

# **Pacific Lamprey Artificial Propagation and Release Research Project Final EA**

Bonneville Power Administration  
DOE/EA 2104  
May 2021

This document is the final Environmental Assessment (EA) for the proposed Pacific Lamprey Artificial Propagation and Release Research Project. This document was prepared as an abbreviated final EA because there were no changes to the proposed action, alternatives, or environmental analysis presented in the draft EA. This abbreviated final EA provides comments received on the draft EA and Bonneville Power Administration's (Bonneville) responses to the comments. This final EA should be used as a companion document to the draft EA (DOE/EA 2132, dated January 25, 2021), which contains the full text describing the project, its potential environmental impacts, and mitigation measures to reduce impacts.

## **Summary**

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Bonneville proposes to fund the Confederated Bands and Tribes of the Yakama Nation (YN) and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) to implement a program intended to evaluate the feasibility of artificial propagation and release for early life stage (egg, prolarva, larva, and juvenile) Pacific lamprey in the Yakima, Walla Walla, and Tucannon subbasins. The program is designed to be a scientific experiment that would evaluate the feasibility of using artificial propagation techniques as future enhancement actions for Pacific lamprey in the Columbia River Basin.

## **Draft EA Comment Period**

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In order to solicit comments on the draft EA, Bonneville released the EA to interested governments, agencies, tribes, organizations, and individuals. The comment period ran from January 25, 2021 to February 9, 2021. All comments and Bonneville's responses are included in this final EA; none of the public comments necessitated changes to the EA.

## **Comments and Responses**

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Three comment letters were submitted during the public comment period. The full text of each letter is provided below along with Bonneville's response to each of the comments.

### **CTUIR -- Comment #1**

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Department of Natural Resources (DNR) would like to express our appreciation for the Draft Pacific Lamprey Artificial Propagation and Release Research Project Environmental Assessment (Draft EA). In our view, lamprey production for recovery is an important effort for Columbia Basin ecology and Tribal culture and treaty harvest. We hope our work together on lamprey restoration under the Fish Accords will continue far into the future to protect, preserve and enhance lamprey populations throughout the region.

Our DNR Fisheries Lamprey Project Leader, Aaron Jackson, worked with BPA staff for two years helping draft the Environmental Assessment. Comments he provided were incorporated into the document so our additional comments below relate to historic properties of religious and cultural significance to tribes (HPRCSITs). We appreciate that BPA has expedited the National Environmental Policy Act review process and hope we can implement features of our lamprey

project in the near future. Our 2021 lamprey project calls for implementing the Master Lamprey Supplementation Plan by releasing lamprey juveniles produced at the Walla Walla Community College Water and Environmental Center into the Tucannon River this spring and we hope this EA will be completed in time to do this.

The CTUIR DNR does have one suggested inclusion in the document. The draft EA makes the following conclusion regarding impacts to historic properties:

Bonneville concluded that the Proposed Action has no potential to cause effects on historic properties since it would not include any ground-disturbing activities or any activities to affect existing structures. However, the tribal proponents would follow established procedures for protecting archaeological and cultural resources if encountered during the artificially propagated lamprey release process. The proponents would avoid damaging cultural and historic resources and would comply with applicable cultural resource preservation laws.

The CTUIR DNR feels the Draft EA should identify that restoration of lamprey populations will be a positive effect on HPRCSITs significant to the CTUIR as well as other tribes. Restoring a traditional species to tribal fishing sites and areas where tribes have exercised treaty rights since time immemorial will enhance HPRCSITs and further the Trust Responsibility of the BPA to protect treaty rights.

We propose rewriting the section slightly to read:

Bonneville concluded that the Proposed Action has no potential to cause **adverse** effects on historic properties since it would not include any ground-disturbing activities or any activities to **adversely** affect existing **historic properties** structures. ~~However,~~ The tribal proponents would follow established procedures for protecting archaeological and cultural resources if encountered during the artificially propagated lamprey release process. The proponents would avoid damaging cultural and historic resources and would comply with applicable cultural resource preservation laws. **However, restoration of lamprey populations would be a positive effect on historic properties of religious and cultural significance to Indian tribes (HPRCSITs) significant to the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes and Bands of the Yakama Nation and other tribes. Restoring a traditional species to fishing sites and areas where tribes have exercised treaty rights since time immemorial will enhance HPRCSITs.**

The link between HPRCSITs and First Foods such as lamprey are inherently and intuitively strong; the presence and accessibility of First Foods at such sites is required for cultural continuity and treaty harvest, to actively practice Tribal religion and culture and to also restore and maintain the links between these Tribal members and these sites.

We thank you again for the Draft EA and hope it can be finalized quickly so that our work can continue. Feel free to contact me or Gary James, Fisheries Program Manager, at 541-429-7285 if you have any further questions regarding this project.

Sincerely,

Eric Quaempts, Director  
Department of Natural Resources

**Bonneville Response to CTUIR – Comment #1**

Bonneville recognizes the cultural significance of Pacific lamprey to tribal cultures in the Columbia River Basin and has been working with tribes in the Columbia River Basin to improve conditions for lamprey. The Proposed Action analyzed in the EA is a continuation of those efforts that would evaluate if artificial production could be a useful component of the overall lamprey enhancement efforts. While the ultimate goal of the larger regional efforts is the restoration of Pacific lamprey populations, it is not yet known what level of effect artificial propagation could have in reaching that goal. For that reason, effects to the overall Pacific lamprey population were not included in the analysis.

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**ODFW – Comment #1**

Although the objectives of understanding habitat use, growth, densities, movements, and survival of early lamprey life stages are mentioned, specific hypotheses, statistical tests, and sampling design are not mentioned.

**ODFW – Comment #2**

Do the project proponents have adequate controls (before/after and/or sites)?

**Bonneville Response to ODFW – Comments #1 and #2:**

Thank you for your comment. The specific elements of the scientific approach were not included in draft EA because of the experimental nature of the Proposed Action. The releases and post-monitoring releases are intended to gather data that would inform future actions. More specific details regarding the research approach can be found in the “Pacific Lamprey Artificial Propagation, Translocation, Restoration, and Research Master Plan”

<https://nwcouncil.app.box.com/s/em09zw9p9iv4mhoh8em6k4b06r4khjvr>.

**ODFW – Comment #3**

Enclosures for post-release monitoring would be used to limit the movements of early life stages of lamprey, and thus facilitate monitoring their growth and survival. It is not clear how human tampering with enclosures or dislodgment of enclosures from environmental events would be minimized.

**Bonneville Response to ODFW – Comment #3:**

Sites would be monitored to deter tampering. As discussed in Section 4.1 of the EA, the Proposed Action would occur in the shallow and slow-moving areas of rivers, which would put them out of high velocity parts of the stream where dislodgement would be more likely to occur.

**ODFW – Comment #4**

Existing facilities to rear early life stages of artificially-propagated Pacific lamprey include the Water and Environment Center at Walla Walla Community College and the Mukilteo Research Station. The water used by the facilities will be returned to nearby rivers. Because adult Pacific lamprey are attracted to larval pheromones, it follows that pheromones generated by artificially propagated larvae and then released to the river may attract adults to the vicinity of the water outflows. It would be informative to monitor and assess whether this occurs and whether it might impact the distribution and spawning locations of adult lamprey in the subbasins.

**ODFW – Comment #5**

Similarly, will the proponents look to see if “wild” adult and larval lamprey increase or are attracted at release locations?

**ODFW – Comment #6**

It would be informative to compare the survival and emigration behavior of wild juvenile (eyed) Pacific lamprey with that of their hatchery-reared counterparts. This could inform whether hatchery lamprey are useful surrogates for wild fish in emigration and survival studies.

**Bonneville Response to ODFW – Comments #4, #5, #6:**

Activities at the Mukilteo Research Station are not included as part of the Proposed Action.

While this type of data collection could be helpful in understanding the movements of Pacific lamprey, the scope of the proposed post-release monitoring is limited to evaluations of larval lamprey at each of the identified release sites. Data collected during post-release monitoring would inform the potential for artificially propagated lamprey to be used as part of future enhancement actions for lamprey populations.

**ODFW – Comment #7**

Although Bonneville’s summary mentions that releases will occur during two periods, including early (April – July) and late (Sept – Oct), this is not explicitly mentioned in the EA. In addition, more specific details about release times relative to river flows are not mentioned. This leaves one wondering whether some releases will be impacted by lack of instream flow.

**ODFW – Comment #8**

The water temperatures in the South Fork of the Walla Walla would allow for survival of the early life stages, but as one moves downstream, the water temperatures warm to past the critical threshold for lamprey. Also, the lower release areas of the Walla Walla River in Washington are almost void of water due to irrigation withdrawals. Larval and juvenile lamprey would need to migrate upstream or downstream significant distances to survive in the lower three proposed release areas. Thus, depending on the time of year, the release locations could result in low survival.

**Bonneville Response to ODFW – Comments #7 and #8:**

Any effects to lamprey releases caused by lack of instream flows would be documented during post-release monitoring.

**ODFW – Comment #9**

Is there a reason not to convey the same concern around lamprey collection impacts to juvenile ESA-listed Mid-Columbia steelhead and Chinook salmon, as for bull trout?

**Bonneville Response to ODFW – Comment #9**

The potential effects to fish described in Section 3.1.3 of the EA would be low regardless of species. Very low frequencies and voltages are used when electrofishing to capture larval lamprey so there would be a low, if any, effect on any fish, including bull trout that would be in the vicinity.

**ODFW – Comment #10**

There is a possibility that bull trout (and Chinook salmon) redds could be encountered in the fall, specifically at the site on the SF Walla Walla River. This site is at the downstream extent of bull trout spawning distribution. Bull trout spawn in the SF Walla Walla from early September through early November.

**ODFW – Comment #11**

The EA should mention the potential impact and identify measures to avoid scaring off spawning fish or damage incubating eggs (e.g., conduct a spawning survey in the sampling area and mark redds prior to lamprey release and monitoring activities). The recommended conservation measures (p. 18) sort of mentions this (i.e., not work in turbid waters), but it would be helpful for the proponents to provide more details. This may also be an issue on the Tucannon River since that site is also within the bull trout spawning and rearing habitat. Similar concerns may be warranted in the spring relative to steelhead.

**Bonneville Response to ODFW – Comments #10 and #11:**

The location of lamprey sites, while within bull trout spawning rearing habitat, are in areas of slow moving water and depositional habitats. These are not areas where bull trout are likely to spawn and so the potential effects to bull trout would be low (see Section 3.1.3 of the EA).

**ODFW – Comment #12**

ODFW would appreciate notifications of release timing, locations, and monitoring data.

**Bonneville Response to ODFW – Comment #12**

Bonneville appreciates your interest in this program and you will receive any future information related to the NEPA process. Once the program starts, the YN and CTUIR intend to continue to work with the larger Pacific lamprey research community and provide the data and information that are collected. Any specific requests for information can be directed toward the tribes' Pacific lamprey program.

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**WDFW – Comment #1**

Washington Department of Fish and Wildlife (WDFW) staff have reviewed the Environmental Assessment (EA) of the Pacific Lamprey Artificial Propagation and Release Research and are supportive of the proposed action of the limited releases of artificially propagated Pacific Lamprey and associated research. We look forward to the evaluation and information gained from this project with regards to the early life stage survival of lamprey. To date, we do not have much information regarding artificial propagated lamprey and agree it is important to thoroughly document the genetics of artificially propagated lamprey and differences in life stage survival as

described in the EA. This work will enhance our scientific understanding of how artificially propagated lamprey could differ from wild fish and how release success varies among early life stages. While similar work has been completed using salmon and sturgeon, lamprey represent an older and unique lineage of species for which this research will be foundational in our understanding of future use of artificially propagated fish.

We request to be kept informed regarding the life stage, site location, release date, and total release numbers of lamprey that are a part of this study. We would be interested in collaborating and assisting in whatever capacity would be helpful for project monitoring and assessment. Reporting and requests for technical assistance can be directed towards our lamprey technical lead, Monica Blanchard ([monica.blanchard@dfw.wa.gov](mailto:monica.blanchard@dfw.wa.gov); 360-490-0097).

Thank you for this opportunity to provide comment.

Sincerely,

/s/Laura Heironimus

Laura Heironimus

Columbia River Sturgeon, Smelt, and Lamprey Unit Lead

Washington Department of Fish and Wildlife 5525 S 11th St, Ridgefield, WA 98642

**Bonneville Response to WDFW – Comment #1**

Thank you for your comment.