

# Categorical Exclusion Determination

Bonneville Power Administration  
Department of Energy



**Proposed Action:** Pacific Lamprey Comparative Performance Study and Gas Bubble Trauma Study

**Project No.:** 2017-005-00 (Contract Number 88068)

**Project Manager:** Siena M. Lopez-Johnston, EWM-4

**Location:** Chelan, Clark, Skamania, and Yakima counties, Washington

**Categorical Exclusion Applied (from Subpart D, 10 C.F.R. Part 1021):** B3.3 Research related to conservation of fish and wildlife

**Description of the Proposed Action:** Bonneville Power Administration (BPA) proposes to fund the U.S. Geological Survey (USGS) under the Pacific Lamprey Conservation Initiative (PLCI), a cooperative effort among agencies and tribes to achieve long-term persistence of Pacific lamprey (*Entosphenus tridentatus*) and support traditional tribal cultural use throughout the Columbia River Basin. Funding supports ongoing efforts to mitigate for effects of the Federal Columbia River Power System on fish and wildlife in the main stem Columbia River and its tributaries pursuant to the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Northwest Power Act) (16 U.S.C. (USC) 839 et seq.).

With funding from BPA, the USGS would study the swimming ability and behavior of artificially propagated (AP) and wild Pacific lamprey at the Columbia River Research Laboratory (CRRL) in Cook, Skamania County, Washington. The two-part study would compare the swimming ability of AP and wild juvenile lamprey implanted with a lamprey-eel acoustic tag (JLAT) and would compare the behavioral effects (i.e., night activity levels, burrowing ability, and photokinetic response to tail illumination) of holding AP and wild larval lamprey in captivity over a six to nine month period.

The USGS would also study gas bubble trauma (GBT) and mortality in larval and potentially juvenile lamprey exposed to a range of total dissolved gas (TDG) levels. In holding tanks at the CRLL, larval and juvenile lamprey would be exposed to a range of TDG levels and would be monitored for signs of the progression, prevalence, and severity of GBT (i.e., formation of bubbles on skin, fins, mouth, or eyes; disorientation; lethargy; irregular swimming; and mortality).

Juvenile and larval AP lamprey would be provided by the U.S. Fish and Wildlife Service (USFWS), the Yakama Nation (YN), and/or other USGS partners. The USGS would collect juvenile and larval wild lamprey using lamprey-specific electrofishing techniques from sites in Skamania, Clark, Yakima, and Chelan counties, Washington, including Wind River, Gibbons Creek, the Wapato and Sunnyside Irrigation Diversions in the Yakima River, and/or the Dryden Irrigation Canal in the Wenatchee River. Wild lamprey could also be sourced from rotary screw traps operated for other research and monitoring purposes by USGS partners, including the USFWS and the YN. Following completion of the studies, AP and wild lamprey would remain in culture at the CRRL.



# **Categorical Exclusion Environmental Checklist**

This checklist documents environmental considerations for the proposed project and explains why the project would not have the potential to cause significant impacts on environmentally sensitive resources and would meet other integral elements of the applied categorical exclusion.

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## **Project Site Description**

Pacific lamprey electrofishing would occur at multiple field sites in Skamania, Clark, Yakima, and Chelan counties, Washington, including Wind River, Gibbons Creek, the Wapato and Sunnyside Irrigation Diversions in the Yakima River, and/or the Dryden Irrigation Canal in the Wenatchee River. All remaining project activities would occur indoors at existing laboratory facilities.

## **Evaluation of Potential Impacts to Environmental Resources**

### **1. Historic and Cultural Resources**

Potential for Significance: No

Explanation: The proposed actions (electrofishing and laboratory-based analyses) would not result in ground disturbance that could potentially impact archaeological resources. No modifications to existing built historic resources are proposed. Therefore, the proposed actions would have no potential to cause effects to historic properties.

### **2. Geology and Soils**

Potential for Significance: No

Explanation: No ground disturbance would occur as a result of the proposed actions. Therefore, the proposed actions would not impact geology and soils.

### **3. Plants (including Federal/state special-status species and habitats)**

Potential for Significance: No

Explanation: The proposed actions would not require any tree or vegetation removal or management and would not result in adverse modification to suitable protected plant habitats. Therefore, the proposed actions would have no effect on special-status plant species or habitats.

### **4. Wildlife (including Federal/state special-status species and habitats)**

Potential for Significance: No

Explanation: Minor and temporary disturbance of normal wildlife behavior could occur from elevated noise and human presence at the various field sites. However, the proposed actions would be temporary (no more than a few hours at each site) and would be largely consistent with human activity and natural processes typical of the sites. Wildlife species that could be present in the area would likely be habituated to this level of activity. The proposed actions

would not result in adverse modification to suitable protected species habitat. Therefore, the proposed actions would have no effect on special-status wildlife species or habitats.

## **5. Water Bodies, Floodplains, and Fish (including Federal/state special-status species, ESUs, and habitats)**

Potential for Significance: No

Explanation: The proposed actions include lamprey-specific electrofishing, which would disturb streambed sediment and would temporarily increase turbidity in a limited area. Following completion of the lamprey collection, suspended sediments would resettle on the streambed, and turbidity would quickly return to pre-existing conditions. The net effect of these actions would be similar to those associated with routine events and processes that commonly occur in streams (e.g., large wildlife walking in a streambed, human recreation). No ground disturbance within floodplains would occur as a result of the proposed actions.

Lamprey-specific electrofishing methods use voltages and frequencies low enough to avoid harming salmonids and other special-status fish species, while still effectively capturing lamprey. Furthermore, larval and juvenile lamprey habitat (i.e., shallow, depositional areas at the stream margins) largely does not coincide with special-status fish habitat (i.e., rocky substrates in flowing water). Backpack electrofishing equipment operated at lamprey-specific voltage and frequencies generate a small diameter (~18") electrical field, which allows for avoidance of non-lamprey fish, if present.

Therefore, the proposed actions would result in no long-term impact to water bodies and no impact to floodplains. The proposed actions would have no effect on special-status fish species or habitats.

## **6. Wetlands**

Potential for Significance: No

Explanation: Some proposed actions could take place within or near wetlands. However, no ground disturbance would occur as a result of the proposed actions. Therefore, the proposed actions would not impact wetlands.

## **7. Groundwater and Aquifers**

Potential for Significance: No

Explanation: No ground disturbance would occur as a result of the proposed actions. Therefore, the proposed actions would not impact groundwater and aquifers.

## **8. Land Use and Specially-Designated Areas**

Potential for Significance: No

Explanation: There would be no change in land use and no impact to specially-designated areas.

## **9. Visual Quality**

Potential for Significance: No

Explanation: There would be no change in visual quality.

## **10. Air Quality**

Potential for Significance: No

Explanation: Minor and temporary dust and emissions could increase in the local area from vehicle and equipment use. There would be no permanent change in air quality.

## 11. Noise

Potential for Significance: No

Explanation: Minor and temporary noise could increase at field sites from vehicle and equipment use and human presence. However, these actions would be consistent with current activities typical of the field sites. All other proposed project activities would occur indoors at existing laboratory facilities. There would be no permanent change in ambient noise.

## 12. Human Health and Safety

Potential for Significance: No

Explanation: Individuals carrying out the proposed actions would be trained in proper techniques and equipment use. The project would not generate or use hazardous materials and would not create conditions that would increase risk to human health and safety. No impacts to human health and safety are expected as a result of the proposed actions.

### Evaluation of Other Integral Elements

The proposed project would also meet conditions that are integral elements of the categorical exclusion. The project would not:

**Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders.**

Explanation: N/A

**Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators) that are not otherwise categorically excluded.**

Explanation: N/A

**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.**

Explanation: N/A

**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 of the Department of Agriculture, the Environmental Protection Agency, and the National Institutes of Health.**

Explanation: N/A

## **Landowner Notification, Involvement, or Coordination**

Description: No landowner notification, involvement, or coordination would be required as all field sites would likely be accessed via existing roads and public lands. The USGS would be responsible for coordinating site access with private landowners, if applicable.

Based on the foregoing, this proposed project does not have the potential to cause significant impacts to any environmentally sensitive resource.

Signed: /s/ W. Walker Stinnette July 30, 2021  
W. Walker Stinnette, EC-4 Date  
Contract Environmental Protection Specialist  
Salient CRGT