

2021 Yakima Basin Aquatic Science and Management “pseudo” Conference
Links to recent Virtual presentations of relevance to this audience
June 28, 2021

- 1) **Yakima Basin Anadromous Fish Habitat and Hatchery Project Review by the Independent Scientific Review Panel (ISRP) of the Northwest Power and Conservation Council.** Minute 7 – 1:09 presented by Bill Bosch, YN Fisheries, YKFP on 6/24/2021.
<https://nwcouncil.app.box.com/s/eucp93t4n67hghzq2abzdv48iefddz3d>

Projects Covered:

- Yakima River Management, Research, and Data-Yakima/Klickitat Fisheries Project (YKFP) (BPA:1988-120-25)
- Yakima River Operations and Maintenance (O&M) for Hatcheries and Acclimation Sites-Yakima/Klickitat Fisheries Project (YKFP) (BPA:1997-063-25)
- Yakima River Monitoring and Evaluation-Yakima/Klickitat Fisheries Project (YKFP) (BPA:1995-063-25)

- 2) **Benton Conservation District Lower Yakima River and Water Quality Habitat Coordination Meeting, October 2020.** Presentations are broken up between Habitat and Water Quality on the site, and the video recording of the presentations are also posted.
<https://www.bentoncd.org/copy-of-lower-yakima>.

- 3) **Mid-Columbia Fisheries Enhancement Group spring 2021 speaker series:**

- Pacific Lamprey by Tyler Beals: <https://youtu.be/TwcmSMA3SE8>
- Potential Effects of Climate Change on Stream Flows and Fish in the Yakima Basin by Paul James: <https://youtu.be/6ODI1ZoP258>
- Smolt Out Migration in the Yakima Basin: a challenge for fish and a challenge for us: <https://youtu.be/dTD8-7rcfI8>
- Returning Instream Wood to the North Fork Teanaway River by Rebecca Wassell and Ryan DeKnikker: <https://youtu.be/OJSkHvi8vzs>
- **Cottonwood: Rivers and Reproduction**, Katrina Strathmann, Restoration Ecologist, MCFEG, Courtesy Yakima Valley Audubon Society

- 4) **Holistic Habitat Restoration in the Yakima Basin**

John Marvin, Yakama Nation Fisheries
Courtesy Cowiche Canyon Conservancy
https://youtu.be/eoxUd_trFPE

Abstract: A comprehensive presentation about the Yakima River Basin and its fish and habitat resources – past, present and future. From its inception in 1983, Yakama Nation Fisheries has employed scientific expertise in concert with traditional ecological knowledge to develop innovative projects and partnerships to restore culturally important fish runs in *Nch'i-Wa'na* (the Columbia River). Marvin describes some of these projects, with a focus on how forest and river restoration are intimately connected.

- 5) **Bigger isn't always better: Relationships between juvenile migration traits and age-at-return in a Columbia River hatchery salmon population.**
Presented by: Bill Bosch, Yakama Nation Fisheries

http://ykfp.org/downloads/AFS_Bosch_Mar2_3_2021.mp4

An update to a talk I gave a couple of years ago relating emigration timing and juvenile size of spring chinook from the Cle Elum Supplementation and Research Facility to their age-at-return to Bonneville Dam.

6) An Ecological Comparison Between Resource Subsidies: Pacific Lamprey and Pacific Salmon

Jocelyn Wensloff, Faculty Mentor(s) Clay Arango (Biological Sciences, CWU Biological Sciences)

<https://www.youtube.com/watch?v=IO163-RoBV8>

Abstract

The regular return of resource subsidies in the form of anadromous fish are especially important in the Pacific Northwest where many streams are nutrient limited. Thus far, stream resource subsidy studies in the Pacific Northwest have focused on Pacific salmon (*Oncorhynchus* spp.), overlooking other anadromous fish species such as Pacific lamprey (*Entosphenus tridentatus*) as potential subsidies. In order to better understand how Pacific lamprey could subsidize stream food webs, I used a modified nutrient diffusing substrate (NDS) approach to compare the stream ecosystem response to nutrients transported by Pacific lamprey versus Chinook salmon in both summer and fall in the Upper Yakima River Basin. I measured chlorophyll a as the autotrophic food web response and community respiration (CR) as the heterotrophic food web response. Chlorophyll a responded equally to lamprey and salmon but was significantly higher in summer. Alternatively, CR had a stronger response to salmon compared to lamprey and was significantly higher in fall compared to summer. These results indicate that Pacific lamprey are equivalent to salmon as a resource subsidy for the autotrophic food web. Moreover, lamprey spawning occurs in the summer when salmon do not spawn, possibly extending the temporal subsidy provided by all anadromous fish returns in Pacific Northwest streams. These data indicate that anadromous lamprey and salmon are equally important in stimulating algal growth in the summer and can stimulate stream food web activity which would directly support both lamprey and salmon. These results should be considered in justifying future lamprey restoration efforts.