

**The Dalles Dam Project Work Plan 2021**  
**Columbia River Inter-Tribal Fish Commission**  
**Fish Management**  
**Pacific Lamprey Project**

**United States Army, Corps of Engineers, Portland District**  
**The Dalles Dam**  
**P.O. Box 564**  
**The Dalles, OR 97058**

**April 2021**

## Background

The Columbia River Inter-Tribal Fish Commission (CRITFC), in accordance with the Tribal Pacific Lamprey Restoration Plan for the Columbia River Basin (TPLRP, CRITFC 2011), is supporting its member tribes' efforts to conserve and restore Pacific lamprey (*Entosphenus tridentatus*) in the Columbia River basin. This ongoing project is funded by the Bonneville Power Administration and managed by CRITFC. A key component of tribal lamprey restoration plans is collecting and translocating adult Pacific lamprey to upper river systems (e.g., the Umatilla, Yakima, and Snake rivers) in the Columbia River basin. To this end, CRITFC is requesting permission from the U.S. Army Corps of Engineers (USACE) to access Bonneville Dam (BON), The Dalles Dam (TDA), and John Day Dam (JDA) to support adult lamprey collection for CRITFC member tribes' translocation efforts. Participating tribes are the Confederated Tribes and Bands of the Yakama Nation (YN), Confederated Tribes of the Umatilla Indian Reservation (CTUIR), the Nez Perce Tribe (NPT), and the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSO). The CTWSO is not expected to collect adults for translocation but may collect for ongoing monitoring and evaluation projects.

In 2021, CRITFC and its member tribes anticipate the collection of up to 4,512 adult Pacific lamprey (up to 1,128 adult lamprey per member tribe) from BON, TDA, and JDA dams. The total allocation of up to 1,128 lamprey per member tribe may be attained through a combination of up to 563 adults at BON, up to 411 adults at TDA, and up to 240 adults at JDA dams (Table 1). This allocation is equal to 8 percent of the adjusted two-year running average adult count past BON. Allocations at each dam are calculated using the Tribal Guidelines for Translocation contained in the TPLRP (updated June 2017). CRITFC and the member tribes will closely monitor adult collection numbers throughout the season to ensure dam allocations are not exceeded.

CRITFC's role in supporting member tribe lamprey collections at USACE projects will include trapping, transportation, holding, and distribution of lamprey to member tribes. As in previous years, lamprey collections will be accomplished through a combination of methods at the three projects including, but not limited to, setting and checking lamprey tube traps above picketed leads at BON Bradford Island AWS, BON Cascades Island AWS, and BON Washington Shore AWS, TDA East and TDA North Fish Ladders, and JDA North Fish Ladder. We likewise plan to collect adult lamprey using the BON Adult Fish Facility (AFF) lamprey flume trap, BON Cascades Island lamprey flume trap, BON Powerhouse Two North Monolith Lamprey Flume System (LFS), the JDA South Fish Ladder lamprey mechanical trap, and JDA North Fish Ladder lamprey flume trap. In addition, CRITFC and its member tribes may request access to adult lamprey from rest boxes at the BON Cascades Island Lamprey Passage Structure (LPS) downstream of the UMT, the BON Cascades Island AWS/ladder LPS, and the BON Bradford Island LPS (Table 2). Additional trapping locations may be considered in consultation with USACE project staff and CRITFC member tribes as deemed appropriate if necessary. In addition to lamprey collection, CRITFC personnel will be responsible for safely holding trapped adult lamprey in tanks at the BON AFF and/or the ODFW Bonneville Hatchery captive broodstock building (if approved and equipped for use in 2021), as well as transportation and holding adult lamprey in tanks at JDA near the Smolt Monitoring Facility building until retrieval by CRITFC member tribes.

**Objectives and tasks specific to The Dalles Dam:**

- 1) Facilitate the collection of up to 411 adult Pacific lamprey per tribe (YN, CTUIR, NPT) at TDA.
- 2) Oversee the holding, transportation, and transfer of lamprey collected at TDA to CRITFC member tribes.
- 3) Set and check lamprey tube traps above picketed leads at the TDA East Fish Ladder AWS and possibly the TDA North Fish Ladder AWS (if needed; Figure 11).
- 4) Safely collect, remove, and transport trapped adult lamprey to tanks at the JDA Smolt Monitoring Facility until transfer to CRITFC member tribe staff utilizing previously established protocols developed by USACE funded researchers
- 5) Assist the USACE, regional researchers, and the CRITFC member tribes in the collection of biological data from adult lamprey collected at USACE mainstem dams (e.g. length, girth, weight, inter-dorsal length) using previously established methods.

**Table 1. Total lamprey collection allocations per tribe per dam in 2021.**

	Number of collected fish will not exceed:			
	BON	TDA	JDA	TOTAL
Yakama Nation	563	411	240	1,128
Umatilla	563	411	240	1,128
Warm Springs*	563	411	240	1,128
Nez Perce	563	411	240	1,128
<b>TOTAL</b>	Up to 2,252	Up to 1,644	Up to 960	Up to 4,512

\*Not expected to collect and translocate adult lamprey in 2021

**Methods**

Lamprey will be collected from May through September using tube traps located above picketed leads in the TDA East Fish Ladder AWS (Figure 9) and possibly the TDA North Fish Ladder AWS, if needed in 2021 (Figure 8). Lamprey tube traps (approximately 12” diameter by 3’ length PVC pipe with funnel entrances on each side) will be deployed and checked daily (Figure 6, Figure 7). Traps are placed along fishway walls upstream of picketed leads and secured with ropes to railings, posts, or similar attachment points. Trapped lamprey will be placed into insulated coolers and/or buckets and carried to a ¾ ton GSA truck equipped with a holding tank containing oxygenated water for transport. Upon checking traps and securing the transport tank and equipment, the CRITFC crew will check out and leave the Project area. Trapped fish will be transported to JDA and held in existing holding tanks located behind the JDA Smolt Monitoring Facility following existing methods and protocols developed by previous USACE funded researchers (e.g., U of I and NOAA).

**Table 2. Summary of proposed collection locations at Bonneville, The Dalles, and John Day dams. Alternate locations may be selected upon consultation between USACE and CRITFC member Tribes as needed to meet allocations.**

<b>Bonneville Dam</b>	<b>Proposed collection locations</b>				
<i>Washington Shore</i>	AWS above picketed leads	AFF flume trap	LFS	Traps within AFF ladder*	LPS rest box*
<i>Cascades Island</i>	AWS above picketed leads	AWS flume trap	LPS rest box*		
<i>Bradford Island</i>	AWS above picketed leads	LPS rest box*			
<b>The Dalles Dam</b>	<b>Proposed collection locations</b>				
<i>East Fish Ladder</i>	AWS above picketed leads				
<i>North Fish Ladder*</i>	AWS above picketed leads				
<b>John Day Dam</b>	<b>Proposed collection locations</b>				
<i>South Fish Ladder</i>	Mechanical trap				
<i>North Fish Ladder</i>	AWS above picketed leads	Flume trap			

\*Not expected to be used but may be added (if needed) upon consultation with USACE staff.

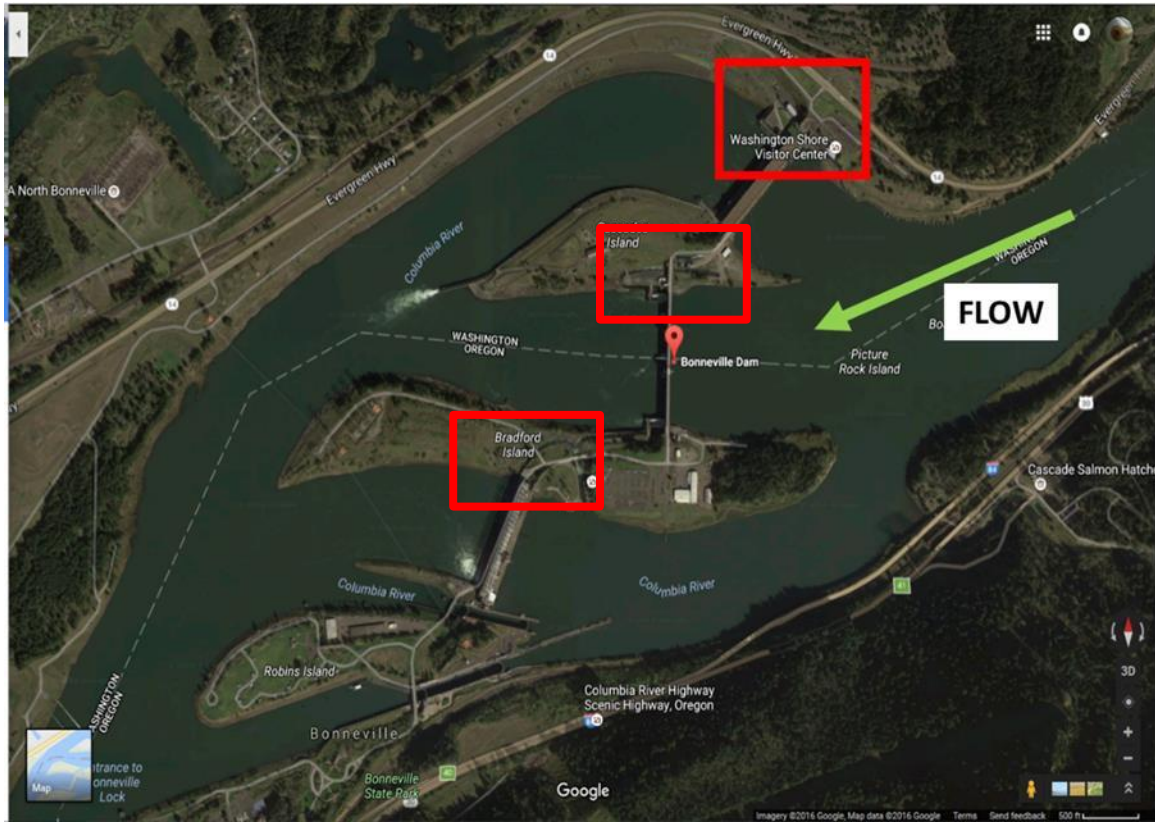


Figure 1. Aerial view of Bonneville Dam showing lamprey trapping locations at the Washington Shore Fish Ladder, Cascades Island Fish Ladder, and Bradford Island Fish Ladder outlined in red boxes. Tube traps are deployed above picketed leads in these locations.



Figure 2. Close-up aerial view of Bonneville Dam with the Adult Fish Facility and upper Washington Shore Fish Ladder outlined in red boxes.

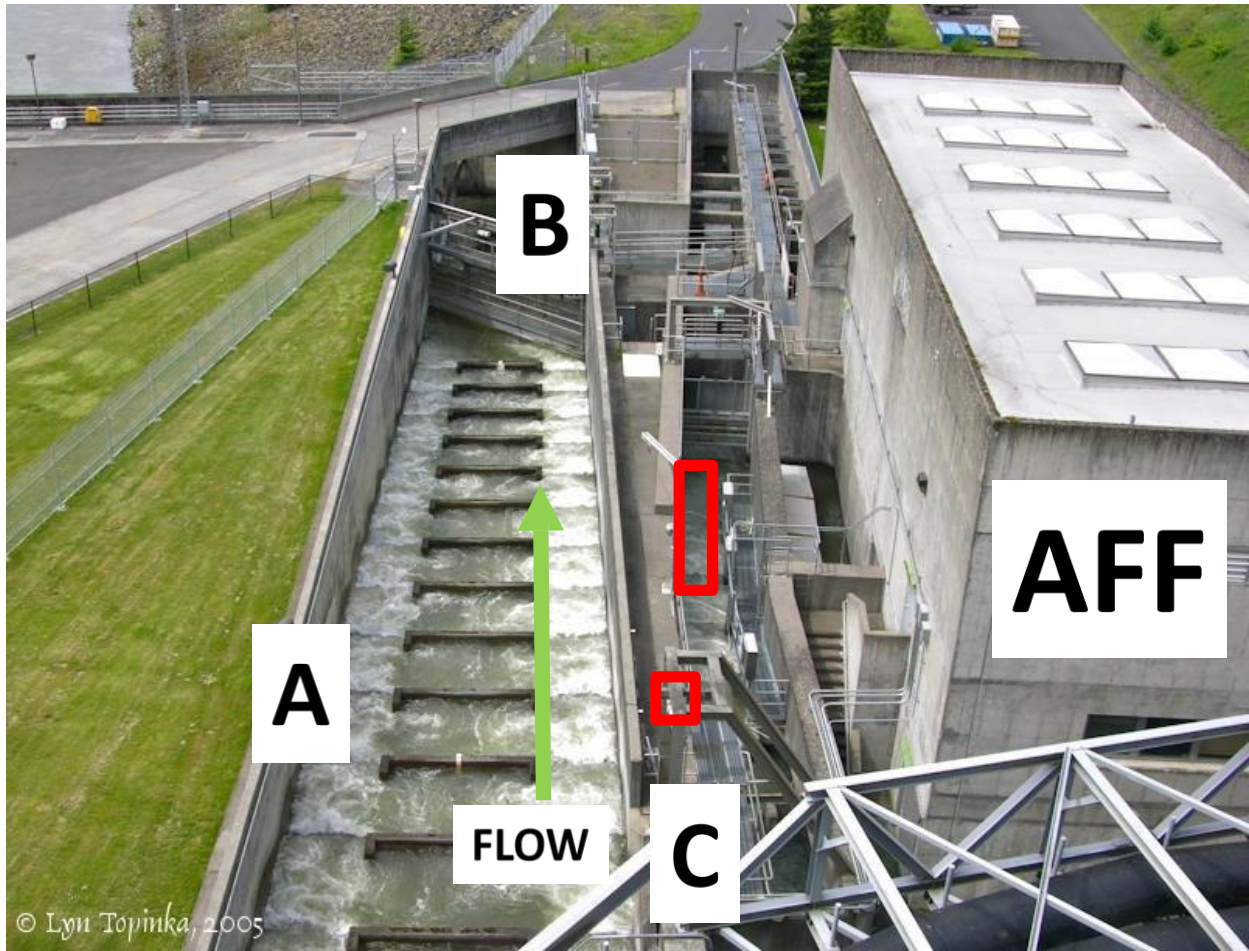


Figure 3. Bonneville Dam Washington Shore Fish Ladder looking downstream at the Adult Fish Facility (AFF). AFF lamprey flume and trap box approximate locations are outlined in red boxes. A = primary Washington Shore fish ladder. B = AFF entrance fish ladder. C = AFF exit fish ladder. Alternate locations may be selected upon consultation between USACE and CRITFC member Tribes.



Figure 4. Close-up aerial view of the Bonneville Dam Washington Shore Fish Ladder at the count station and visitors center. Potential trap locations above picketed leads are denoted by red stars. Alternate locations may be selected upon consultation between USACE and CRITFC member Tribes.





Figure 5. Close-up aerial view of the Bonneville Dam Bradford Island Fish Ladder at the count station and visitors center. Potential trap locations above picketed leads are outlined by red box. Alternate locations may be selected upon consultation between USACE and CRITFC member Tribes.



Figure 6. Representative 36" long lamprey tube trap.

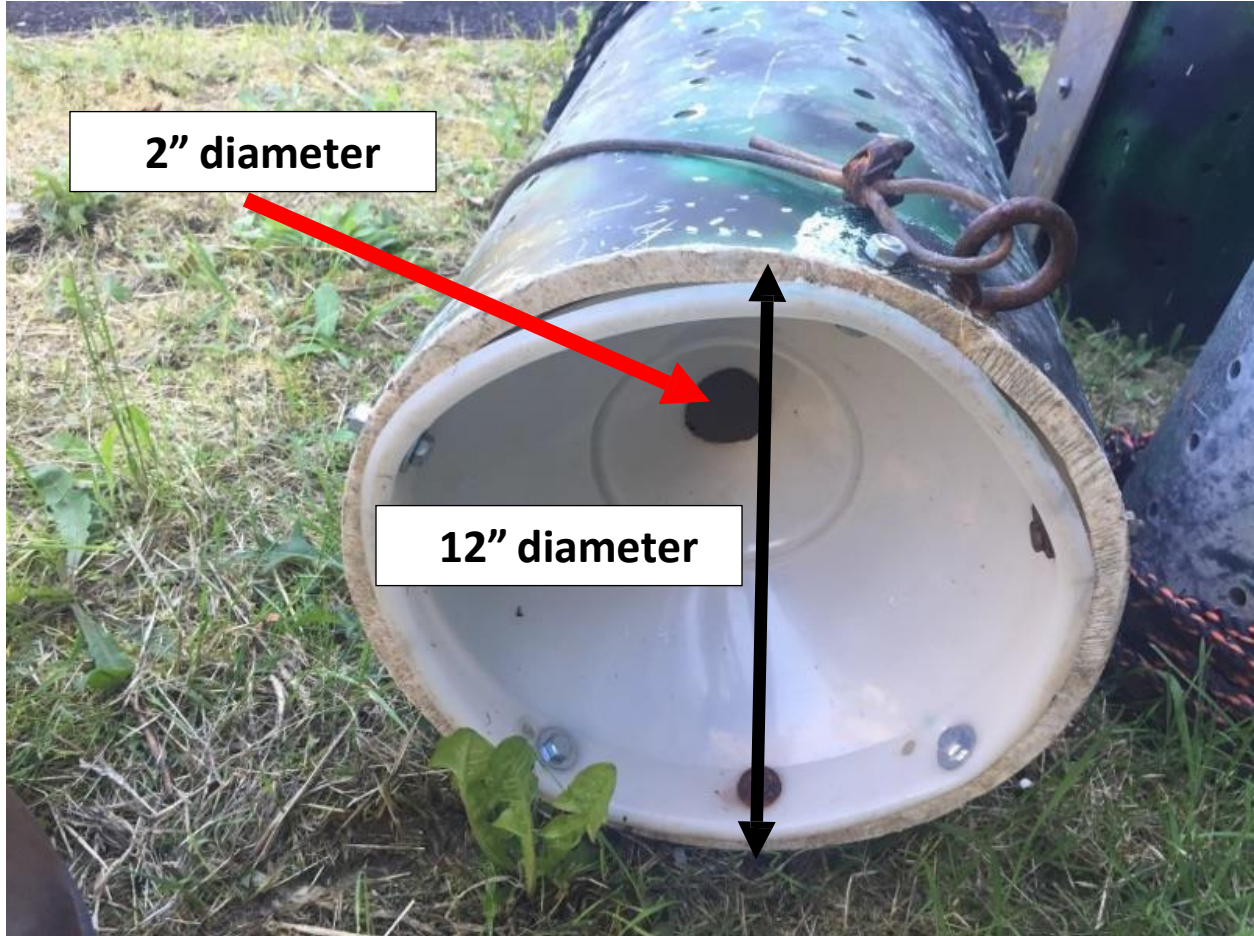


Figure 7. The lamprey tube traps have 12" diameter funnels on each end with 2" diameter holes for lamprey entrance.



Figure 8. Aerial view of The Dalles Dam showing potential lamprey trapping locations at (1) the TDA East Fish Ladder and (2) the TDA North Fish Ladder as indicated by the red circles.



Figure 9. Close-up aerial view of The Dalles Dam East Fish ladder. Small circles (4) denote lamprey tube trap locations above picketed leads. The large red square (2) and circle (3) denote the location of the pulley system used to lift lamprey from the deck of the dam up to the vehicle.



Figure 10. Aerial view of John Day Dam showing locations of the (1) JDA Smolt Monitoring Facility, (2) JDA South Fish Ladder Lamprey Mechanical Trap, (3) JDA North Fish Ladder Lamprey Flume Trap, and (4) JDA North Fish Ladder tube traps.



Figure 11. Close-up aerial view of the JDA North Fish Ladder. Red circles (2) denote the location of pot traps deployed above picketed leads in the fishway.



Figure 12. Close-up aerial view of the JDA North Fish Ladder showing the location of the JDA North lamprey flume trap rest box on the deck of the dam (3). Red circles 1 and 2 show the location of the elevator and the davit arm that can be used to lift buckets when elevator is inoperable.



Figure 13. Close-up aerial view of the JDA South Fish Ladder showing the location of the lamprey mechanical trap (3).

## **Schedule**

Upon USACE approval, CRITFC anticipates beginning collection in late May or early June 2021 and continuing through mid-September, or until the target allocation is met or the lamprey run has effectively ended, whichever is first. A routine work schedule has not yet been developed but is expected to be finalized within the first 10 days of trapping. A high level of consistency and continuity can be expected by USACE in timing of CRITFC crew arrival, trap checking, and departure over the course of the summer months.

This project is essential for continuity of annual lamprey collection and translocation actions during the Pacific lamprey migration season (May through September), however, the safety of CRITFC crewmembers, tribal staff, and USACE staff is paramount. Due to the COVID-19 pandemic, CRITFC staff will align their behavior with recommendations of health authorities as they pertain to COVID-19, as well as CRITFC's internal Coronavirus Interim Measures Policy and USACE COVID-19 policies while performing these essential duties at USACE projects. CRITFC staff will adhere to best practice guidelines for social distancing at all USACE projects. No physical interaction between USACE staff and CRITFC or tribal staff is required to complete this work. The number of CRITFC staff will be minimized; lamprey collection will be made by two CRITFC staff (occasionally three), with the same staff accessing BON, TDA, and JDA projects each day. Time spent at each project will be minimized and limited to that required to carry out the essential functions of the trapping and translocation program. Staff will immediately leave each project upon completion of required field duties. Physical interactions between CRITFC staff and tribal staff during lamprey collection, transfer, and transportation will be minimized and regulated according to the specific and unique COVID-19 guidelines of each tribe. These practices will be subject to review and revision as necessary as COVID-19 conditions evolve, or as tribal, CRITFC, or USACE regulations and guidance change going forward. As COVID-19 vaccinations become available they will be offered to field staff who meet the eligibility criteria.

## **Project Impact Statement**

CRITFC has no anticipated impacts to the existing project activities other than access to the trapping locations identified in this document.

## **Job Hazard/Safety Analysis**

All personnel will read the USACE General Safety Requirements Manual #385-1-1. The CRITFC Pacific Lamprey Project will have regular safety meetings relative to adult collection activities at USACE projects. Activity Job Hazard Safety Analysis sheet, a list of personal and the expiration dates of their First Aid and CPR will be attached.

## **Safety Data Sheet**

No hazardous materials will be brought on site for this activity.

## **Funding Arrangements**

No project support will be necessary to perform job activities.

**Personnel List**

<b>Name</b>	<b>Agency</b>	<b>Activity</b>	<b>1st Aid exp.</b>	<b>CPR exp.</b>
Laurie Porter	CRITFC	Fishways		
Greg Silver	CRITFC	Fishways		
Devayne Lewis	CRITFC	Fishways		
TBD	CRITFC	Fishways		
TBD	CRITFC	Fishways		
TBD	CRITFC	Fishways		

**Vehicle List**

Due to COVID-19 mitigation concerns, each crewmember will be in a separate vehicle while driving to and accessing trapping locations at the project.

**Collection Permit**

Scientific collection permit issued by the Yakama Nation to the Columbia River Inter-Tribal Commission to collect and transport adult lamprey at Bonneville, The Dalles, and John Day dams (issued April 5, 2021).