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May 11, 2022

### **MEMORANDUM**

**TO: Council Members**

**FROM: Mark Fritsch**

**SUBJECT: Update on Pacific Lamprey Conservation and Restoration in the Columbia River Basin**

### **BACKGROUND:**

**Presenter:** Christina Wang, Deputy Project Leader from the U.S. Fish and Wildlife Service; Alicia Marrs Coordinator of the Pacific Lamprey Conservation Initiative (PLCI); Kelly Coates, Water and Environmental Resources Program Manager for the Cow Creek Band of Umpqua Tribe of Indians, and Ben Clemens, Statewide Lamprey Coordinator from the Oregon Department of Fish and Wildlife

**Summary:** Christina, Alicia, Kelly and Ben will review the status of Pacific Lamprey conservation and restoration throughout the U.S. range with an emphasis on the Columbia and also progress made in implementing the Program's PLCI Columbia River Basin Projects.

**Relevance:** The Fish and Wildlife Program (Program) recognizes Pacific Lamprey as not only an ecologically important species, but also a key cultural species in the Columbia Basin. This addresses the Program's emerging priority #5<sup>1</sup>. In addition, the Program also addresses several specific measures in the Program's Lamprey strategy regarding lamprey passage and monitoring.

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<sup>1</sup> Emerging priority #5 – Implement additional sturgeon and lamprey measures (passage and research).

Workplan: Fish and Wildlife Division work plan 2022; Program Implementation and performance. Lamprey are listed as an [emerging priority](#) in the Council's 2014 Fish and Wildlife Program

Background: Pacific Lamprey, *Entosphenus tridentatus* (formerly *Lampetra tridentata*), have inhabited the Pacific for millions of years. Historic runs of Pacific Lamprey in the Columbia River Basin numbered in the hundreds of thousands, but their distribution and abundance have decreased and currently they return in drastically smaller numbers. They migrate from the mouth of the Columbia River to Chief Joseph and Hells Canyon dams, in the mainstem Columbia and Snake rivers, respectively. Threats to Pacific Lamprey occur throughout the entire range of the species and include but are not limited to: restricted mainstem and tributary passage, reduced flows and dewatering of streams, stream and floodplain degradation, degraded water quality, predation and changing marine and climate conditions.

In 1994, the Council approved the first lamprey project in the Fish and Wildlife Program. The project (Project #1994-026-00, *Pacific Lamprey Research and Restoration Project*) proposed by the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) called for research and restoration of Pacific Lamprey throughout tribal ceded lands. This was followed by additional projects in 2002, 2007, 2008 and 2018 (see Table 1). Currently, there are six active projects that focus on Pacific Lamprey funded through the F&W Program. These projects have a variety of goals and objectives, but generally aim at establishing population status and trends, documenting distribution, identifying limiting factors, and develop reintroduction and supplementation actions.

Table 1: Projects currently funded through the direct Fish and Wildlife Program.

<b>Project #</b>	<b>Project Title</b>	<b>Sponsors</b>
<a href="#">1994-026-00</a>	Pacific Lamprey Research and Restoration Project	Confederated Tribes of the Umatilla Indian Reservation, NOAA
<a href="#">2008-308-00</a>	Willamette Falls Lamprey Escapement Estimate	Confederated Tribes of the Warm Springs
<a href="#">2008-470-00</a>	Yakama Nation Ceded Lands Lamprey Evaluation and Restoration	Yakama Nation
<a href="#">2008-524-00</a>	Implement Tribal Pacific Lamprey Restoration Plan	Columbia River Inter-Tribal Fish Commission
<a href="#">2011-014-00</a>	Evaluate Status & Limiting Factors of Pacific in the lower Deschutes River, Fifteenmile Creek and Hood River Subbasins	Confederated Tribes Of the Warm Springs

<a href="#">2017-005-00</a>	Pacific Lamprey Conservation Initiative	Pacific States Marine Fisheries Commission, US Fish and Wildlife Service
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Prior to and concurrent with the work above, the Lamprey Technical Workgroup (LTWG), active since 1995, assisted the region in providing guidance and recommendations to the Anadromous Fish Committee of the Columbia Basin Fish and Wildlife Authority. In 2011, the [Tribal Restoration Plan for the Columbia River Basin](#) (TPLRP) was completed which outlined objectives to halt the decline of Pacific Lamprey and restore them throughout their historical range for ecological health and tribal cultural use. With the development of the [Pacific Lamprey Assessment \(Assessment\)](#) and Template for Conservation Measures by USFWS in 2011 (and revised by PLCI partners in 2018) which noted and built upon the needs and actions identified in the TPLRP, there was a need to solidify regional commitments for lamprey actions and in response a [Conservation Agreement for Pacific Lamprey](#) (Agreement) was signed in 2012 by tribal, state and federal partners in the region to collaborate on efforts that reduce or eliminate threats to Pacific Lamprey. The goal of the Agreement is to achieve long-term persistence of the species.

In addition, an aspect of [Project #2008-524-00, Implement Tribal Pacific Lamprey Restoration Plan](#), which is managed by the Columbia River Inter-Tribal Fish Commission working with the USACE, targeted development of a Passage Improvement Plan as part of the Agreement. The goal of this 10-year plan was to improve adult and juvenile passage and survival through the Federal Columbia River Power System with emphasis on improvements at Bonneville, John Day, and McNary dams.

To demonstrate and reaffirm the importance of Pacific Lamprey to the ecological needs of the Basin and to respect the importance to the Tribal sovereigns, the Council recognized, and supported the TPLRP and Agreement in the [2014 Fish and Wildlife Program](#) (see page 94). This was also confirmed by the need to integrate and take the necessary steps to implement additional lamprey measures into the Program<sup>2</sup>.

On March 14, 2018 the Council approved [Project #2017-005-00, Pacific Lamprey Conservation Initiative](#) as one of the most recent projects to be approved for the direct Program. The Oregon Department of Fish and Wildlife codified their [Conservation Plan for Lampreys](#), which includes Pacific Lamprey in 2019.

Every five years PLCI revisits the Conservation Agreement and Assessment, and in 2022 both are in the process of being updated.

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<sup>2</sup> Emerging priority #5, page 116: Implement additional sturgeon and lamprey measures (passage and research).

Partners and supporters, including the Council and other organizations, are invited to join or recommit to the updated Conservation Agreement in 2022.