



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003



IN REPLY REFER TO:
PAS 2273.3492.4132

September 19, 2005

Jane M. Hicks, Acting Chief
Regulatory Branch, San Francisco District
U.S. Army Corps of Engineers
333 Market Street
San Francisco, California 94105-2197

Subject: Installation of the Monterey Accelerated Research System Cabled Observatory,
Monterey County, California

Dear Ms. Hicks:

We have reviewed your letter dated June 30, 2005, and received in our office on July 7, 2005, requesting our concurrence with your determination that the proposed action may affect but is not likely to adversely affect the federally endangered brown pelican (*Pelecanus occidentalis*), short-tailed albatross (*Phoebastria albatrus*), California least tern (*Sterna antillarum browni*), and California clapper rail (*Rallus longirostris obsoletus*) and the federally threatened southern sea otter (*Enhydra lutris nereis*), marbled murrelet (*Brachyramphus marmoratus marmoratus*), and western snowy plover (*Charadrius alexandrinus nivosus*). The project area is located at the town of Moss Landing and in Monterey Bay, California. Your request and our response are in accordance with section 7 (a)(2) of the Endangered Species Act of 1973, as amended (Act).

The Monterey Bay Aquarium Research Institute (MBARI) is proposing to install and operate an advanced undersea cabled observatory in Monterey Bay. The project has onshore and offshore segments and consists of a single submarine cable that would be laid between a shore station in Moss Landing and the observatory that would be placed on the seabed on Smooth Ridge, approximately 31.7 miles west-southwest of Moss Landing, at a depth of 2,923 feet in the Monterey Bay National Marine Sanctuary. Prior to the main cable lay operation, a pre-lay grapnel run (PLGR) would be conducted along the proposed cable route. The PLGR would clear the seabed of debris such as wires, hawsers, abandoned fishing equipment, or other debris that may occur along the proposed route. The main cable would be buried along approximately 76 percent of the route to a depth of 3.3 feet, where feasible. The cable would be buried using a hydraulically operated plow, which would be towed by a cable installation vessel. The plow would cut a narrow trench on the seafloor for the cable and then bury the cable. The cable vessel *Ile de Ré*, or other equivalent vessel, would conduct the cable-laying operations at speeds of generally less than two knots (2.3 miles per hour). The onshore cable-landing site would be located in a currently vacant parcel owned by MBARI in Moss Landing on the west side of Sandholdt Road at the road's northern terminus. Horizontal directional drilling (HDD) would be

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used to drill an arc-shaped borehole from shore under the harbor beach to a point approximately 0.89 mile offshore at a depth of approximately 50 feet. A mixture of bentonite clay and water would be used to cool the drill heads, remove suspended solids from the borehole, and fill the annulus space in the surrounding soils. A 5-inch diameter steel conduit, in which a fiber optic cable would be placed, would be advanced in sections through the borehole as it is created. During HDD operations and estimated 93 cubic yards of material would be removed from the borehole and stored in the temporary HDD entry pit located onshore. The proposed onshore staging area for the HDD operation would be located adjacent to the beach at the entrance of Moss Landing Harbor. Drilling activities would occur 12 hours a day during daylight hours and are expected to be completed within 13.5 days. HDD operations and drilling pressures would be monitored to detect the unintentional release of drilling fluid (frac-out) to the surface. An environmental monitor would visually inspect the beach and near shore surf zone during HDD operations, to look for evidence that drilling fluid has surfaced. Drilling operations would temporarily cease if drilling fluid was observed on land or in the water, and the contractor would take appropriate measures to attempt to reduce or eliminate the release.

The contractor proposes to implement the following best management practices in association with HDD operations:

1. Locate the entrance and exit pits at a sufficient elevation to avoid inundation by tidal activity.
2. Contain the spoils from excavation of the entrance and exit pits using silt fencing, to avoid sediment transport.
3. Erect isolation/containment devices (underwater booms and/or turbidity curtains) if drilling mud does not congeal.
4. Call in a spill-response team to contain and clean up excess drilling mud in the water if a frac-out becomes excessively large.
5. Undertake and complete proper disposal of excess spoils including the backfilling and restoring of the original contour of the entrance/exit pits.
6. Isolate a frac-out in upland areas using hay bales, sand bags, or silt fencing to surround and contain the mud.
7. Report all bentonite seeps into waters of the State of California or sensitive habitat immediately to the project's resource coordinator and the appropriate resource agencies.
8. Consult with the required regulatory agencies regarding the next appropriate action for the cleanup of the drilling mud.

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9. Restore the area to preconstruction conditions in consultation with regulatory agencies once the cleanup has been completed.

Southern sea otters (hereafter, sea otters) generally forage in both rocky and soft-sediment communities in water depths of 82 feet or less, although individuals occasionally will move into deeper water. Most sea otters remain within 1.2 miles of shore, and in Monterey Bay are most often found in association with giant kelp (*Macrocystis pyrifera*) forests. Rocky habitats that are topographically heterogeneous and support kelp forests are likely to support the greatest diversity and abundance of food resources. Sea otters occasionally move up large, tidally influenced rivers and sloughs, and have been observed within Blkhorn Slough and Moss Landing Harbor. Sea otters could be present in the near-shore waters near the cable-laying vessel during proposed project activities. However, the sea-bottom substrate is sandy and giant kelp and bull kelp (*Nereocystis luetkeana*) are unlikely to occur in this location; thus, sea otters are unlikely to be foraging in the proposed project area. Sea otters seldom come to the mainland except when sick or during extreme storm events, so it is unlikely that any sea otters would be on the beach during HDD operations.

Short-tailed albatrosses breed on islands in the Pacific Ocean. Only two breeding colonies remain active today: Torishima Island and Minami-kojima Island, Japan. In addition, a single nest was recently found on Yomejima Island of the Ogasawara Island group in Japan. Single nests also occasionally occur on Midway Island, Hawaii. Short-tailed albatrosses forage widely across the temperate and subarctic North Pacific, and have been observed along the coast of California, including Monterey Bay, in all seasons. Short-tailed albatrosses could occur at-sea in the vicinity of the cable-laying vessel, but only seven sightings of the taxon in or near Monterey Bay have been reported since 1983. Short-tailed albatrosses are unlikely to occur at-sea near the shoreline, and return to land only to breed, and thus would not occur on the beach at Moss Landing.

California least terns are migratory and spend the breeding season, from April through August, along the central and southern California coast, as well as along northern Baja California, Mexico. Historically, the breeding range stretched from Monterey County, California, to Cabo San Lucas, Baja California Sur, Mexico. The current distribution of nesting locations in California is discontinuous and distributed in five clusters along the coast: San Francisco Bay, San Luis Obispo/Santa Barbara County, Ventura County, Los Angeles/Orange County, and San Diego. The majority of California least terns nest from southern Santa Barbara County south through San Diego County. The last recorded breeding of California least terns in the Monterey Bay area was in 1956. California least terns obtain most of their food from shallow estuaries and lagoons. California least terns have been observed near Moss Landing Harbor and migrating individuals could occur in the area while feeding in the harbor or roosting on the beach. However, since there are no breeding colonies nearby, we do not expect many California least terns to occur near the proposed project site during cable-laying and HDD operations.

California clapper rails occur in salt and brackish marshes are now restricted almost entirely to the marshes of the San Francisco Bay estuary, where the only known breeding populations occur.

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California clapper rails occurred in the Elkhorn Slough region until 1980. They were extirpated due to habitat changes and predation by non-native red fox (*Vulpes vulpes*). Therefore, California clapper rails are not expected to occur at the proposed project site.

Along the Pacific coast of the United States, brown pelicans nest only on Anacapa and Santa Barbara Islands off the southern California coast. Hence, nesting brown pelicans would not be disturbed by the proposed project activities. However, between breeding seasons which is generally between July and January, brown pelicans range north as far as Vancouver Island, British Columbia, Canada and south to Colima, Mexico. At all times of the year brown pelicans are known to roost, forage, and disperse along the California central coast, including the Monterey Bay area. Roosting sites and loafing areas are essential habitat for brown pelicans. Disturbance at roosting areas may negatively affect behavior, local distribution patterns, and even energy budgets. Displacement from traditional, high-quality roosts may induce the use of marginal or less-preferred habitats or increase the amount of time spent commuting to and between food sources.

The marbled murrelet is a small seabird that nests primarily in coniferous forests bordering the north Pacific Ocean. The southern extent of the known breeding range of marbled murrelets is the Santa Cruz Mountains in Santa Cruz and San Mateo Counties. Marbled murrelets only return to land in the vicinity of nesting areas; they do not roost on beaches. Throughout the year marbled murrelets occur in nearshore waters off California, including Monterey Bay, where they primarily feed on small schooling fishes. Marbled murrelets could occur at-sea in the vicinity of the cable-laying vessel.

The western snowy plover is a small, pale-colored shorebird with dark patches on either side of the upper breast. Western snowy plovers prefer coastal beaches that are relatively free from human disturbance and predation. The Pacific coast population of the western snowy plover breeds primarily on coastal beaches from southern Washington to southern Baja California, Mexico. An estimated 200 to 250 adult western snowy plovers breed in the Monterey Bay area. Western snowy plovers nested approximately 300 meters north of and approximately 1,000 meters south of the proposed HDD operations onshore site in 2004. The breeding season for western snowy plovers extends from March to late September, with birds at more southerly locations breeding earlier. During the non-breeding season western snowy plovers may remain at breeding sites or may migrate to other locations. Disruption of western snowy plovers on beaches could hinder foraging behavior, cause separation of adults and their chicks, and flush adults off nests and away from chicks, thereby interfering with essential incubation and chick-rearing behaviors.

The laying of the cable on the seafloor in Monterey Bay is unlikely to affect food resources of the aforementioned species. Due to the slow speeds of the cable-laying vessel, the slow release rate of the cable, and the likelihood that sea otters and seabirds would avoid the ship, collisions between the vessel and the aforementioned would be unlikely. Because California clapper rails do not occur in the area and western snowy plovers spend most of their time on beaches, these species are unlikely to be affected by cable-laying activities. A frac-out near the shoreline could

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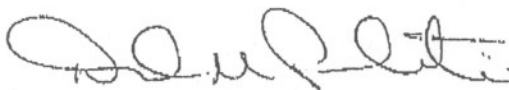
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temporarily disrupt feeding activities of near-shore species due to siltation of the water. Due to the proposed monitoring of HDD operations, a frac-out would be detected quickly and any release of drilling fluids into the nearshore aquatic environment would be small. In addition, bentonite clay slurry is not toxic to wildlife; therefore, fish, sea otters, seabirds, and shorebirds would not be poisoned by a release of drilling fluids. Similarly, slurry in the water would likely not degrade the feathers of seabirds, and thus would not compromise their ability to remain waterproof. A frac-out on the beach at Moss Landing Harbor could temporarily affect beach habitat and disrupt foraging activities of adult western snowy plovers and roosting behaviors of brown pelicans. However, because nests of western snowy plovers are likely to occur greater than 300 meters from the proposed HDD onshore site, the temporary release of drilling fluids would likely not affect adults, chicks, or eggs of the species. In addition, many other roost sites would be available to brown pelicans, such as adjacent beaches, jetties, and structures within nearby Moss Landing Harbor.

We concur with your determination that the proposed action is not likely to adversely affect the aforementioned species. Our concurrence is based on the expected effects of the activities proposed as discussed earlier, the status and distribution of listed species in the project vicinity, and the proposed best management practices. Therefore, further consultation, pursuant to section 7 of the Endangered Species Act of 1973, as amended is not necessary. If the proposed action changes in any manner that may affect a listed species or critical habitat, you must contact us immediately to determine whether additional consultation is required.

If you have any questions, please contact Bill MoIver of my staff at (805) 644-1766, extension 234.

Sincerely,



David M. Pereksta
Assistant Field Supervisor
Santa Cruz/San Benito/Monterey

cc: Deirdre Hall