

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



RECIPIENT: Electric Power Research Institute (EPRI)

STATE: SC

PROJECT TITLE: Evaluation of the Fishheart Hydraulic Fishway for Passing Fish Upstream at Hydropower Dams

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002801	DE-EE0011090	GFO-0011090-001	GO11090

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.)
- B3.16 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.
- 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 funding to the Electric Power Research Institute (EPRI) to evaluate the suitability of the Fishheart hydraulic fishway to provide safe passage for American shad at the Santee Cooper Spillway dam.

Award activities would include project planning, Fishheart deployment, passage and collection of shad and injury assessment, data collection, telemetric tagging, data analysis, and outreach. EPRI (Heber City, UT; Palo Alto, CA) and Alden Research Laboratory (Holden, MA) would carry out project planning, data analysis, and reporting. Fishheart Ltd (Tornio, Finland) would fabricate and provide equipment, as well as providing assistance with data analyses. The Santee Cooper Spillway (SCS; Lake Marion, SC) consists of a riverine site downstream of the dam where the Fishheart fishways would be deployed in powerhouse tailwater. At the SCS, fish would pass through the Fishheart

hydraulic fishway into a collection tank onshore, then to a holding tank where they would be evaluated for injury and held for about twenty-four hours, then released. Some shad would be collected near the SCS by electrofishing in order to tag the fish with transponders and acoustic tags to monitor fish approach, entry, and passage through the Fishheart system. Lastly, outreach would consist of engaging local students from Historically Black Colleges and Universities for seminars, SCS visits, and to recruit interns for the project.

EPRI would be required to complete all applicable permitting processes prior to deploying the floating Fishheart device and undertaking fish testing activities, including a United States Army Corps of Engineers Nationwide Permit and fish collection permit from the State of South Carolina Department of Natural Resources.

The proposed award activities would result in some temporary ground disturbance in an existing gravel parking lot adjacent to the riverine site. The Fishheart unit (measuring 27 feet (ft) by 7 ft) would be deployed floating in the river with above-water mooring lines anchored to the shore, including a 16-inch-long conduit and a 12-inch pipeline running to temporary on-shore concrete blocks and fish collection tank. There would be nothing placed on the river bottom. Four cylindrical holding tanks (in the gravel parking lot) would be set up adjacent to the fish collection tank, each measuring 6 meters (m) in diameter and 1.5 m in depth. Tanks and the Fishheart unit would be connected by standard 12-inch PVC pipelines with around 20 ft. of flexible pipe.

The section of the Santee River where project activities (including electrofishing sampling) would occur is within the geographic distribution of three Endangered Species Act (ESA) listed species: Shortnose sturgeon, Atlantic sturgeon, and the West Indian manatee. Survey and telemetry data generated by the South Carolina Department of Natural Resources indicate there are few if any sturgeon inhabiting this section of the Santee River. In addition, sturgeon have been shown to have exceptional electro-sensory abilities and actively avoid electrofishing gear. The West Indian manatee may be seasonally present in the project area. However, it would be unusual for a manatee to be in the Santee River while the project would be occurring (early in the year – February and March). Manatees are typically observed in South Carolina during the late spring, summer, and early fall when water temperatures are warmest. Seasonality of the project in combination with the project location well inland would make it unlikely for a manatee to be present in the area during project activities. DOE has determined there would be no effect to special status species as a result of award activities.

In the unlikely event that a manatee(s) is observed within 50 ft. of project activities, all in-water operations, including vessels, must be shut down. Activities can not resume until the manatee(s) has moved beyond the 50-ft. radius of the project operation, or until 30 minutes elapse, if the manatee(s) has not reappeared within 50 ft. of the operation. The recipient must inform the DOE Project Officer if a manatee is observed during the project.

Award activities would involve typical hazards associated with electrofishing and deploying equipment in and around bodies of water. Existing health, safety, and environmental policies and procedures would be followed to mitigate hazards to acceptable levels. All activities would comply with existing federal, state, and local laws, regulations, and permits.

DOE has considered the scale, duration, and nature of proposed activities to determine potential impacts on resources, including those of an ecological, historical, cultural, and socioeconomic nature. DOE does not anticipate adverse impacts on these resources.

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

All in-water operations, including vessels, must be shut down if a manatee(s) comes within 50 feet of the project activities. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapse, if the manatee(s) has not reappeared within 50 feet of the operation. The recipient must inform the DOE Project Officer if a manatee is observed during the project.

Notes:

Water Power Technologies Office (WPTO)

This NEPA determination requires legal review of the tailored NEPA provision.

NEPA review completed by Alex Colling on 01/25/2024.

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.

DOE has determined that work to be carried out outside of the United States, its territories and possessions is exempt from further review pursuant to Section 5.1.1 of the DOE Final Guidelines for Implementation of Executive Order 12114; "Environmental Effects Abroad of Major Federal Actions."

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  _____ Date: 2/1/2024
NEPA Compliance Officer

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: _____ Date: _____
Field Office Manager