GENERIC CATEGORICAL EXCLUSION FOR RESEARCH ACTIVITIES IN AQUATIC ENVIRONMENTS, PACIFIC NORTHWEST NATIONAL LABORATORY, RICHLAND, WASHINGTON

Proposed Action:

Pacific Northwest National Laboratory (PNNL) proposes to conduct small-scale, temporary surveying, site characterization, and research activities in the aquatic environment.

Location of Action:

The proposed action would occur within any rivers, lakes, estuaries, bays, or other aquatic areas, including wetlands, within the United States or in territorial waters of the United States.

Description of the Proposed Action:

The proposed action is to (1) acquire rights-of-way, easements, and temporary use permits; (2) install, operate, and remove passive scientific measurement devices; (3) conduct natural resource inventories, data and sample collection, environmental monitoring, and basic and applied research; and (4) conduct surveying and mapping. Examples of such activities include, but are not limited to:

- Installation, operation and removal of antennae, tidal gauges, flow-testing equipment for existing wells, weighted hydrophones, salinity measurement devices, and water quality measurement devices
- Conducting benthic and fishery community inventories
- Collecting biotic and water samples for long- and short-term environmental monitoring
- Collecting biotic materials in support of habitat restoration.

Proposed activities must meet the U.S. Department of Energy (DOE) categorical exclusion (CX) eligibility criteria (10 Code of Federal Regulations [CFR] 1021.410) and all of the following criteria:

1. Aquatic research activities would be conducted in accordance with, where applicable, an approved Spill Prevention, Control, and Countermeasures plan and would incorporate appropriate control technologies and best management practices.

2. Aquatic research activities would not 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). For example, the Washington Department of Natural Resources supports PNNL's scientific research activities conducted within the Protection Island Aquatic Reserve (located off the Washington coast) because such activities

are consistent with the reserve's goals, objectives, and management. 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.

3. Aquatic research activities would comply with applicable environmental administrative controls and permit requirements.

4. Aquatic research activities could use hazardous materials when necessary. Inventories would be maintained at the lowest practicable levels while remaining consistent with continuing operations and research goals, pollution prevention measures, applicable permits and licenses, manufacture label use instructions, and waste minimization practices.

5. Releases of liquid and/or airborne substances to the environment would be minimized and remain compliant with applicable facility, local, state, and federal regulations; DOE Orders; and PNNL guidelines.

6. Wastes generated by aquatic research activities would be limited to those with an available disposal pathway. Volumes of waste generated by each activity would be reduced as much as possible by pollution prevention measures and waste minimization practices. Wastes would be dispositioned in accordance with applicable local, state, and federal regulations and DOE Orders; and PNNL guidelines.

7. No permanent facilities or devices would be constructed or installed.

8. Covered actions do not include drilling of resource exploration or extraction wells.

The proposed aquatic research activities would include reasonably foreseeable actions necessary to implement the proposed action (e.g., safety support; boat operation; material transport; project closeout; maintenance, development, and demonstration of processes, instruments, and detectors; consultation and planning with sponsors and collaborators; and maintenance, calibration, transport, and use of analytical and research equipment).

Biological and Cultural Resources:

Biological and cultural resources reviews will be conducted prior to such activities to assure that impacts to sensitive resources are avoided or minimized.

The biological resources review will identify the occurrence of federally and state-protected species and habitats in the project area such as avian species protected under the Migratory Bird Treaty Act (MBTA); species protected by the Marine Mammal Protection Act (MMPA);

essential fish habitat as defined by the Magnuson-Stevens Fisheries Conservation and Management Act (MSA); plant and animal species and critical habitat protected under the Endangered Species Act (ESA), including candidates for such protection; and state species listed as threatened or endangered. Resource review recommendations will be followed during aquatic research activities to assure there are no adverse impacts to sensitive species and resources.

DOE will conduct a cultural resources review as part of the Section 106 process of the National Historic Preservation Act (NHPA). The Section 106 process assesses undertakings to determine if the undertaking will have an adverse effect/impact to historic properties.

If the biological and/or the cultural resources review determines that resources may be adversely affected/impacted, the use of this categorical exclusion (CX) would be reevaluated. Potential options could be, but are not limited to, changing the proposed activity location, the development of mitigation measures to render the impacts not significant, or the performance of additional National Environmental Policy Act (NEPA) analysis and review.

Categorical Exclusion to Be Applied:

Because the proposed action is to conduct research activities in the aquatic environment, the following CX, as listed in the DOE National Environmental Policy Act (NEPA) implementing procedures 10 CFR 1021, would apply:

B3.16 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.

Generic CXs are authorized by 10 CFR 1021.410(f) for recurring activities to be undertaken during a specified period of time, after considering potential aggregated impacts.

Eligibility Criteria:

The proposed activity meets the eligibility criteria of 10 CFR 1021.410(b) because the proposed action does not have any extraordinary circumstances that might affect the significance of the environmental effects, is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(l)), 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 environmental impact statement preparation.

The "Integral Elements" of 10 CFR 1021 are satisfied as discussed below:

INTEGRAL ELEMENTS, 10 CFR 1021, SUBPART D, Appendix B (1)-(5)	
Would the Proposed Action:	Evaluation
Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health?	The proposed action would not threaten a violation of regulations or DOE or Executive Orders.
Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities?	No waste management facilities would be constructed under this CX. Any generated waste would be managed in accordance with applicable regulations in existing facilities. Waste disposal pathways would be identified prior to generating waste and waste generation would be minimized.
Disturb hazardous substances, pollutants, or contaminants that preexist in the environment such that there would be uncontrolled or unpermitted releases?	No preexisting hazardous substances, pollutants, or contaminants would be disturbed in a manner that results in uncontrolled or unpermitted releases.
Involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species?	The proposed action would not involve the use of genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species (unless the proposed activity would be controlled or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements).
Have the potential to cause significant impacts on environmentally sensitive resources including, but not limited, to: • protected historic/archaeological resources • protected biological resources and habitat • jurisdictional wetlands, 100-year floodplains • Federal- or state-designated parks and wildlife refuges, wilderness areas, wild and scenic rivers, national monuments, marine sanctuaries, national natural landmarks, and scenic areas.	No environmentally sensitive resources would be significantly affected by the proposed research activities. The proposed action would not significantly affect floodplains, wetlands regulated under the Clean Water Act, national monuments, or other specially designated areas, prime agricultural lands, or special sources of water. Impacts to biological and cultural resources would be evaluated using the review processes described above.

Summary of Environmental Impacts:

The following table summarizes environmental impacts considered when preparing this CX

determination.

Environmental Impacts Considered when Preparing this CX Determination	
Would the Proposed Action:	Evaluation
Result in more than minimal air impacts?	Aquatic research activities are not likely to have more than minimal air impacts.
Increase offsite radiation dose measurably?	No releases to the environment would occur, and there would not be a measureable increase in offsite radiation dose.
Require a radiological work permit?	Although the proposed activities would not involve source, special nuclear, or byproduct materials, projects might involve encapsulated sources or other radiological materials or occur within outdoor areas that require a radiological work permit. Activities would be performed in compliance with as low as reasonably achievable (ALARA) principles, applicable state and federal regulations, DOE Orders, and PNNL guidelines. The radiation received by workers during the performance of activities would be administratively controlled below DOE limits as defined in 10 CFR 835.202(a). Under normal circumstances, those limits control individual radiation exposure to below an annual effective dose equivalent of 5 rem.
Discharge any liquids to the environment?	Liquid wastes, including any biological waste, generated by research operations would be discharged into existing treatment systems and/or managed in accordance with applicable regulations and best management practices.
Require a Spill Prevention Control and Countermeasures plan?	Aquatic research activities would be conducted in accordance with, where applicable, an approved Spill Prevention, Control, and Countermeasures plan and would incorporate appropriate control technologies and best management practices.
Use carcinogens, hazardous, or toxic chemicals/materials?	Proposed aquatic research activities could use small quantities of carcinogens, hazardous and/or toxic chemicals and materials. Project inventories would be maintained at the lowest practicable levels and chemical wastes would be recycled, neutralized, or regenerated if possible. Product substitution (use of less toxic chemicals in place of more toxic chemicals) would be considered where reasonable. These materials would be recycled, re-used, or excessed for other uses to the extent practical.

Involve hazardous, radioactive, polychlorinated biphenyl, or asbestos waste?	Proposed aquatic research activities could result in hazardous or PCB wastes. If unrecyclable, such wastes would be returned to the client or characterized, handled, packaged, transported, treated, stored, and/or disposed of through treatment, storage, and disposal facilities in accordance with applicable regulations.
Cause more than a minor or temporary increase in noise level?	Noise may be caused by activities such as boat use and use of jackhammers to install piezometers or other instruments; these will be short-term increases in noise level.
Create light / glare, or other aesthetic impacts?	Aquatic research activities are not likely to create light, glare, or other aesthetic impacts.
Require an excavation permit (e.g., for test pits, wells, utility installation)?	It is possible that an excavation permit, such as a PNNL or Hanford Site excavation permit, may be required for activities along the shoreline associated with aquatic research. Stipulations in the excavation permit to minimize potential impacts to safety and the environment would be followed. Applicable permits would be obtained including evaluations of impacts to biological and cultural resources.
Disturb an undeveloped area?	Disturbances, if any, would be very small for the purpose of installing instruments or staging equipment. Additional NEPA would be required if disturbances would impact sensitive species and/or habitats; cultural resources, including historic buildings and Traditional Cultural Properties; or other resources.
Result in more than minimal impacts on transportation or public services?	Aquatic research activities would not be likely to affect transportation or public services, in rare occasions the placement of instruments or buoys would be coordinated with the U.S. Coast Guard to minimize impacts to boat traffic.
Disproportionately impact low-income or minority populations?	Aquatic research activities would not disproportionately impact low income or minority populations.
Require environmental or other permits from federal, state, or local agencies?	Federal, state, or local environmental permits may be required for aquatic research activities. All necessary environmental permits would be obtained prior to conducting aquatic research activities and activities will abide by all applicable permit requirements.

Compliance Action:

I have determined that the proposed action satisfies the DOE NEPA eligibility criteria and integral elements, does not pose extraordinary circumstances, and meets the requirements for the CX referenced above. Therefore, using the authority delegated to me, I have determined that the

proposed action may be categorically excluded from further NEPA review and documentation. This determination must be reviewed at least once every 5 years.

Signature:  Digitally signed by THOMAS MCDERMOTT
Date: 2023.03.31 06:36:44 -07'00'

Tom McDermott
PNSO NEPA Compliance Officer

cc: ES Norris, PNNL