



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Marine Region
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April 21, 2025

Ms. Maria Flynn
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CITY OF FORT BRAGG ONEKA DESALINATION BUOY (ICEBERG) PILOT PROJECT, INITIAL STUDY/MITIGATED NEGATIVE DECLARATION SCH #2025030927

Dear Ms. Maria Flynn:

The California Department of Fish and Wildlife (Department) received an Initial Study/Mitigated Negative Declaration (IS/MND) from the City of Fort Bragg (City) for the Oneka Desalination Buoy (Iceberg) Pilot Project (Project), pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹ Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife resources. 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

¹ 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.

(*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. Pursuant to our jurisdiction, the Department has the following comments and recommendations regarding the Project.

PROJECT DESCRIPTION SUMMARY

Proponent: City of Fort Bragg

Objective: The primary objective of the proposed Project is to conduct a pilot test to determine functionality, operability, and environmental effect by deploying a single desalination buoy (Iceberg) in Mill Bay offshore of the City's wastewater treatment plant (WWTP) in Fort Bragg, Mendocino County. The Project will deploy the Iceberg and test its new technology to produce and deliver desalinated water using wave generated power, without the need for any additional electricity from shore. Project activities include conveying desalinated water generated by the Iceberg to shore via a submerged 3-inch pipeline that will be anchored on the seafloor, and on the existing WWTP concrete outfall encasement, extending through the surf zone and up the concrete stairway to the WWTP. When operational, the Iceberg will intake seawater at a rate of 13,200 gal/day and discharge brine at the rate of 5,800 gal/day. The desalinated water will undergo testing once on the WWTP property and will be ultimately disposed of via the existing WWTP outfall. The Project's purpose is to gather data over the course of a 12-month timeframe to inform design and permitting of a future, utility scale deployment to meet the City's water needs.

Location: The Iceberg and its mooring infrastructure will be placed within a 6.3 acre soft-bottom area located off the coast of Mendocino County, 0.5 miles due west of the City of Fort Bragg's wastewater treatment plant at: Latitude: 39.44° Longitude: -123.82°.

BIOLOGICAL SIGNIFICANCE

The nearshore coastal waters off Fort Bragg in Mendocino County, California, are ecologically rich and biologically significant, supporting a wide range of sensitive marine habitats such as rocky reefs, kelp forests, sandy bottoms, and estuarine environments. These diverse habitats provide critical ecosystem functions and serve as vital foraging,

breeding, and nursery grounds for numerous marine species, such as abalone, halibut, rockfish (*Sebastes sp.*), and salmonids.

COMMENTS AND RECOMMENDATIONS

The Department offers the comments and recommendations below to assist the City in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct, and indirect impacts on fish and wildlife resources.

Pilot Study to Commercial Scale

Comments: The Department understands that this is a pilot scale project intended to gain data and information for future commercial scale buildout. With that understanding the Department is concerned that some aspects and data from the Project may not inform a commercial scale buildout of multiple Icebergs. Questions remain about the cumulative impacts from multiple clustered Iceberg units, such as impacts from brine discharge, shading, and entanglement of marine life. For example, one Iceberg will have minimal shading impacts, but the shading impacts of multiple Iceberg units in close proximity will have to be evaluated before commercial scale buildout and permitting. Additionally, the anchor lines and pipeline for multiple units for any large-scale buildout will pose a risk marine life entanglement, including marine mammals. These impacts from scaling up the pilot will need to be evaluated, and avoidance and mitigation measures will need to be identified.

Intake Screen

The Iceberg system has the potential to harm or kill marine organisms through entrainment and impingement, as 0.013 MGD of seawater is drawn into the system and desalinated. Entrainment typically harms or kills smaller organisms that can be pulled through intake screens such as algae, plankton, fish and invertebrate larvae, and eggs. Impingement impacts occur when organisms become trapped against intake screen or reverse osmosis membranes. The design of the intake structure described in Section 8.2.2 of the IS/MND, which includes "a 16.5 in diameter and 10.3 in long, 60-micron (0.06 mm) mesh screen on the intake, with a maximum through-screen velocity of 0.22 ft/sec," is consistent with the Department's recommendations for intake screens. Additionally, the IS/MND states, "The presence of groundfish adult habitat suggests larvae produced by resident adults would be exposed to the operation of the Iceberg. The 60- μ m mesh intake screen and low intake velocity will minimize the potential impact on groundfish larvae." A plankton monitoring program will be initiated after deployment of the Iceberg to monitor and quantify impingement and entrainment.

Recommendation: The Department has engaged in early coordination with the City regarding the plankton sampling and monitoring plan and recommends continued collaboration to ensure that all monitoring and mitigation activities are conducted in compliance with applicable state laws and permitting requirements. The Department has determined that a Department issued Scientific Collecting Permit (SCP) will be required to authorize the Project's proposed plankton monitoring and sampling activities. The Department recommends submitting a complete SCP application at least 3 months prior to the Project start date to avoid delays to the projected Project timeline.

SCIENTIFIC COLLECTING PERMIT

Comments: The Department has the authority to issue permits for the take or possession of wildlife, including mammals; birds, nests, and eggs; reptiles, amphibians, fish, plants; and invertebrates (Fish & G. Code, §§ 1002, 1002.5, 1003). The Department has determined that the Project requires a SCP issued by the Department to authorize the Project's proposed plankton monitoring and sampling activities. Pursuant to the California Code of Regulations, title 14, section 650, qualified biologist(s) must obtain appropriate handling permits to capture, temporarily possess, and relocated wildlife to avoid harm or mortality in connection with Project-related activities.

Recommendations: The Department appreciates the continued collaboration to ensure that all monitoring and mitigation activities are conducted in compliance with applicable state laws and permitting requirements. The Department recommends a complete SCP application, including but not limited to, detailed methodologies for plankton sampling/monitoring activities, as well as qualifications of personnel involved in these activities. This will facilitate timely review and issuance of the required SCP and help avoid delays in the Project's schedule. For more information on submitting the SCP application, please visit: [Scientific Collecting Permits](#).

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database that may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, section 21003, subd. (e)). Please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDDB). The CNDDDB field survey form can be filled out and submitted online at the following link:

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<https://wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The types of information reported to CNDDDB can be found at the following link:

<https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

ENVIRONMENTAL DOCUMENT FILING FEES

The Project, as proposed, could have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by the Department. Payment of the environmental document filing fee is required 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 the IS/MND to assist the City of Fort Bragg in identifying and mitigating Project impacts on biological resources. Questions regarding this letter or further coordination should be directed to Heidi Carpenter, Environmental Scientist at R7CEQA@wildlife.ca.gov.

Sincerely,



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Marine Regional Manager

ec: Claire Waggoner, Environmental Program Manager
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