



State of California – Natural Resources Agency  
DEPARTMENT OF FISH AND WILDLIFE  
Central Region  
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[www.wildlife.ca.gov](http://www.wildlife.ca.gov)

**GAVIN NEWSOM, Governor**  
**CHARLTON H. BONHAM, Director**



July 6, 2023

Cindi Hoover  
Kern County Planning and Natural Resources Department  
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**Subject: Carbon Frontier Carbon Capture and Sequestration Project (Project)  
Notice of Preparation (NOP)  
State Clearinghouse No. 2023060293**

Dear Cindi Hoover:

The California Department of Fish and Wildlife (CDFW) received a NOP from the Kern County Planning and Natural Resources Department for the above-referenced Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.<sup>1</sup>

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under Fish and Game Code.

## **CDFW ROLE**

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on

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<sup>1</sup> CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

**Fully Protected Species:** CDFW has jurisdiction over species of birds, mammals, amphibians, reptiles, and fish designated by statute as "fully protected" pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515. Take of any fully protected species is prohibited and CDFW cannot authorize their incidental take except as specifically provided for in Fish and Game Code; none of those specific exceptions are applicable to this project.

**Nesting Birds:** CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs and nests include sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

**Unlisted Species:** Species of plants and animals need not be officially listed as Endangered, Rare, or Threatened (E, R, or T) on any State or federal list to be considered E, R, or T under CEQA. If a species can be shown to meet the criteria for E, R, or T, as specified in the CEQA Guidelines section 15380, CDFW recommends it be fully considered in the environmental analysis for the Project.

## **PROJECT DESCRIPTION SUMMARY**

**Proponent:** Aera Energy, LLC

**Objective:** Aera Energy, LLC proposes the construction and operation of a carbon capture and storage (CSS) facility over portions of the existing and contiguous South Belridge and North Belridge oil fields near the community of Lost Hills in western Kern County. In the NOP, Kern County Planning and Natural Resources Department indicates that the CCS facility would involve the construction of appurtenant structures

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for the capture, transport, and subsurface injection (geologic sequestration) of carbon dioxide (CO<sub>2</sub>). Once the Project is implemented, CO<sub>2</sub> would be captured at newly constructed facilities within the South Belridge oil field and transported in newly constructed pipelines to existing abandoned oil wells in the North Belridge oil field. These wells will be retrofitted to function as injection wells and used to inject the captured CO<sub>2</sub> into the depleted underground oil- and gas-bearing geologic formation where it will be permanently sequestered.

The Kern County Planning and Natural Resources Department will prepare an Environmental Impact Report (EIR) for the Project. The NOP lacks detailed information with regard to the actual footprint of the Project (Project Site) within the oil fields, and does not address ground disturbance, staging, laydown, or other specific Project-related activities which could threaten biological resources and result in significant environmental impacts within the Project Site. CDFW expects these details will be provided in the EIR. CDFW also expects additional detail will be provided in the EIR addressing:

- the need for nightwork during construction or operations/maintenance of the facilities;
- construction of the pipeline (aboveground vs underground, support of aboveground sections);
- the phase of the CO<sub>2</sub> transported through the pipeline (gaseous or liquid); and
- potential catastrophic events (and emergency responses to those events) which could occur along the pipeline, at the capture facilities, and at the injection facilities over the life of the Project.

**Location:** The Project Site exists within the administrative boundaries of the existing South Belridge and North Belridge oil fields, which adjoin each other (one immediately north of the other) and are generally west of State Route 33 and north and south of Lerdo Highway. The oil fields containing the Project Site are approximately seven miles southwest of the community of Lost Hills and approximately 30 miles northwest of the city of Bakersfield in Kern County, California.

**Timeframe:** n/a

## COMMENTS AND RECOMMENDATIONS

**Special-Status Species:** Special-status species are known to exist in the vicinity of the Project Site, there is the potential for the Project to impact State and federally listed species. Records from the California Natural Diversity Database (CNDDDB) show that the following special-status species, including State and federally listed species (CDFW 2023) could be impacted: the State threatened and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*); the State and federally endangered and State fully

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protected blunt-nosed leopard lizard (*Gamelia sila*); the State and federally endangered and California Rare Plant Ranked (CRPR) 1B.1 California jewelflower (*Caulanthus californicus*); the State and federally endangered giant kangaroo rat (*Dipodomys ingens*), Tipton kangaroo rat (*Dipodomys nitratooides nitratooides*); the State threatened San Joaquin antelope squirrel (*Ammospermophilus nelsoni*), tricolored blackbird (*Agelaius tricolor*), and Swainson's hawk (*Buteo swainsoni*); the federally endangered and State species of special concern Buena Vista Lake ornate shrew (*Sorex ornatus relictus*); the federally endangered and CRPR 1B.2 San Joaquin woollythreads (*Monolopia congdonii*) and Kern mallow (*Eremalche parrye ssp. kernensis*); the candidates for State listing Temblor legless lizard (*Anniella alexanderae*) and Crotch bumble bee (*Bombus crotchii*); the State species of special concern burrowing owl (*Athene cunicularia*), short-nosed kangaroo rat (*Dipodomys nitratooides brevinasus*), Tulare grasshopper mouse (*Onychomys torridus tularensis*), western spadefoot (*Spea hammondi*), American badger (*Taxidea taxus*), San Joaquin coachwhip (*Masticophis flagellum ruddocki*), and Le Conte's thrasher (*Toxostoma lecontei*); and the CRPR 1B.1, 1B.2 and 4.2 California alkali grass (*Puccinellia simplex*), Coulter's goldfields (*Lasthenia glabrata ssp. coulteri*), heartscale (*Atriplex cordulata var. cordulata*), Lost Hills crownscale (*Atriplex coronata var. vallicola*), recurved larkspur (*Delphinium recurvatum*), showy golden madia (*Madia radiata*), and Hoover's eriastrum (*Eriastrum hooveri*).

CDFW recommends that a habitat assessment be conducted at and in the vicinity of the Project Site for the aforementioned plant and animal species. The assessment should be conducted by a qualified biologist knowledgeable with the species and any potentially suitable habitat identified should be surveyed by a qualified biologist for the potential presence of these species as part of the biological technical studies conducted in support of the EIR. If the surveys reveal the aforementioned listed and candidate species occur at and/or near the Project Site, the EIR should include either measures to avoid take of those species, or the Project proponent's commitment to obtaining incidental take authorization under Section 2081 of Fish and Game Code, as appropriate, if avoidance will be unfeasible. Similarly, if the surveys reveal the aforementioned unlisted species, the EIR should include a commitment by the Project proponent to consult with CDFW, prior to commencing the Project, to identify and implement appropriate measures to avoid or minimize impacts to those species. It should be noted that blunt-nosed leopard lizard is State fully protected, therefore, no "take", incidental or otherwise, can be authorized by CDFW; complete avoidance of this species is required to comply with State law.

CDFW recommends that the surveys for blunt-nosed leopard lizard, San Joaquin kit fox, tricolored blackbird, Swainson's hawk, and burrowing owl be conducted in accordance with the species-specific protocols which can be found here:

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<https://wildlife.ca.gov/Conservation/Survey-Protocols>. CDFW recommends that the surveys for the aforementioned special status and CRPR plants be surveyed for by a qualified botanist following the “Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities” which can also be found at: <https://wildlife.ca.gov/Conservation/Survey-Protocols>. This protocol, which is intended to maximize detectability, includes identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period. In the absence of protocol-level surveys being performed, additional surveys may be necessary. If take could occur as a result of Project-related activities, consultation with CDFW may be warranted.

**Nesting birds:** CDFW recommends that Project ground-disturbing activities occur during the bird non-nesting season; however, if ground-disturbing or vegetation-disturbing activities must occur during the nesting season (February 1st through September 15th), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes as referenced above.

To evaluate Project-related impacts on nesting birds, CDFW recommends that a general habitat assessment for nesting birds be conducted as part of the biological technical studies conducted in support of the EIR. Depending on the results of that assessment, CDFW further recommends that the EIR for this Project include that a qualified biologist conduct a pre-construction survey for active nests no more than 10 days prior to the start of ground- or vegetation-disturbance to maximize the probability that nests that could potentially be impacted are detected. CDFW also recommends that surveys cover a sufficient area around the Project Site to identify nests and determine their status. A sufficient area means any area potentially affected, either directly or indirectly, by the Project. In addition to direct impacts (i.e. nest destruction), noise, vibration, and movement of workers or equipment could also affect nests. CDFW recommends that a qualified biologist establish a behavioral baseline of all identified nests. Once Project activities begin, CDFW recommends having a qualified biologist continuously monitor nests to detect behavioral changes resulting from the Project. If behavioral changes occur, CDFW recommends halting the work causing that change and consulting with CDFW for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified biologist is not feasible, CDFW recommends the EIR include a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or on-site parental care for survival. Variance from these no-disturbance buffers is possible when there is a

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compelling biological or ecological reason to do so, such as when the Project Site would be concealed from a nest site by topography. CDFW recommends that a qualified biologist advise and support any variance from these buffers and notify CDFW in advance of implementing a variance.

**CNDDDB:** Please note that the CNDDDB is populated by and records voluntary submissions of species detections. As a result, species may be present in locations not depicted in the CNDDDB but where there is suitable habitat and features capable of supporting species. A lack of an occurrence record in the CNDDDB does not mean a species is not present. In order to adequately assess any potential Project-related impacts to biological resources, surveys conducted by a qualified biologist during the appropriate survey period(s) and using the appropriate protocol survey methodology are warranted in order to determine whether or not any special status species are present at or near the Project Site.

**Project Alternatives Analysis:** CDFW recommends that the information and results obtained from the biological technical surveys, studies, and analysis conducted in support of the project's CEQA document be used to develop and modify the Project's alternatives to avoid and minimize impacts to biological resources to the maximum extent possible. When efforts to avoid and minimize have been exhausted, remaining impacts to sensitive biological resources may need to be mitigated to reduce impacts to a less than significant level, if feasible.

**Cumulative Impacts:** CDFW recommends that a cumulative impact analysis be conducted for all biological resources that will either be significantly or potentially significantly impacted by implementation of the Project, including those whose impacts are determined to be less than significant with mitigation incorporated or for those resources that are rare or in poor or declining health and will be impacted by the project, even if those impacts are relatively small (i.e. less than significant). CDFW recommends cumulative impacts be analyzed using an acceptable methodology to evaluate the impacts of past, present, and reasonably foreseeable future projects on resources and be focused specifically on the resource, not the Project. An appropriate resource study area identified and utilized for this analysis is advised. CDFW staff is available for consultation in support of cumulative impacts analyses as a trustee and responsible agency under CEQA.

**Lake and Stream Alteration:** The Project may be subject to CDFW's regulatory authority pursuant to Fish and Game Code section 1600 et seq. Fish and Game Code section 1602 requires the Project proponent notify CDFW prior to commencing any activity that may (a) substantially divert or obstruct the natural flow of any river, stream, or lake; (b) substantially change or use any material from the bed, bank, or channel of any river, stream, or lake; or (c) deposit debris, waste or other materials that could pass

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into any river, stream, or lake. "Any river, stream, or lake" includes those that are ephemeral or intermittent as well as those that are perennial in nature. The EIR should address the potential Project-related impacts to all streams at and near the Project Site. For additional information on notification requirements, please contact our staff in the LSA Program at (559) 243-4593, or [R4LSA@wildlife.ca.gov](mailto:R4LSA@wildlife.ca.gov).

**Federally Listed Species:** CDFW recommends consulting with the USFWS on potential impacts to federally listed species including, but not limited to the aforementioned San Joaquin kit fox, blunt-nosed leopard lizard, California jewelflower, giant kangaroo rat, Tipton kangaroo rat, Buena Vista Lake ornate shrew, San Joaquin woollythreads, and Kern mallow. Take under the Federal Endangered Species Act (FESA) is more broadly defined than CESA; take under FESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. Consultation with the USFWS in order to comply with FESA is advised well in advance of any ground disturbing activities.

CDFW is available to meet with you ahead of draft EIR preparation to discuss potential impacts and possible mitigation measures for some or all of the resources that may be analyzed in the EIR. If you have any questions, please contact Steven Hulbert, Senior Environmental Scientist Specialist, at the address provided on this letterhead, by telephone at (559) 575-6415, or by electronic mail at [Steven.Hulbert@wildlife.ca.gov](mailto:Steven.Hulbert@wildlife.ca.gov).

Sincerely,

DocuSigned by:  
  
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**FOR** Julie A. Vance  
Regional Manager

ec: United States Fish and Wildlife Service  
Patricia Cole; [patricia\\_cole@fws.gov](mailto:patricia_cole@fws.gov)

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## **REFERENCES CITED**

California Department of Fish and Wildlife. 2023. Biogeographic Information and Observation System (BIOS). <https://www.wildlife.ca.gov/Data/BIOS>. Accessed June 27, 2023.