

PMC-ND

(1.08.09.13)

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



RECIPIENT: University of Washington

STATE: WA

PROJECT TITLE : Marine Mammal Behavioral Response to Tidal Turbine Sound

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000816	DE-EE0006385	GFO-0006385-003	GO6385

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.)

B3.16 Research activities in aquatic environments Small-scale, temporary surveying, site characterization, and research activities in aquatic environments, limited to: (a) Acquisition of rights-of-way, easements, and temporary use permits; (b) Installation, operation, and removal of passive scientific measurement devices, including, but not limited to, antennae, tide gauges, flow testing equipment for existing wells, weighted hydrophones, salinity measurement devices, and water quality measurement devices; (c) Natural resource inventories, data and sample collection, environmental monitoring, and basic and applied research, excluding (1) large-scale vibratory coring techniques and (2) seismic activities other than passive techniques; and (d) Surveying and mapping. These activities would be conducted in accordance with, where applicable, an approved spill prevention, control, and response plan and would incorporate appropriate control technologies and best management practices. None of the activities listed above would occur within the boundary of an established marine sanctuary or wildlife refuge, a governmentally proposed marine sanctuary or wildlife refuge, or a governmentally recognized area of high biological sensitivity, unless authorized by the agency responsible for such refuge, sanctuary, or area (or after consultation with the responsible agency, if no authorization is required). If the proposed activities would occur outside such refuge, sanctuary, or area and if the activities would have the potential to cause impacts within such refuge, sanctuary, or area, then the responsible agency shall be consulted in order to determine whether authorization is required and whether such activities would have the potential to cause significant impacts on such refuge, sanctuary, or area. Areas of high biological sensitivity include, but are not limited to, areas of known ecological importance, whale and marine mammal mating and calving/pupping areas, and fish and invertebrate spawning and nursery areas recognized as being limited or unique and vulnerable to perturbation; these areas can occur in bays, estuaries, near shore, and far offshore, and may vary seasonally. No permanent facilities or devices would be constructed or installed. Covered actions do not include drilling of resource exploration or extraction wells.

Rationale for determination:

The Department of Energy, (DOE) is proposing to provide funding to the University of Washington (UW) to characterize the behavioral response of harbor porpoises and pinnipeds to the sound produced by marine energy converters, using a simulated sound source. The proposed project would analyze the behavioral responses of marine mammals to marine energy converter sounds, as well as demonstrate the effectiveness of shoreline observers and localizing passive acoustics to describe the distribution and use of marine mammals around marine renewable energy projects.

Two previous NEPA determinations were completed for this award (GFO-0006385-01, December 5, 2013: GFO-0006385-02, May 11, 2016). The original review was based on a UW proposal to study behavioral responses of marine mammals around a pair of active tidal turbines which were to be deployed in northern Admiralty Inlet, Puget Sound, Washington, by the Public Utility District No. 1 of Snohomish County. However, the scope of the proposed project has significantly changed as the tidal turbines will no longer be deployed. No work was undertaken by UW on the original SOPO. UW submitted a new SOPO which was reviewed in the second NEPA determination identified above.

The revised SOPO contained six tasks divided into two budget periods, plus project management and reporting. The previous NEPA determination reviewed Budget Period 1 (Tasks 1 and 2). This determination reviews all Budget

Period 2 tasks (Tasks 3-6).

Tasks 3 – 6 are as follows:

Task 3 would involve the deployment of the simulated sound into the marine environment. The sound simulator would be deployed into the marine environment from a moored vessel. This would include three deployments, each consisting of six hours of sound simulation, over a six day period. In addition an instrumentation package to characterize in water conditions (current velocity, ambient noise, marine mammal echolocation) would be deployed on the seabed during the study. The instrumentation package would include only passive instrumentation, while the sound simulator would deploy active acoustics (i.e. sound) into the environment.

The sounds would be created by a J11 transducer suspended to a depth of 10 meters beneath the moored vessel. The transducer would be able to amplify and maintain a source level of 160 dB from 30Hz to 10kHz.

Task 4 would include observations of marine mammals during the sound deployments. Observation methods in Task 4 would be the same as those used in Task 2; specifically shoreline observations would occur from Admiralty Head, Whidbey Island, WA utilizing a scan sampling approach with binoculars and an SLR camera.

Task 5 would include modeling sound and marine mammal behavior, to evaluate the correlation between the simulated sound and observed marine mammal behavior.

Task 6 would include completion of a report synthesizing the results of the study.

Tasks 3 – 4 would involve activity occurring within the tidal waters of Admiralty Inlet. The waters of Admiralty Inlet and land area around the inlet include threatened or endangered species as well as critical habitat. Specifically, the project area could include the following species: Puget Sound Chinook salmon Evolutionary Significant Unit (ESU), Hood Canal Summer-run chum salmon (ESU), Puget Sound steelhead Distinct Population Segment (DPS), Bocaccio, Yelloweye rockfish, Pacific eulachon, Southern Resident DPS killer whale, Humpback whale, Bull trout, Marbled murrelet, and streaked horned lark. Of these threatened and endangered species, Admiralty Inlet is included in the critical habitat for Chinook salmon and chum salmon, as well as Southern Resident killer whales.

UW provided DOE with a Biological Assessment for use in Section 7 consultation regarding the proposed project. DOE reviewed the Biological Assessment, and agreed with the conclusions that the proposed project would not effect the streaked horned lark, would not likely adversely affect the remainder of the T&E species, and would not result in the destruction or adverse modification of designated critical habitat. As such, on February 28, 2017 DOE engaged in informal consultation with US Fish and Wildlife Service (USFWS) and with the National Marine Fisheries Service (NMFS), seeking concurrence from those agencies on the determinations. On April 17, 2017 USFWS concurred with the determinations regarding the Bull trout, Marbled murrelet, and streaked horned lark. On May 1, 2017 NMFS concurred with the determination regarding the remaining species, which are under their jurisdiction. In addition, NMFS concurred with the determination regarding critical habitat as well as determined that the proposed project would not have adverse impacts on essential fish habitat designated under the Magnuson-Stevens Fishery Conservation and Management Act.

In addition, UW has obtained necessary permits from NOAA to comply with the Marine Mammal Protection Act.

Tasks 5 -6 would involve office work including modeling and report writing. This work would be completed at the University of Washington. Additional office work may take place at the offices of SMRU consulting in Friday Harbor, Washington. Applicable health and safety procedures would be followed at all sites.

Based on the review of the proposal, DOE has determined the proposal fits within the class of action(s) and the integral elements of Appendix B to Subpart D of 10 CFR 1021 outlined in the DOE categorical exclusion(s) selected above. DOE has also determined that: (1) there are no extraordinary circumstances (as defined by 10 CFR 1021.410(2)) related to the proposal that may affect the significance of the environmental effects of the proposal; (2) the proposal has not been segmented to meet the definition of a categorical exclusion; and (3) the proposal is not connected to other actions with potentially significant impacts, related to other proposals with cumulatively significant actions, or an improper interim action. This proposal is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If the Recipient intends to make changes to the scope or objective of this project, the Recipient is required to contact the Project Officer, identified in Block 15 of the Assistance Agreement before proceeding. The Recipient must receive notification of approval

from the DOE Contracting Officer prior to commencing with work beyond that currently approved. If the Recipient moves forward with activities that are not authorized for Federal funding by the DOE Contracting Officer in advance of a final NEPA decision, the Recipient is doing so at risk of not receiving Federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

This NEPA determination does not require a tailored provision.
Review completed by Roak Parker 5/7/2017
Water Power Program

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:

 Electronically Signed By: Kristin Kerwin
NEPA Compliance Officer

Date: 5/15/2017

FIELD OFFICE MANAGER DETERMINATION

Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

- Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
- Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature:

Field Office Manager

Date: _____