

PMC-ND

(1.08.09.13)

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



RECIPIENT: HRF - Oregon State University 2

STATE: OR

PROJECT TITLE: Hydro Research Foundation University Research Awards

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	EE0002668/EE0006506	GFO-0006506-026	GO6506

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.)
- B3.1 Site characterization and environmental monitoring** Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources); (i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.
- B3.6 Small-scale research and development, laboratory operations, and pilot projects** Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to the Hydro Research Foundation (HRF) to award grants to individual research projects through its University Research Awards Program to support innovative research related to conventional or pumped-storage hydropower, stimulate interest among students and universities in

this research arena, and provide students with a foundation for productive careers related to the hydropower industry.

DOE completed a previous NEPA review (GFO-0002668-002 CX A9, A11 3/23/2015) that included development of a Hydro Fellowship Program that would competitively award grants for hydropower-related, graduate-level research projects for one- to two-year periods of study. This NEPA determination applies to activities associated with one of the projects which has been selected to receive a grant award from the HRF.

The awardee at Oregon State University (OSU) would use HRF grant funding provided by DOE to determine the carbon footprint of large reservoirs by evaluating the burial efficiency (percent carbon buried relative to total carbon flux accumulation) in reservoir sediments. Proposed activities would include coring, subsampling, and analysis of sediments from the delta deposits in privately-owned Lake Billy Chinook in central Oregon. Sample collection (coring) would be conducted from a small fishing boat or pair of canoes launched from public boat launches and would involve the use of a small, hand-operated coring system which would remove a 7 centimeter by 1 meter (or less) sample from delta sediments in the middle of the reservoir. It is hoped that gravity would be sufficient to remove these samples; however, percussion may be used if needed. These activities would be restricted to the common-use areas of the reservoir and would not necessitate any landing on Bureau of Land Management- (BLM-) or U.S. Forest Service- (USFS-) controlled lands, or any trespass on the Warm Springs Indian Reservation. These activities would not extend upstream of the reservoir impoundment into free-flowing river, but would remain in the waters privately owned and operated by Pacific Gas and Electric Company (PGE) who has expressly permitted these activities. Therefore, no special permits would be required. All subsequent subsampling and analysis would be performed on campus at Oregon State University in Corvallis, OR, an existing facility designed for this type of research; therefore, no modifications or new permits, additional licenses and/or authorizations would be necessary. The project would not require any new facilities to be constructed or any change in use, mission, or operation of existing facilities arising out of or resulting from work under the project.

A review of the U.S. Fish and Wildlife Service (USFWS) website indicates that two federally listed species – northern spotted owl and bull trout – are likely to occur in the Lake Billy Chinook area. The project area does not contain mature or old-growth conifer forest that would provide suitable habitat for northern spotted owl so no adverse effects to this species are anticipated. However, Lake Billy Chinook is known to support a robust bull trout population. Juvenile and sub-adult bull trout can be found in the highest densities in the upper Metolius River Arm, but this species is found throughout Lake Billy Chinook near the surface and along the rocky shoreline, through the winter and early spring. Due to the overwhelming evidence that this population is abundant, the USFWS continues to allow a consumptive fishery in Lake Billy Chinook. As samples would be collected in the summer months from the delta sediments in the center of the main reservoir where bull trout populations would be expected to be minimal and due to the manual nature of the sample collection it is not anticipated that there would be any adverse effect to protected bull trout populations.

For field work at Lake Billy Chinook, safety procedures as established by OSU and PGE would be followed, including mandatory use of life preservers to ensure safety while on the water. Lab work would not involve exposure to any hazardous materials, and existing laboratory safety and training procedures would be followed for all analytical work to ensure proper lab safety. The project is expected to produce small quantities of sediment waste from coring, but this sediment is non-hazardous. Small quantities of waste chemical may be produced in performance of sampling analysis; this would be handled in accordance with established laboratory procedure at OSU.

Based on review of the project information and the above analysis, DOE has determined the activities associated with the proposed project would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with actions contained in DOE categorical exclusions A9 "Information gathering, analysis, and dissemination", B3.1 "Site characterization and environmental monitoring" and B3.6 "Small-scale research and development, laboratory operations, and pilot projects" and 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 you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

Water Power Program

This NEPA Determination does NOT require a tailored NEPA provision.
NEPA review completed by Rebecca McCord, 6/11/2015

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:


NEPA Compliance Officer

Date: 6/17/2015

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:
