

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** Percheron Power, LLC**STATE:** WA

PROJECT TITLE: Development of a Modular Helical Fish Passage for Low Head Applications

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002080	DE-EE0008945	GFO-0008945-001	G08945

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), 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.)

B3.6 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 Percheron Power LLC (Percheron) to develop and test a modular helical fish passage for low head hydro applications.

Proposed tasks would include establishing an advisory group, modeling and design work, small scale and full scale model fabrication of the Fish Pass Helix, laboratory testing, testing at the Pacific Northwest National Laboratory (PNNL), and analysis.

Modeling, design work, and analysis, would be completed by Percheron at their offices in Kennewick, Washington as well as by Utah State University, in Logan, Utah. The Oak Ridge National Laboratory (ORNL) may assist in design and/or reviewing designs.

A small scale model of the Fish Pass Helix would be produced through large format 3-D printing or Light Resin Transfer Molding. Printing or molding of the bench scale Fish Pass Helix would be completed by a contractor who engages in such work. The small scale device would then be bench tested in the laboratory at Percheron's facility as well as at Hertelendy Research Associates, Inc.,(HRA) in Richland, Washington.

Outer tube(s) for a large scale device (approximately 3 feet wide and 15 feet long) would then be fabricated at Reiff Manufacturing Inc. (Reiff) in Walla Walla, Washington. These tubes would be constructed from fiberglass epoxy and solvents. Additional balance of system components, including helix screw and rotation and control systems would be procured. All components would then be bench tested at HRA. HRA would then assemble components into the Fish Pass Helix. It is anticipated that up to two Fish Pass Helix devices would be fabricated and assembled. Percheron and HRA laboratories are pre-existing laboratories that engage in the type of work described above in their regular course of business. Reiff is a pre-existing manufacturing facility that regularly manufactures products such as the product proposed to be manufactured for this project. All facilities will follow established health and safe health and safety policies and procedures for each facility, including employee training, proper protective equipment, material handling/Material Safety Data Sheets (MSDS), test procedures and controls, water and waste management, and internal risk assessments. No modifications to any facility or new permits will be required.

Hydraulic (in water) and live fish testing of the Fish Pass Helix would then take place at PNNL's Aquatic Research Laboratory (ARL) in Richland, Washington. The ARL is a pre-existing aquatic research facility designed specifically for

conducting research and testing utilizing live fish. The ARL is an indoor facility that utilizes water from the Columbia River. ARL has permits to utilize the river water and to conduct live fish testing. No new permits will be required. No contaminants or fish will be released into the river.

Any work proposed to be conducted at a federal facility may be subject to additional NEPA review by the cognizant federal official and must meet the applicable health and safety requirements of the facility.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

This NEPA determination does NOT require a tailored NEPA provision
Water Power technology Office
Roak Parker 3/19/2020

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

 Electronically
Signed By: **Roak Parker**
NEPA Compliance Officer

Date: 3/19/2020

FIELD OFFICE MANAGER DETERMINATION

- Field Office Manager review not required
 Field Office Manager review required

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

Field Office Manager's Signature: _____

Field Office Manager

Date: _____