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September 8, 2021

MEMORANDUM

TO: Fish and Wildlife Committee Members

FROM: Stacy Horton, Washington staff

SUBJECT: New Pacific Lamprey Restoration and Investigations

BACKGROUND:

Presenter: Ralph Lampman, Lamprey Research Biologist, Yakama Nation Fisheries Pacific Lamprey Project

Summary: Pacific Lamprey is an ecologically and culturally important species, whose population numbers have declined sharply since the large hydro dam construction era in the mid-twentieth century within the Pacific Northwest. Harvest have traditionally occurred throughout the Columbia River Basin (and beyond) and they were highly valued by the local and regional indigenous people similar to salmon species. In recent years, new restoration, investigations, and partnerships are taking shape by tribal, federal, state, and local entities. Ralph Lampman will share and highlight some examples of these new projects that are being implemented by the Yakama Nation Fisheries Pacific Lamprey Project and its partners. He will also outline and discuss some of the key future management topics and considerations for the species.

Background: The 2014 Columbia River Basin Fish and Wildlife Program and the 2020 Addendum recognize lamprey as an important Columbia River species and calls for action to improve lamprey migration success, survival and growth. Lamprey impacts occur to their food webs, water quality, and from the effects of passage and predation. To address these concerns, the 2014 Program strategy for lamprey calls for activities to increase survival and abundance, improve habitat, advance passage and operations

efficiencies, conduct population monitoring and research, and to develop standards for assessment. Additional passage and research measures for lamprey are ranked as the Councils' fifth highest emerging priority. The Councils Program makes clear that lamprey are a species equally important to others impacted by hydropower development and operation for which mitigation is to occur.

More Info: Columbia River Inter-Tribal Fish Commission Pacific Lamprey (website):
<https://www.critfc.org/fish-and-watersheds/columbia-river-fish-species/lamprey/>

Yakama Nation Fisheries Pacific Lamprey Project (website):
<https://yakamafish-nsn.gov/restore/projects/pacific-lamprey-project>

Master Plan: Pacific Lamprey artificial propagation, translocation, restoration, and research (2018 report):
http://sitkawhalefest.org/wordpress/wp-content/uploads/2018/08/Master-Plan_March_9_2018.pdf

Lamprey aquaculture successes and failures: A path to production for control and conservation (in press):
<https://www.sciencedirect.com/science/article/pii/S0380133020302434>

Management of anadromous lampreys: Common threats, different Approaches (in press):
<https://www.sciencedirect.com/science/article/pii/S0380133020302227>

Whose kids did you eat? Genetic identification of species and parents of larval lampreys in fish predator guts (2021):
<https://afspubs.onlinelibrary.wiley.com/doi/abs/10.1002/tafs.10307>

Using a customized portable deepwater electrofisher to assess larval lamprey populations in irrigation canals (2021):
<https://afspubs.onlinelibrary.wiley.com/doi/abs/10.1002/nafm.10626>

Factors affecting the fate of Pacific lamprey carcasses and resource transport to riparian and stream macrohabitats (2020):
<https://onlinelibrary.wiley.com/doi/abs/10.1111/fwb.13510>

An experimental study to evaluate predation threats on two native larval lampreys in the Columbia River Basin, USA (2020):
<https://onlinelibrary.wiley.com/doi/abs/10.1111/eff.12537>