PMC-ND
(1.08.09.13)

U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION

RECIPIENT: Electric Power Research Institute **STATE:** CA

PROJECT TITLE : Assessment of Potential Impact of Electromagnetic Fields from Undersea Cable on Migratory Fish Behavior

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000816	DE-EE0006382		EE6382

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:
Description:

A9 Information gathering, analysis, and dissemination	Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)
B3.3 Research related to conservation of fish, wildlife, and cultural resources	Field and laboratory research, inventory, and information collection activities that are directly related to the conservation of fish and wildlife resources or to the protection of cultural resources, provided that such activities would not have the potential to cause significant impacts on fish and wildlife habitat or populations or to cultural resources.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Electric Power Research Institute (EPRI) to research and assess the potential impacts of the electromagnetic field (EMF) from underwater marine electrical power cables on migratory fish behavior. Funding would be used for project management/planning, data collection, analysis, and dissemination activities which would include in-water surveys, computer modeling and mapping and the dissemination of the research project results through the submission of a paper(s) to an appropriate peer reviewed journal.

To complete the proposed project, EPRI would work with project partners from the Biotelemetry Laboratory at the University of California, Davis (UC Davis) to measure, model and map the EMF produced by an existing high voltage direct current underwater marine power cable (Trans Bay Cable) in the San Francisco Bay. EPRI would also collect fish location data from migratory fish in the bay that were previously tagged with coded beacons. Between 2007 and 2013, as a part of other studies and research projects, various migratory fish (steelhead, chinook salmon, green sturgeon, white sturgeon, and cow shark) that migrate through the bay were tagged with coded beacons. Arrays of beacon detecting monitors have been placed throughout the bay to collect migratory fish locational information. All fish location data would be collected from existing sources, no new fish tagging or monitor device placement would occur. Collected data would be modeled, mapped, synthesized, analyzed and disseminated by the EPRI team.

To survey and map the EMF produced by the Trans Bay Cable, EPRI and UC Davis propose to perform in-water surveys over a period of approximately two weeks. The Trans Bay Cable runs approximately 85 km through the San Francisco Bay from the city of Pittsburg at the edge of the Delta, just past the eastern edge of the bay, along the south side of the main channels of Suisun and San Pablo Bays, across the deep flat bottom of San Francisco Bay to the city of San Francisco south of the Golden Gate. Proposed in-water survey activities would include towing and stationary surveys via a research boat. Towing surveys would include towing of a submersible proton precession magnetometer in the bay at multiple locations adjacent to the beacon detecting monitor arrays. The submersible proton precession magnetometer would be towed approximately half way down the water column and would measure and profile the EMF produced by the cable. The stationary magnetometer surveys would occur near or above the cable by lowering the magnetometer from the surface to the bottom of the bay above the cable. The magnetometer would not come in contact with the seafloor. These Stationary surveys would occur at various locations along the cable route. Concurrent to both types of magnetometer surveys, a low frequency multi-band Acoustic Doppler Current Profiler (ADCP), mounted to the side of the boat, would be used to measure depth and current from the top of the water column. Stationary surveys would occur for approximately 24 hours at a time, while towing surveys would be approximately 8 hours at a time. UC Davis would ensure the boat operator and crew performing the surveys have taken a course in boat safety and are properly certified to operate the boat.

DOE has determined that proposed in-water survey activities, summarized above, and currently listed as "Task 2: Mapping of the magnetic field" in the project's Statement of Project Objectives (SOPO), are consistent with DOE CX B3.3 "research related to conservation of fish, wildlife, and cultural resources"; however, DOE is required to comply with the Marine Mammal Protection Act, the Magnuson-Stevens Fishery Conservation and Management Act, and the Endangered Species Act prior to authorizing the expenditure of project funds for the initiation and completion of in-water surveys and data collection.

DOE has determined the limited duration and scope of these in-water survey activities would have no effect on historical or cultural resources; and would not have a significant impact to ambient noise levels on and near the bay and local air quality or levels of criteria air pollutants.

All other proposed project management/planning, data collection, analysis, and dissemination activities and Tasks as proposed in the current SOPO are administrative in nature and would be performed at facilities dedicated to this type of work.

Based on the review of the project information and the above analysis, DOE has determined the proposed project is consistent with actions contained in DOE categorical exclusions A9 "information gathering, analysis, and dissemination," and B3.3 "research related to conservation of fish, wildlife, and cultural resources" and is categorically excluded from further NEPA review. Task 2 is conditioned subject to DOE's compliance with the Marine Mammal Protection Act, the Magnuson-Stevens Fishery Conservation and Management Act, and the Endangered Species Act.

NEPA PROVISION

DOE has made a conditional NEPA determination for this award, and funding for certain tasks under this award is contingent upon the final NEPA determination.

Insert the following language in the award:

You are restricted from taking any action using federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding the project.

Prohibited actions include:
Task 2: :Mapping of the magnetic field" is conditioned subject to DOE's compliance with the Marine Mammal Protection Act, the Magnuson-Stevens Fishery Conservation and Management Act, and the Endangered Species Act.

This restriction does not preclude you from:
The remainder of project activities (Tasks 1, 3, 4, and 5) are Categorically Excluded from futher NEPA review.
If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Insert the following language in the award:

You are required to:
DOE is required to comply with Marine Mammal Protection Act, Magnuson-Stevens Fishery Conservation and Management Act, and Section 7 of the Endangered Species Act prior to authorizing the expenditure of project funds for proposed in-water surveys and data collection under "Task 2: Mapping of the magnetic field". The recipient is restricted from initiating Task 2 in-water survey activities until DOE complies with these regulations and notification has been received from DOE. The DOE Contracting Officer will notify the recipient, in writing, when they are authorized to initiate these activities.

Note to Specialist :

This NEPA determination requires a tailored NEPA provision.

Obadiah Broughton 12/17/2013

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 12/17/2013
NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION