



State of California – Natural Resources Agency  
DEPARTMENT OF FISH AND WILDLIFE  
Central Region  
1234 East Shaw Avenue  
Fresno, California 93710  
(559) 243-4005  
[www.wildlife.ca.gov](http://www.wildlife.ca.gov)

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



August 7, 2024

Keith Alvidrez, Planner II  
Kern County Planning and Natural Resources Department  
2700 M Street, Suite 100  
Bakersfield, California 93301  
[CF-EIRComments@kerncounty.com](mailto:CF-EIRComments@kerncounty.com)

**Subject: CarbonFrontier Carbon Capture and Storage Project (Project)  
Draft Environmental Impact Report (DEIR)  
State Clearinghouse No. 2023060293**

Dear Keith Alvidrez:

The California Department of Fish and Wildlife (CDFW) received a Draft Environmental Impact Report (DEIR) from Kern County Planning and Natural Resources Department (Lead Agency) 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 projects and related activities that have the potential to adversely affect fish and wildlife resources.

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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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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 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.

**Bird Protection:** 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).

**Other Special Status 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 (California Code of Regs tit. 14, Chapter 3, § 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 (CCS) 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 DEIR, the Lead Agency indicates the CCS facility would involve the construction of appurtenant structures 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 injection wells in the North Belridge oil field, a distance of at most, eleven miles. These injection wells will include newly constructed injection wells as well as abandoned oil production which have been retrofitted to function as injection wells. The nine injection wells will be used to inject the captured CO<sub>2</sub> into a depleted underground oil- and gas-bearing geologic formation where it will be permanently sequestered. The receiving underground formation is estimated to underly approximately 2,290 acres of land owned by Aera Energy, LLC and at capacity will contain as much as 44.1 million tons of

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CO<sub>2</sub>. In addition to the nine injection wells and 14.7 miles of pipeline, the Project will involve eight monitoring wells.

In response to a Notice of Preparation (NOP) circulated for public comment by the Lead Agency, June 9, 2023, CDFW submitted comments (in a letter dated July 6, 2023) which, in part, recommended the Lead Agency address:

- 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.

The DEIR addressed the above listed items reporting that:

- nightwork would be limited to nighttime responses to emergency situations and temporary continuous drilling activities during the construction phase. In the DEIR the Lead Agency imposes limitations on any artificial lighting that would be necessitated by these night work activities;
- the CO<sub>2</sub> conveyance and distribution pipelines (and associated water lines) would be installed above ground over concrete/steel support structures constructed at grade at about 20-foot intervals along the length of the Project, except in those areas where the pipelines intersect roads. In these areas where the pipelines intersect roads, the pipelines would be buried underground employing trenching techniques;
- the CO<sub>2</sub> will be transported in its vapor and dense phase (under pressure) states; and
- the Project proponent has developed an emergency response plan to respond to suspected endangerment of: the underground source of drinking water, human health, or the environment from the non-toxic, non-flammable CO<sub>2</sub> which at standard temperatures and pressure is gaseous and heavier than air. Shutoff valves will be incorporated into the conveyance/injection system which will be used to shut the system down in the event of a leak from the pipeline or the underground storage formation.

**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:** The CO<sub>2</sub> collection, conveyance, injection, and monitoring systems will require between two and three years to construct and the system is expected to operate for approximately 20 years after construction is complete. Monitoring of the sequestered CO<sub>2</sub> could continue for another 50 years.

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## COMMENTS AND RECOMMENDATIONS

**Special-Status Species:** Special-status species are known to exist in the vicinity of the Project Site and 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 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 nitratoides nitratoides*); 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's bumble bee (*Bombus crotchii*); the state species of special concern burrowing owl (*Athene cunicularia*), short-nosed kangaroo rat (*Dipodomys nitratoides 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*).

In CDFW's July 2023 letter providing comments on the Lead Agency's NOP, CDFW recommended that a habitat assessment be conducted at and in the vicinity of the Project Site for the aforementioned **plant** species. In the DEIR, the Lead Agency reports that no individuals of the ten plant species listed above were observed during 2023 botanical surveys, and that they all have a "low" or only "moderate" potential to occur or are "not likely to occur." Although none of the special status plants were observed during the 2023 botanical survey, the Lead Agency states the Project proponent will conduct additional botanical surveys, implement no-disturbance buffers, obtain take authorization, conduct restoration, and mitigate for Project-related impacts to habitat thereby reducing the Project-related impacts to special status plants at the Project Site to a less than significant level.

In CDFW's July 2023 letter providing comments on the Lead Agency's NOP, CDFW recommended that a habitat assessment be conducted at and in the vicinity of the Project Site for the aforementioned **animal** species. In the DEIR, the Lead Agency reports that during reconnaissance surveys conducted at the Project Site, no individual western spadefoot, tricolored blackbird, burrowing owl, LeConte's thrasher, Crotch's bumble bee, giant kangaroo rat, short-nosed kangaroo rat, Tipton kangaroo rat, Tulare grasshopper mouse, San Joaquin kit fox, San Joaquin pocket mouse, Buena Vista Lake ornate shrew, American badger, or Temblor legless lizard were observed. However, individual Swainson's hawk, horned lark, prairie falcon, loggerhead shrike, San Joaquin antelope squirrel, blunt-

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nosed leopard lizard, and San Joaquin coachwhip were observed during reconnaissance surveys of the Project Site. Additionally, CDFW understands that two individual Crotch's bumble bee were incidentally observed at the Project Site by the Project proponent. The Lead Agency has appropriately included requirements for additional focused/protocol surveys, no-disturbance buffers, take authorization (for those species which are state or federally listed), restoration of habitat, which is only temporarily impacted, and mitigation for permanent impacts to habitat thereby reducing the Project-related impacts to plants at the Project Site to a less than significant level.

After reviewing the provided CEQA document, CDFW concurs with the biological resources related analyses and measures proposed in the DEIR and recommends that all such measures in the DEIR be carried forward into the Final EIR. CDFW has determined the biological resource mitigation measures as currently documented in the DEIR are sufficient for mitigation of potential project related impacts to listed species. Please note that implementation of certain mitigation measures such as the relocation of listed species would constitute take of listed species under CESA, and erecting exclusion fencing could also result in take of listed species under CESA. Such take of any species listed under CESA would be unauthorized if an Incidental Take Permit (ITP) pursuant to Fish and Game Code section 2081(b) was not acquired in advance of such actions. It is recommended to consult with CDFW before any ground disturbing activities commence and to obtain an ITP if take (including capture related to salvage and relocation) cannot be avoided.

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:  
*Gerald Hatler*

**FOR** Julie A. Vance  
Regional Manager

ec: United States Fish and Wildlife Service  
Justin Sloan; [Justin\\_Sloan@fws.gov](mailto:Justin_Sloan@fws.gov)

California Department of Fish and Wildlife  
LSA/1600; [R4LSA@wildlife.ca.gov](mailto:R4LSA@wildlife.ca.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.