

Bonneville Dam Project Work Plan 2022
Columbia River Inter-Tribal Fish Commission
Fish Management
Pacific Lamprey Project

United States Army, Corps of Engineers, Portland District
Bonneville Lock and Dam
Cascade Locks, OR 97014
(541) 374-8801

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Background

The Columbia River Inter-Tribal Fish Commission (CRITFC), in accordance with the Tribal Pacific Lamprey Restoration Plan for the Columbia River Basin (CRITFC 2011; *in revision*), 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 2022, CRITFC and its member tribes anticipate the collection of adult Pacific lamprey to occur from late May through early September at BON, TDA, and JDA in accordance with the CRITFC Tribal Pacific Lamprey Restoration Plan Guidelines for Translocation (*in revision*). CRITFC will monitor collection numbers throughout the season and provide weekly updates as well as final collection numbers at the end of the season.

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 picket 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. 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 ODFW Bonneville Hatchery Captive Broodstock Building (CBB) and/or BON AFF, and JDA Smolt Monitoring Facility (SMF) until retrieval by CRITFC member tribes.

Objectives and tasks specific to Bonneville Dam:

1. Facilitate the collection of adult Pacific lamprey for three tribes (YN, CTUIR, NPT) at BON.
2. Oversee the holding, transportation, and transfer of lamprey collected at BON to CRITFC member tribes.

3. Set and check lamprey tube traps above picket leads at Bradford Island AWS, Cascades Island AWS, and Washington Shore AWS (Figure 2 through Figure 5).
4. Collect lamprey captured in the Cascades Island lamprey flume trap, AFF lamprey flume trap, and Powerhouse Two LFS.
5. Safely hold trapped adult lamprey in tanks at the ODFW Bonneville Hatchery CBB and/or BON AFF and JDA SMF utilizing previously established protocols developed by USACE funded researchers.
6. Assist the USACE, regional researchers, and CRITFC member tribes in collection of biological data from adult lamprey collected at USACE mainstem dams (e.g. length, girth, weight, inter-dorsal length) using previously established methods, as needed.

Methods

Lamprey will be collected at BON from late May through September using tube traps in AWS locations discussed above and from lamprey-specific flume traps (Cascades Island AWS, Powerhouse Two LFS, and AFF). In addition, CRITFC and its members Tribes may seek access to adults from rest boxes at the Cascades Island LPS, the Bradford Island LPS, Washington Shore LPS, and other locations as deemed necessary upon consultation with the USACE and CRITFC member tribes. 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 picket 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 other equipment, the CRITFC crew will check out and leave the BON project area. Trapped fish will be held in existing equipment located within the ODFW Bonneville Hatchery CBB and/or BON AFF and JDA SMF 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.

Bonneville Dam		Proposed collection locations			
<i>Washington Shore</i>	AWS above picket leads	AFF flume trap	LFS	Traps within AFF ladder*	LPS rest box*
<i>Cascades Island</i>	AWS above picket leads	AWS flume trap	LPS rest box*		
<i>Bradford Island</i>	AWS above picket leads	LPS rest box*			
The Dalles Dam		Proposed collection locations			
<i>East Fish Ladder</i>	Count station above picket leads				
<i>North Fish Ladder*</i>	Count station above picket leads				

John Day Dam	Proposed collection locations				
<i>South Fish Ladder</i>	Mechanical trap				
<i>North Fish Ladder</i>	Count station above picket leads	Flume trap			

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

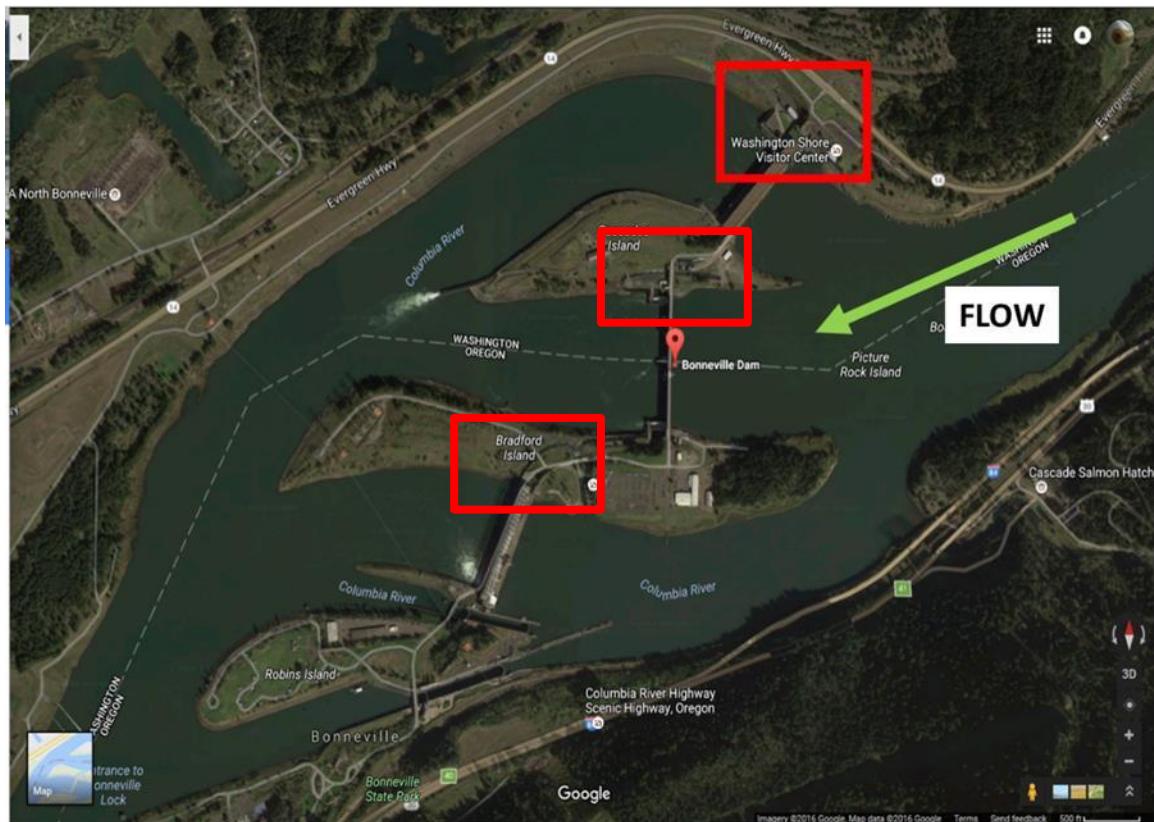


Figure 1. Aerial view of Bonneville Dam showing lamprey trapping locations at the Washington Shore Fish Ladder, Cascades Island Fish Ladder, and Bradford Island Fish Ladder outlined in red boxes. Tube traps are deployed above picket leads in these locations.



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

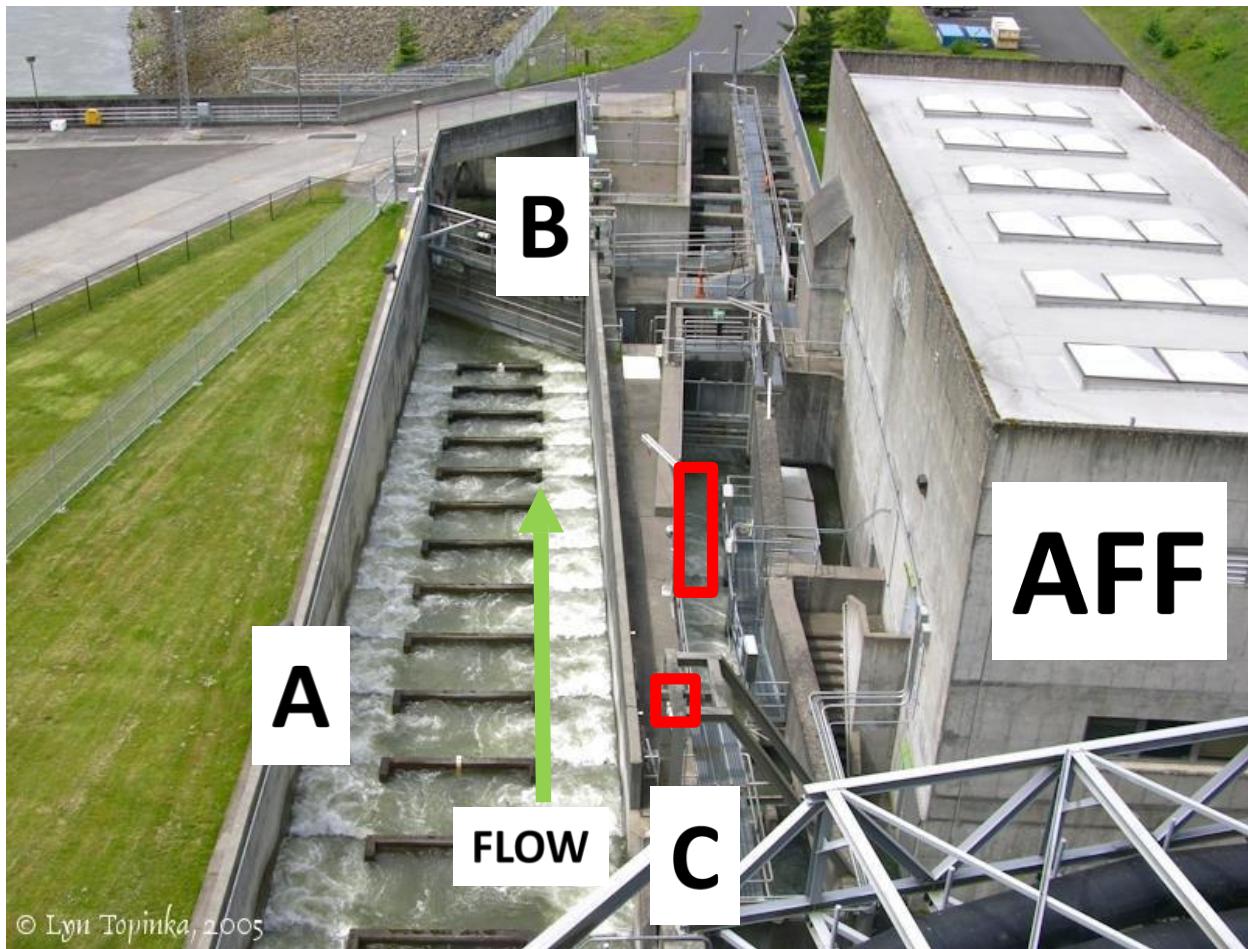


Figure 3. Bonneville Dam Washington Shore Fish Ladder looking downstream at the Adult Fish Facility (AFF). AFF lamprey flume and trap box approximate locations are outlined in red boxes. A = primary Washington Shore fish ladder. B = AFF entrance fish ladder. C = AFF exit fish ladder. Alternate locations 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 picket 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 picket 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.

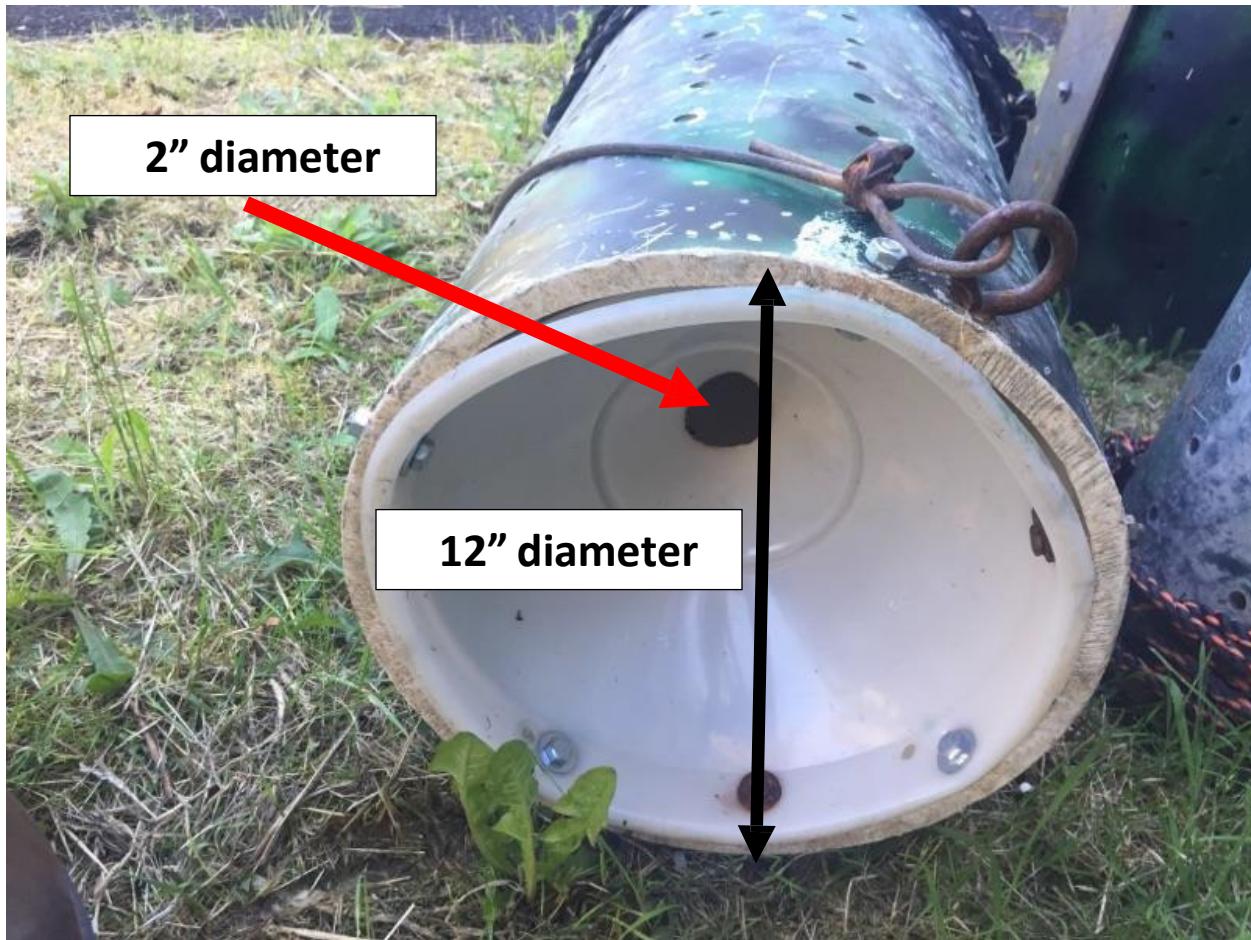


Figure 7. The lamprey tube traps have 12" diameter funnels on each end with 2" diameter holes for lamprey entrance.



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.

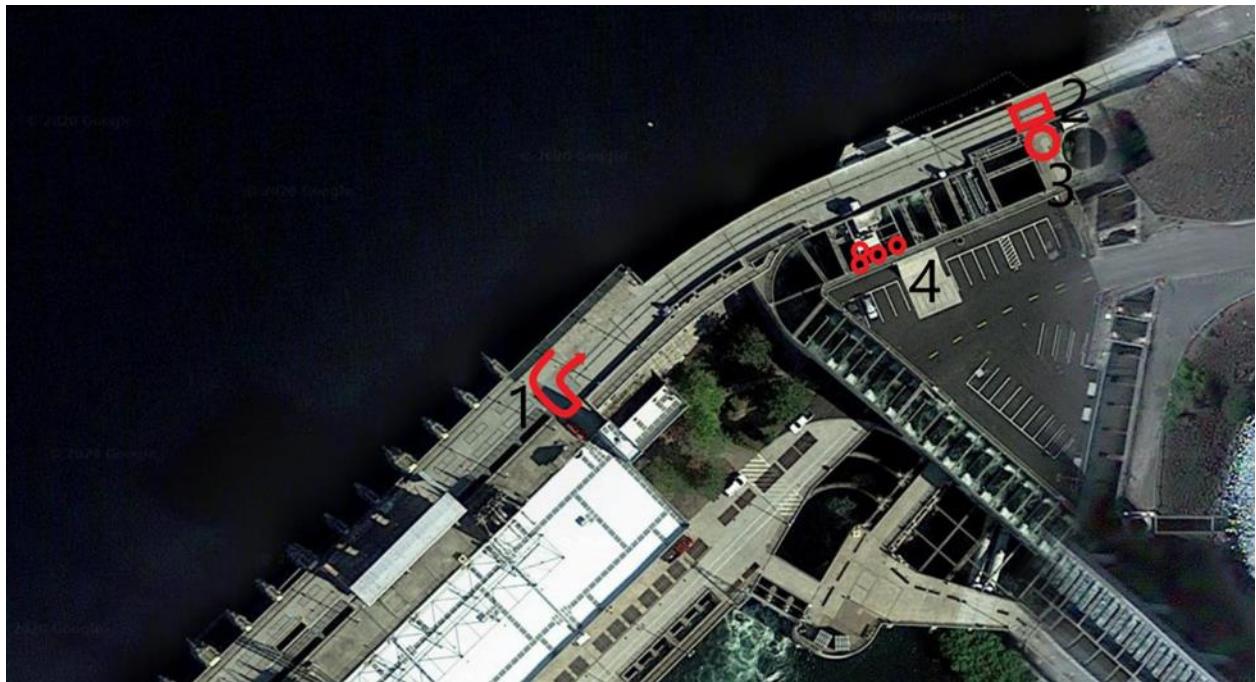


Figure 9. Close-up aerial view of The Dalles Dam East Fish ladder. Small circles (4) denote lamprey tube trap locations above picket leads. The large red square (2) and circle (3) denote the location of the pulley system used to lift lamprey from the deck of the dam up to the vehicle.



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 tube traps deployed above picket 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.

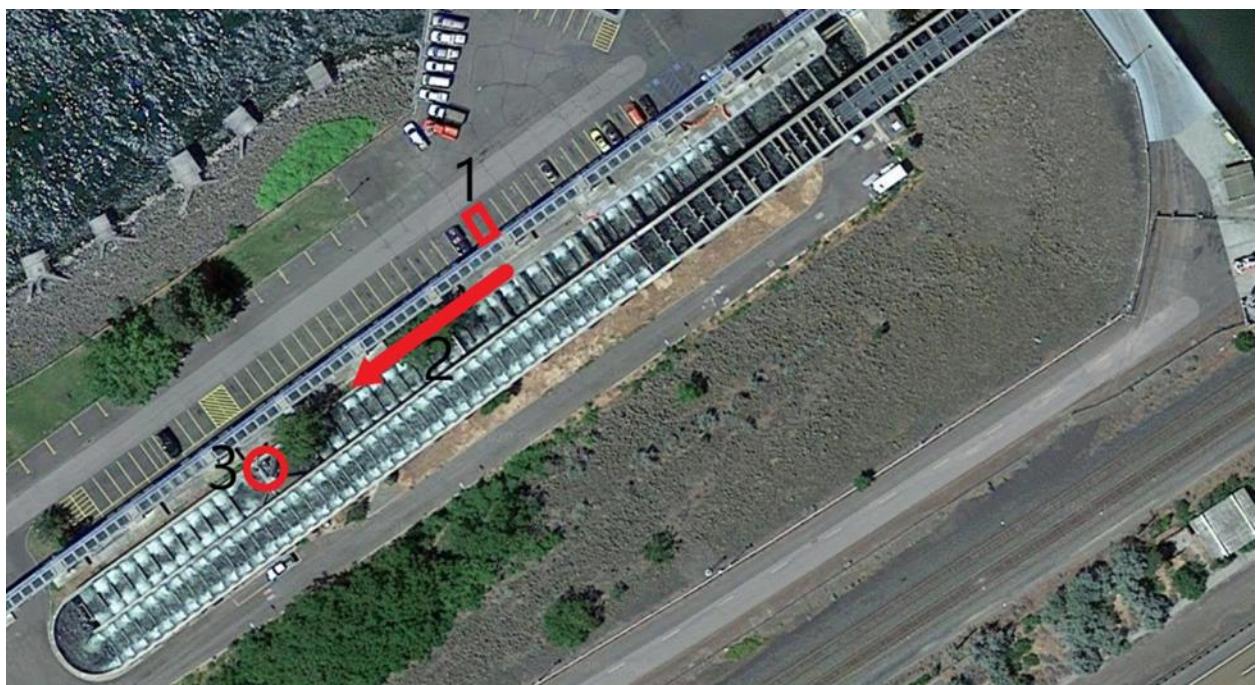


Figure 13. Close-up aerial view of the JDA South Fish Ladder showing the location of the lamprey mechanical trap (3).

Schedule

Upon USACE approval, CRITFC anticipates beginning collection in late May or early June 2022 and continuing through mid-September or until the lamprey run has effectively ended. 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.

In light of the changing conditions of the ongoing 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. 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. All CRITFC Lamprey Program staff will be fully vaccinated against COVID-19 or provide a negative COVID-19 test result within 72 hours of accessing the project.

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

The safety data sheet for hydrogen peroxide is being submitted along with the BON Chemical Use Request Form.

Funding Arrangements

No project support will be necessary to perform job activities.

Personnel List

Name	Agency	Activity	1st Aid exp.	CPR exp.
Laurie Porter	CRITFC	Fishways		
Greg Silver	CRITFC	Fishways		
Devayne Lewis	CRITFC	Fishways		
Tech III TBD	CRITFC	Fishways		
Tech III TBD	CRITFC	Fishways		
Tech III TBD	CRITFC	Fishways		
Tod Sween	Nez Perce	Fishways		

Ray Ellenwood	Nez Perce	Fishways
Mike Kosinski	Nez Perce	Fishways
Jay Oatman	Nez Perce	Fishways
Morgan Sublett	Nez Perce	Fishways
Tech II TBD	Nez Perce	Fishways
Ralph Lampman	Yakama Nation	Fishways
Tyler Beals	Yakama Nation	Fishways
Dave'y Lumley	Yakama Nation	Fishways
Shekinah Saluskin	Yakama Nation	Fishways
Zane Ketchen	Yakama Nation	Fishways
Aaron Jackson	CTUIR	Fishways
Jerrid Weaskus	CTUIR	Fishways
Kanim Moses-Conner	CTUIR	Fishways
Paul Shoeships	CTUIR	Fishways

Vehicle List

GSA Chevy Silverado 2500 pickup; G63-1512Y

Additional vehicles may occasionally be driven on site. Vehicle descriptions and license plate numbers will be provided as needed.

Collection Permit

Scientific collection permit issued by the Yakama Nation to the Columbia River Inter-Tribal Fish Commission to collect and transport adult lamprey at Bonneville, The Dalles, and John Day dams (issued March 22, 2022).