



State of California – Natural Resources Agency  
 DEPARTMENT OF FISH AND WILDLIFE  
 Marine Region  
 1933 Cliff Drive, Suite 9  
 Santa Barbara, CA 93109  
[wildlife.ca.gov](http://wildlife.ca.gov)

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



**Governor's Office of Planning & Research**

June 16, 2022

**Jun 16 2022**

**STATE CLEARINGHOUSE**

Jacqueline Zipkin  
 East Bay Dischargers Authority  
 2651 Grant Avenue  
 San Lorenzo, CA 94580  
[jzipkin@ebda.org](mailto:jzipkin@ebda.org)

**Cargill Mixed Sea Salt Processing and Brine Discharge Project (PROJECT)  
 Notice of Preparation (NOP)  
 SCH# 2022050436**

Dear Ms. Zipkin:

The California Department of Fish and Wildlife (Department) received a NOP from the East Bay Dischargers Authority (EBDA) for the 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, we appreciate the opportunity to provide comments regarding those aspects of the Project that the Department, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

**DEPARTMENT ROLE**

The Department 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, Section 711.7, subd. (a) & 1802; Pub. Resources Code, Section 21070; CEQA Guidelines Section 15386, subd. (a).) The Department, 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.*, Section 1802.) Similarly for purposes of CEQA, the Department 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. The Department is also responsible for marine biodiversity protection under the Marine Life Protection Act in coastal marine waters of California, and ensuring fisheries are sustainably managed under the Marine Life Management Act. The Department is also submitting comments as a Responsible Agency under CEQA. (Pub. Resources Code, Section 21069; CEQA Guidelines, Section 15381.). The Department expects that it may need to exercise regulatory

<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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authority as provided by the Fish and Game Code. As proposed, the Project may be subject to the Department's lake and streambed alteration regulatory authority (Fish & G. Code, Section 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, Section 2050 et seq.), related authorization as provided by the Fish and Game Code will be required. Pursuant to our jurisdiction, the Department has the following comments and recommendations regarding the Project.

## **REGULATORY REQUIREMENTS**

*California Endangered Species Act:* Please be advised that a CESA Incidental Take Permit (ITP) should be obtained if the Project has the potential to result in "take" of plants or animals listed under CESA, either during construction or over the life of the Project. Issuance of a CESA Permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially restrict the range or reduce the population of a threatened, rare, or endangered species (Pub. Resources Code, Section 21001, subd. (c), 21083; CEQA Guidelines, Sections 15380, 15064, and 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with Fish and Game Code Section 2080.

*Lake and Streambed Alteration (LSA):* The Department requires an LSA Notification, pursuant to Fish and Game Code Section 1600 et. seq., for Project activities affecting lakes or streams and associated riparian habitat. Notification is required for any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake, or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are subject to notification requirements. The Department, as a Responsible Agency under CEQA, will consider the CEQA document for the Project and may issue an LSA Agreement. The Department may not execute the final LSA Agreement (or ITP) until it has complied with CEQA as a Responsible Agency.

## **PROJECT DESCRIPTION SUMMARY**

**Proponent:** Cargill, Incorporated

**Objective:** Cargill is proposing to enhance extraction of additional salts from the mixed sea salts (MSS) inventory stored at its Solar Salt Facility in Newark, CA. After

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harvesting additional product, the residual MSS would be dissolved in San Francisco Bay (Bay) water to produce a brine that would be pumped into EBDA's combined effluent conveyance system. Once in EBDA's conveyance system, the brine would be blended with and further diluted by additional effluent and then discharged back into the Bay at an average rate ranging from 0.9 million gallons per day (MGD) to 2 MGD, (taking approximately 20 to 10 years, respectively), in accordance with EBDA's National Pollutant Discharge Elimination System (NPDES) permit. Through this process, the volume of brine and precipitated salts stored in ponds adjacent to the Bay at the Solar Salt Facility would be reduced. The proposed project would involve construction of new pipelines and pumping facilities within Cargill's Solar Salt Facility and construction of approximately 16 miles of new underground pipeline, primarily within roadway rights-of-way, to connect the Solar Salt Facility to EBDA's outfall system on the site of the Oro Loma Sanitary District/Castro Valley Sanitary District Water Pollution Control Plant in the community of San Lorenzo.

**Location:** The Project is located in the eastern San Francisco Bay Area, including portions of San Lorenzo, an unincorporated community in Alameda County, and portions of the cities of Hayward, Union City, Fremont, and Newark. Specifically, project improvements would be constructed at Cargill's Solar Salt Facility, located at 7220 Central Avenue in Newark, California, and primarily within roadway rights-of-way between the Solar Salt Facility and the Oro Loma Sanitary District/Castro Valley Sanitary District Water Pollution Control Plant in San Lorenzo. The MSS are primarily situated in Ponds 12 and 13 of Cargill's Solar Salt Facility, which are located within the United States Fish and Wildlife Service's (USFWS) Don Edwards San Francisco Bay National Wildlife Refuge.

**Timeframe:** Up to the year 2040 with the potential termination before that date or potentially continuing beyond 2040 under a renegotiated agreement between Cargill and EBDA.

## **MARINE BIOLOGICAL SIGNIFICANCE**

The Bay-Delta is the second largest estuary in the United States and supports numerous aquatic habitats and biological communities. It encompasses 479 square miles, including shallow mudflats. This ecologically significant ecosystem supports both state and federally threatened and endangered species and sustains important commercial and recreational fisheries.

## **STATE AND FEDERALLY LISTED AND COMMERCIAL/RECREATIONALLY IMPORTANT SPECIES**

Protected species under the State and Federal Endangered Species Acts that could potentially be present near Project activities include:

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- White-tailed kite (*Elanus leucurus*; State fully protected)
- California least tern (*Sternula antillarum browni*; federal and State endangered and State fully protected)
- Brown pelican (*Pelecanus occidentalis californicus*; State fully protected)
- Salt-marsh wandering shrew (*Sorex vagrans halicoetes*; SSC)
- Northern harrier (*Circus hudsonius*; SSC)
- Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*; SSC)
- Alameda song sparrow (*Melospiza melodia pusillula*; SSC)
- Yellow rail (*Coturnicops noveboracensis*; SSC)
- Longfin smelt (*Spirinchus thaleichthys*; federal candidate and State threatened)
- Central California Coast steelhead (*Oncorhynchus mykiss*; federal threatened; Central California Coast and Central Valley ESUs)
- Green sturgeon (*Acipenser medirostris*; federal threatened; southern DPS)
- White Sturgeon (*A. transmontanus*; SSC)

Several species with important commercial/recreational fisheries value and habitat value for spawning and rearing could potentially be present near Project activities. These include:

- Pacific herring (*Clupea pallasii*)
- Crangon shrimp (*Crangon* spp.)
- Surfperches (Embiotocidae)
- Eelgrass (*Zostera marina*).

## COMMENTS AND RECOMMENDATIONS

The Department offers the comments and recommendations below to assist EBDA in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

### I. Project Level Impacts and Other Considerations

#### Brine Discharge

**Comment:** Brine disposal through the Oro Loma Sanitary District/Castro Valley Sanitary District Water Pollution Control Plant outfall will increase salinity at and around the discharge point and could also release contaminants into the marine environment. If brine disposal is inconsistent, this will cause salinity at the discharge to fluctuate. Changes in salinity and release of contaminants in brine from desalination plants have been observed to impact a range of marine fauna and

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communities (Jenkins et al. 2012). Larvae and other small organisms may also become entrained in the jets arising from diffusers (Foster et al. 2013).

**Recommendation:** The Department recommends the draft Environmental Impact Report (DEIR) discuss the timing of when discharges into the Bay will occur. In addition, the DEIR should include modeling of the Zone of Initial Dilution (ZID) under all proposed discharge scenarios as well as what proposed future modeling of the ZID will occur. Additionally, the DEIR, as recommended below, should describe how the discharge may affect marine species, larval fish, water temperature, and salinity levels in the vicinity of the brine discharge at these times.

**Recommendation:** The Department recommends the DEIR discuss the brine salinity and how much higher salinity levels could be, above ambient, under the various discharge rates proposed.

**Recommendation:** The Department recommends the DEIR discuss the potential impacts to aquatic species and habitats, specifically eelgrass, from the potentially elevated salinity levels in the area surrounding the discharge into the Bay.

**Recommendation:** The Department recommends the DEIR discuss any potential upgrades that may be needed to the existing outfall at the Oro Loma Sanitary District/Castro Valley Sanitary District Water Pollution Control Plant to handle and diffuse the brine discharge and the potential impacts caused by these construction activities.

### **Pump Station Construction**

**Comment:** The NOP describes the potential need for additional pump stations to be constructed at the southern end of the Project. Water intakes within the Bay have shown the potential to entrain and/or impinge listed species, specifically the longfin smelt. Impacts such as entrainment and/or impingement of listed species would be considered take under Fish and Game Code Section 2080.

**Recommendation:** The Department recommends that the DEIR discuss the potential marine and terrestrial species and habitat impacts from water intake structures being constructed for the Project and whether the potential for take of state listed species may occur.

### **Project Alternatives**

**Comment:** The NOP listed three Project alternatives that have different alignments of the pipeline to bring brine to the Oro Loma Sanitary District/Castro Valley Sanitary District Water Pollution Control Plant. These alignments could all pose different impacts depending on the exact location, methods used to place the pipeline, and habitats that it may traverse. Additionally, the use of directional drilling under

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sensitive habitats poses the potential for impacts on the surface in the event of a frac-out event.

**Recommendation:** The Department recommends that the DEIR describe in detail the potential impacts to species and habitats from each of the proposed alternative pipeline alignments.

**Recommendation:** The Department recommends that the DEIR describe measures taken to avoid a potential frac-out during directional drilling activities and measures that would be taken in the event of a frac-out occurring.

### **Construction Adjacent to Eden Landing Ecological Reserve**

**Comment:** Under the Project alternatives the alignment of the brine pipeline appears to be adjacent to or within Eden Landing Ecological Reserve which is a Department-managed property. From the map provided in the NOP it appears that the alignment is in the vicinity of the Bay Trail and supporting levee along Mt. Eden Creek. If the trail were to be affected by construction of one of these pipeline alignments, it could impact recreational use and the Department's ability to use the trail for operations and access.

**Recommendation:** The Department recommends the DEIR discuss the proposed pipeline and alternative alignments and whether there would be any anticipated impacts to Eden Landing Ecological Reserve or the surrounding area. Avoidance and/or minimization measures that would be adhered to during construction adjacent to or within the reserve should also be discussed.

## **II. Editorial Comments and/or Suggestions**

### **Brine Discharge Amount**

**Location in Document:** On p. 2, the NOP states that the brine discharge rate would range from 0.9 MGD to 2 MGD. On p. 3, under Project Description, it is stated that the brine discharge would range from 0.9 MGD to 1.8 MGD.

The DEIR should be consistent in discussing the volume of brine to be discharged for agencies and the public to adequately review the potential impacts to habitats and species in the Bay from this portion of the Project.

### **ENVIRONMENTAL DATA**

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, Section 21003, subd. (e).). Accordingly, please report any special status species and

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natural communities detected during Project surveys to the California Natural Diversity Database (CNDDDB). The CNDDDB field survey form can be found at the following link: <https://wildlife.ca.gov/Data/CNDDDB/SubmittingData#44524420-pdf-field-survey-form>. The completed form can be mailed electronically to CNDDDB at the following email address: [CNDDDB@wildlife.ca.gov](mailto:CNDDDB@wildlife.ca.gov). The types of information reported to CNDDDB can be found at the following link: <https://wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

## FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by the Department. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, Section 753.5; Fish & G. Code, Section 711.4; Pub. Resources Code, Section 21089.).

## CONCLUSION

The Department appreciates the opportunity to comment on NOP to assist EBDA in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Arn Aarreberg, Environmental Scientist, Marine Region at (707) 791-4195 or [Arn.Aarreberg@wildlife.ca.gov](mailto:Arn.Aarreberg@wildlife.ca.gov) and Marcia Grefsrud, Environmental Scientist, Bay-Delta Region, at (707) 644-2812 or [Marcia.Grefsrud@wildlife.ca.gov](mailto:Marcia.Grefsrud@wildlife.ca.gov).

Sincerely,

DocuSigned by:  
  
8E67557DA72D4F6...  
Kirsten Ramey for  
Craig Shuman, D. Env  
Marine Regional Manager

ec: Becky Ota, Environmental Program Manager  
Department of Fish and Wildlife  
[Becky.Ota@wildlife.ca.gov](mailto:Becky.Ota@wildlife.ca.gov)

Eric Wilkins, Senior Environmental Scientist  
Department of Fish and Wildlife  
[Eric.Wilkins@wildlife.ca.gov](mailto:Eric.Wilkins@wildlife.ca.gov)

Arn Aarreberg, Environmental Scientist  
Department of Fish and Wildlife  
[Arn.Aarreberg@wildlife.ca.gov](mailto:Arn.Aarreberg@wildlife.ca.gov)

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Craig Weightman, Environmental Program Manager  
Department of Fish and Wildlife  
[Craig.Weightman@wildlife.ca.gov](mailto:Craig.Weightman@wildlife.ca.gov)

Brenda Blinn, Senior Environmental Scientist  
Department of Fish and Wildlife  
[Brenda.Blinn@wildlife.ca.gov](mailto:Brenda.Blinn@wildlife.ca.gov)

John Krause, Senior Environmental Scientist  
Department of Fish and Wildlife  
[John.Krause@wildlife.ca.gov](mailto:John.Krause@wildlife.ca.gov)

Marcia Grefsrud, Environmental Scientist  
Department of Fish and Wildlife  
[Marcia.Grefsrud@wildlife.ca.gov](mailto:Marcia.Grefsrud@wildlife.ca.gov)

Rebecca Carniello, Environmental Scientist  
Department of Fish and Wildlife  
[Rebecca.Carniello@wildlife.ca.gov](mailto:Rebecca.Carniello@wildlife.ca.gov)

State Clearinghouse (SCH No. 2022050436)  
[State.clearinghouse@opr.ca.gov](mailto:State.clearinghouse@opr.ca.gov)

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- Foster, M.S., G.M. Cailliet, J. Callaway, K.M. Vetter, P. Raimondi, and P.J.W. Roberts. 2013. Desalination plant entrainment impacts and mitigation. Final Report in fulfillment of SWRCB Contract No. 11-074-270, Work Order SJSURF 11-11-019. Available at [https://www.waterboards.ca.gov/water\\_issues/programs/ocean/desalination/docs/erp\\_final.pdf](https://www.waterboards.ca.gov/water_issues/programs/ocean/desalination/docs/erp_final.pdf)
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