |                      |                | BLM WATCH        |

**Special Status Animal Species Potentially within 650 Meters of Project Area**

| Common Name                                      | Scientific Name                               | USFWS (ESA) | NMDGF (WCA) | NMDGF SGCN/SERI | USFS              | USFS SCC    | BLM           |
|--------------------------------------------------|-----------------------------------------------|-------------|-------------|-----------------|-------------------|-------------|---------------|
| <a href="#">Thick-billed Longspur</a>            | <a href="#">Rhynchophanes mccownii</a>        |             |             | SGCN            |                   |             | BLM SENSITIVE |
| <a href="#">Chestnut-Collared Longspur</a>       | <a href="#">Calcarius ornatus</a>             |             |             | SGCN            |                   |             | BLM SENSITIVE |
| <a href="#">Cassin's Finch</a>                   | <a href="#">Haemorhous cassinii</a>           |             |             | SGCN            |                   |             | BLM WATCH     |
| <a href="#">Evening Grosbeak</a>                 | <a href="#">Coccothraustes vespertinus</a>    |             |             | SGCN            |                   |             |               |
| <a href="#">Spotted Bat</a>                      | <a href="#">Euderma maculatum</a>             |             | T           | SGCN            | Sensitive Species | USFS R3 SCC | BLM SENSITIVE |
| <a href="#">Black-Tailed Prairie Dog</a>         | <a href="#">Cynomys ludovicianus</a>          |             |             | SGCN            | Sensitive Species |             | BLM SENSITIVE |
| <a href="#">Gunnison's Prairie Dog</a>           | <a href="#">Cynomys gunnisoni</a>             |             |             | SGCN            | Sensitive Species |             | BLM SENSITIVE |
| <a href="#">New Mexican Meadow Jumping Mouse</a> | <a href="#">Zapus hudsonius luteus</a>        | LE          | E           | SGCN            | Sensitive Species |             | BLM SENSITIVE |
| <a href="#">Mountain Lion</a>                    | <a href="#">Puma concolor</a>                 |             |             | SGCN            |                   |             |               |
| <a href="#">Elk</a>                              | <a href="#">Cervus canadensis</a>             |             |             | SGCN            |                   |             |               |
| <a href="#">Mule Deer</a>                        | <a href="#">Odocoileus hemionus</a>           |             |             | SGCN            |                   |             |               |
| <a href="#">Bighorn Sheep</a>                    | <a href="#">Ovis canadensis</a>               |             |             | SGCN            |                   |             |               |
| <a href="#">Rock Rattlesnake</a>                 | <a href="#">Crotalus lepidus</a>              |             |             | SGCN            |                   |             |               |
| <a href="#">Desert Massasauga</a>                | <a href="#">Sistrurus catenatus edwardsii</a> |             |             | SGCN            |                   |             |               |

Common Name hyperlink takes you to species account in [bison-m.org](https://www.bison-m.org/); Scientific Name hyperlink takes you to information in [NatureServe Explorer](#); ESA = Endangered Species Act, C = Candidate, LE = Listed Endangered, LT = Listed Threatened, XN = Non-essential Experimental Population, for other ESA codes see this [website](#); WCA = Wildlife Conservation Act, E = Endangered, T = Threatened; SERI = Species of Economic and Recreational Importance; SGCN = Species of Greatest Conservation Need; USFS = U.S. Forest Service, Sensitive Species = A species likely to occur on USFS lands that is of concern for a potential reduction in population viability; SCC = Species of Conservation Concern; BLM = Bureau of Land Management, BLM SENSITIVE = A species that occurs on BLM lands and whose viability is at risk, BLM WATCH = Species that may be added to the sensitive species list in future pending new information regarding species status.

## Project Recommendations

Your proposed project activities may require a custom review for assessment of potential effects to wildlife. See the "OVERALL STATUS" section above to determine the likelihood that your project will be reviewed further based on its location. A Department biologist will confirm whether any additional conservation measures are needed. You should expect to receive any additional project recommendations within 30 days of your project submission. If the "OVERALL STATUS" section indicates that no further consultation with the Department is required based on its location, then you will only receive additional project feedback from the Department if a biologist deems it necessary.

Grading or blading within the proposed solar project area should be minimized to the greatest extent possible. Minimize soil compaction by ensuring that heavy equipment has rubber tires and tracks and avoid the use of "drive and crush", "disc and roll", and other similar techniques. Whenever feasible, retain 60-70% native vegetation within the project area. This will help retain wildlife habitat features within the site and preserve existing vegetation and soil structure. Keeping the existing soil and root structures intact also helps to maximize water infiltration, minimize erosional run-off, and reduce biodiversity loss within the site.

Security perimeter fencing around the solar facility should be constructed to allow for some wildlife permeability. Leaving a 6 to 8 inch gap between the ground surface and bottom of the fence will allow smaller terrestrial wildlife species to move freely through the area and make use of any suitable habitat within the solar facility. Retain patches of undisturbed habitat within and adjacent to the project area and connect these patches with a minimum of 300 feet wide, unfenced corridors. For large solar arrays, optimally include a 300 feet wide corridor for every mile of fence and keep corridors as short as possible. Angle fencing at perimeter and corridor corners to facilitate animal movement around the project area.

To protect important and sensitive wildlife habitats, place solar arrays at least 200 feet from the edges of desert washes and build in previously disturbed or developed areas whenever possible. To minimize potential for fenced areas to drive animals onto roadways, place fenced areas at least 300 feet from roadways that don't have wildlife-proof fencing. In the event that development must encompass desert washes, ensure that fences do not cross these washes and fragment this sensitive habitat.

All migratory birds are protected against direct take under the federal [Migratory Bird Treaty Act](#) (16 U.S.C. Sections 703-712), and hawks, falcons, vultures, owls, songbirds, and other insect-eating birds are protected under New Mexico State Statutes (17-2-13 and 17-2-14 NMSA), unless permitted by the applicable regulatory agency. To minimize the likelihood of adverse impacts to migratory birds, nests, eggs, or nestlings, the Department recommends that ground disturbance and vegetation removal activities be conducted outside of the primary migratory bird breeding season. This season runs from 15 April - 1 September for upland songbirds, willow flycatcher (*Empidonax traillii*), yellow-billed cuckoo (*Coccyzus americanus*), and other riparian songbirds; 1 March - 1 September for most raptors; 1 January - 15 July for golden eagle (*Aquila chysaetos canadensis*) and great horned owl (*Bubo virginianus*); and 1 March - 15 September for low-elevation deserts. If ground disturbing and clearing activities must be conducted during the breeding season, the area should be surveyed for active nest sites (with birds or eggs present in the nesting territory) and avoid disturbing active nests until young have fledged. For active nests, establish adequate buffer zones to minimize disturbance to nesting birds. Buffer distances should be at least 100 feet from songbird and raven nests; 0.25 miles from most raptor nests; and 0.5 miles for ferruginous hawk (*Buteo regalis*), golden eagle, peregrine falcon (*Falco peregrinus*), and prairie falcon (*Falco mexicanus*) nests. Active nest sites in trees or shrubs that must be removed should be mitigated by qualified biologists or wildlife rehabilitators. Department biologists are available to consult on nest site mitigation and can facilitate contact with qualified personnel.

For post-construction reclamation of the solar project area, the Department recommends that the project proponent use only native plant species and that the reclamation seed mix is designed to enhance local pollinator habitat. The Department also recommends that only certified weed-free seed be used to avoid inadvertently introducing non-native species to the reclamation site. Any alternate plant species, used to substitute for primary plant species that are unavailable at the time of reclamation, should also be native. When possible, the Department recommends using seeds that are sourced from the same region and habitat type as the reclamation site and suggests including seeds from a region that represents potential future climatic conditions at the site.

Burrowing owl (*Athene cunicularia*) may occur within your project area. Burrowing owls are protected from take by the Migratory Bird Treaty Act and under New Mexico state statute. Before any ground disturbing activities occur, the Department recommends that a preliminary burrowing owl survey be conducted by a qualified biologist using the Department's [Burrowing Owl Survey Protocol](#). Should burrowing owls be documented in the project area, please contact the Department or USFWS for further recommendations regarding relocation or avoidance of impacts.

Prairie dog colonies may occur within the vicinity of your project area. Both black-tailed prairie dogs (*Cynomys ludovicianus*) and Gunnison's prairie dogs (*Cynomys gunnisoni*) are designated as New Mexico SGCN, and their colonies provide important habitat for other grassland wildlife. Wherever possible, occupied prairie dog colonies should be left undisturbed, and all project activities should be directed off the colony. Any burrows that are located on the project site should be surveyed by a qualified biologist to determine whether burrows are active or inactive and whether burrowing owls may be utilizing the site. Colonies within the range of the black-tailed prairie dog can be surveyed by a qualified biologist diurnally, year-round using binoculars. Colonies within the range of the Gunnison's prairie dog can be surveyed by a qualified biologist diurnally, using binoculars during the warmer months from April through October and by searching for fairly fresh scat and lack of cobwebs or debris at the mouths of burrows during the cold months (November through March). If ground-disturbing activities cannot be relocated off the prairie dog colony, or if project activities involve control of prairie dogs, the Department recommends live-trapping and relocation of prairie dogs. The Department can provide recommendations regarding suitability of potential translocation areas and procedures.

#### **Disclaimers regarding recommendations:**

- The Department provides technical guidance to support the persistence of all protected species of native fish and wildlife, including game and nongame wildlife species. Species listed within this report include those that have been documented to occur within the project area, and others that may not have been documented but are projected to occur within the project vicinity.
- Recommendations are provided by the Department under the authority of § 17-1-5.1 New Mexico Statutes Annotated 1978, to provide "communication and consultation with federal and other state agencies, local governments and communities, private organizations and affected interests responsible for habitat, wilderness, recreation, water quality and environmental protection to ensure comprehensive conservation services for hunters, anglers and nonconsumptive wildlife users".
- The Department has no authority for management of plants or Important Plant Areas. The [New Mexico Endangered Plant Program](#), under the Energy, Minerals, and Natural Resources Department's Forestry Division, identifies and develops conservation measures necessary to ensure the survival of plant species within New Mexico. Plant status information is provided within this report as a courtesy to users. Recommendations provided within the ERT may not be sufficient to preclude impacts to rare or sensitive plants, unless conservation measures are identified in coordination with the Endangered Plant Program.
- Additional coordination and/or consultation may also be necessary under the federal ESA or National Environmental Policy Act (NEPA). Further site-specific mitigation recommendations may be proposed during ESA consultation and/or NEPA analyses or through coordination with affected federal agencies.