



Fall/Winter 2023 Issue

THE CONFLUENCE

NEWSLETTER OF THE WASHINGTON-BRITISH COLUMBIA
CHAPTER OF THE AMERICAN FISHERIES SOCIETY

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Executive
Committee*



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Letter from the President

Greetings from the 2023-2024 President of the WA BC AFS Chapter!

As the weather is getting colder and field studies are wrapping up, we once again look toward the planning and preparation for our annual WA BC AFS Chapter meeting. This year we have partnered with the Idaho Chapter to put together a joint AFS meeting a little later than is typical April 29-May 2, 2024, in Spokane. The meeting theme is focused on anadromous species as they are regionally significant however, we recognize there is considerable work and interest in non-anadromous species and yes, of course, we'd love to hear about those as well. Please keep an eye out for the Request for Abstracts coming soon. Note, although we ask you to specify which symposium your work should be associated with – there is always an “other” category if your work is outside the symposium selections.

The Executive Committee met in Union Gap in Late October to discuss our vision and priorities for the WA BC chapter for 2024 and beyond. Our goal is to become a more active and involved chapter and in so doing we will challenge you to get a little more involved. How? Lots of ways! There are standing committees that could use additional volunteer members, there are working groups to join or start your own, there are activities that need support in the planning and preparation for the annual meeting. In addition, we send out surveys trying to get your thoughts, please spend a few minutes when they come, exercise your fingers and click a few times to share your opinions. We are in a growth phase, a terrific opportunity to be a part of reshaping our chapter to represent our region and to provide opportunities for all of us to gain from each other and the work we all do.

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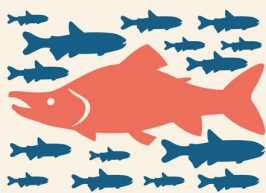
President's Letter, Cont'd.

As a chapter we are one of the largest in AFS and we represent one of the largest geographical areas. As such we have an opportunity to have a bigger voice and a greater influence than we currently do. Fisheries is a big part of our region and thus there is considerable work, innovation, studies, and know-how that we can and should highlight and share. Please help us call out notice by sharing with us your publications, exciting studies, restoration milestones met etc. Although it will take a minute or two, your experience and expertise can open doors for others in saving time and improving the way fisheries operate. We see the Tribes, and fisheries students as crucial elements of our chapter and welcome an opportunity to focus chapter membership efforts toward increasing their engagement and contributions. Similarly, we hope to expand British Columbia member involvement and invite all, on both sides of the border, to start thinking about the 2025 Vancouver BC WA BC Chapter meeting as well. In my presidential year I hope that we, as the WA BC AFS Chapter, will celebrate who we are and what we do, while helping each other through membership, community, information and positive growth.

I wish you a wonderful exit to fall and transition to winter!

Best wishes,

Janine Bryan, WA-BC President



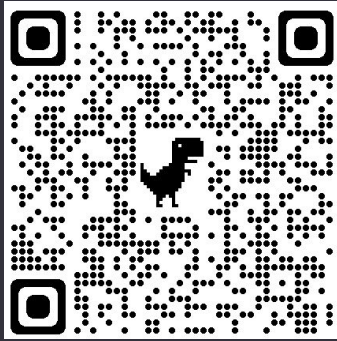
RETURNING HOME

ANADROMOUS FISHERIES IN THE PACIFIC NORTHWEST

Please join us for the **2024 Joint Meeting of the Idaho & Washington-British Columbia Chapters of the American Fisheries Society** in beautiful Spokane, WA from April 29 to May 2, 2024!

This year's theme is *Returning Home: Anadromous Fisheries in the Pacific Northwest*—abstract submissions will open soon, so watch your emails and check our website at wa-bc.fisheries.org!

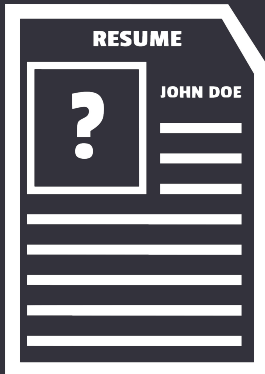
Announcements and Upcoming Events



Annual Meeting Childcare Survey

The WA-BC Executive Committee is considering supporting childcare services for the 2023 Joint Meeting, but would like to assess the necessity and value to the membership.

Please take a moment to complete this short survey about annual meeting childcare needs by [clicking here](#), or using the QR code on the left. Thank you!



Looking for a job?

Did you know that WA-BC AFS maintains a job board on our website? We also have links to other state and local job boards! Visit our website to explore your next job:

<https://wa-bc.fisheries.org/job-board/>

Want to post a job to our board? Email our Communication Officer at plum.fisheries@gmail.com!

2024 Cederholm Scholarships Available

Scholarships for undergraduate & graduate students are available for 2024! Visit our website to learn about eligibility, award amounts, and to submit your application:

<https://wa-bc.fisheries.org/students/2024-cederholm-scholarships-available/>

Applications are due by February 18th, 2024, so apply today!

Call for Abstracts for Joint Meeting 2024

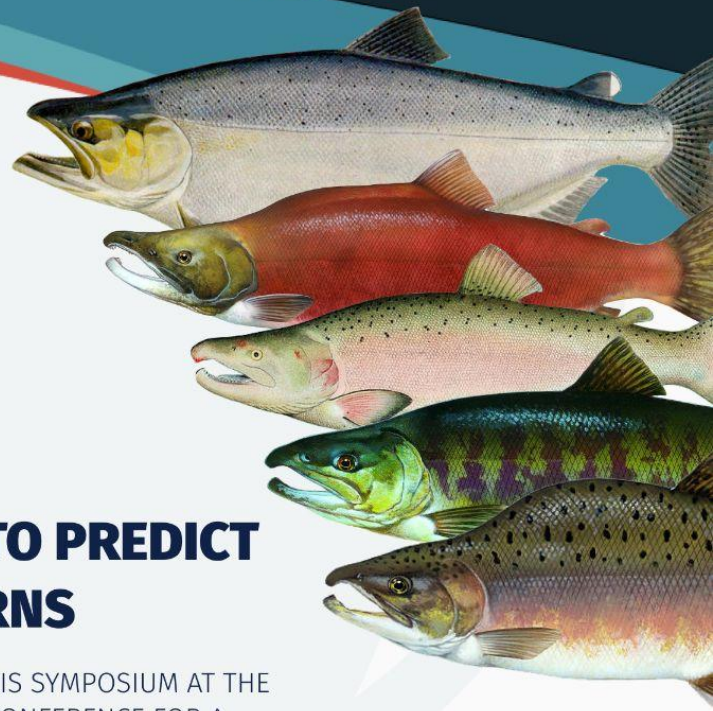
The Idaho and Washington-BC Chapters of AFS are excited to open up abstract submissions for our joint chapter conference taking place April 29 to May 2, 2024 in Spokane, Washington. Abstracts are due January 31st, 2024!



[Submit here!](#)



The Salmon Prize



COMPETITION TO PREDICT SALMON RETURNS

SUBMIT AN ABSTRACT FOR THIS SYMPOSIUM AT THE **2024 RETURNING HOME** AFS CONFERENCE FOR A CHANCE TO WIN CASH PRIZES. HOSTED BY THE IDAHO AND WASHINGTON-BC CHAPTERS OF THE AMERICAN FISHERIES SOCIETY, APRIL 29 TO MAY 2 IN SPOKANE, WA.



COMPETITION PERIOD

ABSTRACTS DUE JAN 31, 2024

WINNERS MUST PRESENT AT THE CONFERENCE.

SIGN UP HERE



\$500

FOR FIRST FIVE TEAMS TO SUBMIT ABSTRACTS AND THEN PRESENT

**\$1,000
FIRST PRIZE**

SYMPOSIUM ABSTRACT: The **Salmon Prize** competition is a new initiative to spur discoveries about the mechanisms that drive salmon survival by measuring how well individuals or teams can predict salmon returns. For this unique symposium, presenters will be asked to present their 2024 predictions of salmon returns for any run of salmon whose return is measured by a recognized institution, such as the Pacific Salmon Commission or other public agency. Presenters can be individuals or part of a team and presentations must include the following elements: (1) the model used to make the prediction; (2) the list of variables used in the modeling process; (3) the theory of salmon survival mechanisms that underpin the model; and (4) the independent source that will be used to measure the actual number of returning salmon. Since this will be a competition with prizes as incentives, the first five abstracts submitted will automatically receive \$500 (USD) after they present their predictions at the conference. A grand prize of \$1,000 (USD) will be awarded to the presenter(s) who most accurately predict the number of returning salmon as measured in percent error. This prize will be awarded once all predicted salmon returns have been measured and are available from the measuring agency, most likely in 2025. If you want to participate but cannot accept a reward, you can dedicate your reward to a student scholarship. If anyone has any questions about the process, please contact the moderator, Sean Simmons, by email (sean@anglersatlas.com). Funding for the prize is from the Salmon Prize project (www.salmonprize.com).

CONFERENCE RUNS APRIL 29 TO MAY 2, 2024 IN SPOKANE, WA

President Elect Update & Washington-BC Working Groups

By Sean Simmons

Dear Washington - BC Chapter Members,

Our annual executive committee fall retreat was held in Yakima this year, a place famous for its locally grown hops which I was able to sample during our visit. At the retreat I provided updates on two important areas of work for me over the past six months — the joint conference we're hosting with Idaho in 2024 and the new chapter working groups that were launched following our last conference in Bellingham.

The theme for our joint 2024 conference is "Returning Home: Anadromous Fisheries in the Pacific Northwest", and starting December 20, 2023 we will be seeking oral presentation abstracts that support this theme, as well as submissions for other topics that are of interest to fisheries professionals in the region. If you have an interesting symposium topic or continuing education workshop you would like to help organize, please submit your abstracts through the form linked on our website.

Another major initiative underway is the development of working groups within the chapter. So far we have seven working groups formed, each of which is tasked to hold a symposium at the upcoming conference in Spokane. If you are interested in learning more about these groups, or wish to participate in some way, please contact the appropriate working group chair(s):

- **Angler Engagement and Citizen Science** — Dedicated to exploring new methods of engaging anglers in support of fisheries research and management through citizen science. (Chair Sean Simmons, sean@anglersatlas.com)
- **Bull Trout** — The purpose is to develop a joint Bull Trout / Char symposium focusing on the key topics of migration and connectivity, but also open to new science and information (Chair Judy Neibauer, jneibauer9395@gmail.com)
- **Fish Passage** — This broad working group would focus on science, policy, projects, and progress of fish passage and ongoing restoration efforts in our regions. (Co-chairs Adam Crispin and Zach Sherker, adam.crispin@shanwil.com and sherkerz@mac.com)
- **Hatchery Evaluations** — To create a forum to discuss and compare the attributes and performances of varying salmonid populations across Washington and BC and to compare and contrast evaluation techniques (Chair Alf Haukenes, ahaukenesafs@gmail.com)
- **Pinniped Interactions** — The purpose of this working group is to identify the best available research quantifying such interactions, connect those interested in the topic, and gather solutions that prevent human/pinniped conflict. (Chair Kylie DaCunha, dacunha.kylie@gmail.com)

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President-Elect Updates, Cont'd.

- **Salmon Prize** — The purpose of this working group is to support new salmon research that can discover mechanisms that regulate salmon survival, improve our ability to predict returns, and ultimately find ways to conserve Pacific Salmon. To achieve these goals, we will be exploring and testing a new research approach using competitions and are calling it the “*Salmon Prize*” (Chair Sean Simmons, sean@anglersatlas.com)
- **Tribes and First Nations** — The purpose of this working group is to try and develop a stronger connection and integration between fisheries science and traditional knowledge, and is dedicated to pursuing this vision within the WA-BC AFS chapter (Chair Ryan Branstetter, brar@critfc.org)

We are also keen on setting up a **working group for communications** to make sure we are able to communicate the great work being done in these working groups and to build momentum for the conference. If you want to be part of this communications working group, please contact our Communications lead, Tyler Plum (plum.fisheries@gmail.com).

If there is a topic you are particularly interested in and would like to see established as a working group, please get in touch with myself or someone on the Executive Committee and we'll see what we can do to help.

Working Group Spotlight: Pinnipeds

Seals and sea lions (collectively known as pinnipeds) play a large role in our marine and aquatic ecosystems, acting as predator and prey for various species. Though populations were once severely depleted due to human impact, numbers seem to have increased in recent decades. Given that these animals are sheltered under the Marine Mammal Protection Act (MMPA), negative interactions between humans and pinnipeds are avoided whenever possible. However, this becomes challenging in instances such as: where pinnipeds predate on threatened/endangered fish populations in riverine environments, when they are caught as bycatch during fisheries operations, or when they damage aquaculture facilities leading to escapements and loss of profit. The purpose of this working group is to identify the best available research quantifying such interactions, connect those interested in the topic, and gather solutions that prevent human/pinniped conflict.

This group is currently working on recruiting additional members and preparing to host a Pinniped Interactions symposium at the 2024 Joint Meeting in Spokane, WA. If you are interested in joining or contributing, please contact working group chair, Kylie DaCunha, at dacunha.kylie@gmail.com.

Membership Committee Update

Greetings from the Membership Committee!

By Josh Williams

The Membership Committee has changed its look recently and we are excited to introduce you to our new Committee. Josh Williams, your Vice President, has taken over the reins as Committee Chair. He is joined by Tom Willms and Alex Lopez, both of which are PhD candidates at University of Northern British Columbia and Washington State University, respectively. Rounding out our team is Sean Simmons – your President-Elect.

One of the more exciting updates to pass along is the kickoff of our student lunchtime seminar which we are calling “Lunch and Learn”. This will be an informal platform where students can present on a topic of their choice. Talks will be around 30-minutes with time for questions at the end. We hope this will allow students an opportunity to hone talks and seek insight and guidance on things like study design, methods, analysis, etc. The first session will be January/February 2024 so stay tuned for the invite!

We are also making a push to engage with university faculty, students, and our membership base. If you are interested in participating, now is your chance! We are actively seeking new Membership Committee members as well as looking for volunteers at our annual meetings. If you are interested in becoming more involved, please contact Josh Williams (josh.williams63@yahoo.com).

2024 Lunch & Learn Seminar Series

This seminar series is meant to be a friendly space where we can gather to learn and talk about a wide range of topics relating to fisheries. Our aim is to have quarterly seminars that are educational, fun, and informal. Please join us Wednesday January 24th at 12:10pm Pacific Standard Time for our first session! If you are interested in presenting at an upcoming seminar, please contact me and we will get you in the lineup! These seminars are free to attend and all are welcome.

Wednesday, January 24th, 12:10 pm – 12:55 pm PST ([Click for meeting link](#))

Title: Passive Integrated Transponder (PIT) tags: what are they and how are they used

Talk description: Passive Integrated Transponder (PIT) tags are used throughout the fisheries world and have become a major tool for monitoring and evaluating fish in the Pacific Northwest. Join Tom for an introduction into how they work, the required equipment, common uses in fisheries work, and research applications.

Tom Willms Bio: Tom Willms is a PhD Candidate at the University of Northern British Columbia and teaches at Nicola Valley Institute of Technology.

New Opportunity: Communications Working Group

The WA-BC Executive Committee is looking for volunteers for a new Communications Working Group! The new group will support a variety of communications efforts for the chapter, including:

- Email campaigns
- Website design/maintenance
- Social media management
- Newsletter development

This an excellent way to get involved in the chapter, network with colleagues across the chapter, stay up-to-date on the annual meeting and other events, and gain new skills. Students are especially encouraged to get involved! Please email Tyler Plum at plum.fisheries@gmail.com for more info!

New & Noteworthy in the Northwest

Askey et al. 2023. [Comparison of known spawner abundance from fence counts to visual counts for simplified spawner estimation methods](#). *Canadian Journal of Fisheries and Aquatic Sciences*

Kiffney et al. 2023. [Colonization of a temperate river by mobile fish following habitat reconnection](#). *Ecosphere*

Min et al. 2023. [Data-limited fishery assessment methods shed light on the exploitation history and population dynamics of Endangered Species Act-listed Yelloweye Rockfish in Puget Sound, Washington](#). *Marine & Coastal Fisheries*

White et al. 2023. [Expansion of smallmouth bass distribution and habitat overlap with juvenile Chinook salmon in the Willamette River, Oregon](#). *River Research and Applications*

From the Field

New Training Portal & Checklists Support Fish Passage Design Solutions

By Tyler Plum

Managers, biologists, and engineers now have a few new tools to help plan and execute Fish Passage projects. Through a partnership between the AFS Bioengineering Section (BES) Education Committee and the American Society of Civil Engineers (ASCE) Environmental & Water Resources Institute (EWRI) /AFS-BES Joint Committee on Fisheries Science and Engineering, two new resources have been created to aid in the development of Fish Passage projects:



1. A series of **checklists** for various type of common projects (e.g. fish ladders, fish screens, dam removals) that will help a project proponent move in a deliberate and methodical manner through the steps of pre-design, design, construction, and post-construction to reduce missteps and backtracking.
2. The **Training Portal** to serve as a “first-stop” shop to find trainings in these areas of practice. The purpose of this Portal is to house a user-friendly compilation of links to relevant training and guidance resources. This includes text-based design guidelines, slideshows, recorded and live videos, and webinars. If you conduct, or know of, training you would like to add, there will be a link for submitting your contributions.

(AFS-BES Education & ASCE-EWRI/AFS-BES Joint Committee release)

Designed by experienced professionals, the products are intended to help current practitioners capitalize on the recent increase in state & federal funding for fish passage projects, while also helping to train newcomers to the field. The hope is that use of these products will support the development of more effective and comprehensive projects, with better outcomes for aquatic systems and resources.

Anyone involved in fish passage construction or design is encouraged to use these new materials, and share them with colleagues. The downloadable files can be found at the ASCE-EWRI/AFS-BES Joint Committee website:

<https://units.fisheries.org/fishpassagejointcommittee/fishpassagetrainingportal/>

From the Field

Local TU Chapter Receives Volunteer Award from WDFW

By Gabriel Temple



TU volunteers using roving PIT tag surveys to monitor Westslope Cutthroat Trout.

as well as numerous volunteer activities throughout the larger Yakima Basin (central Washington State) for the past six years. One of the chapter's goals is to raise awareness and appreciation of Westslope Cutthroat Trout and to participate in conservation actions intended to benefit the species now, and their persistence into the future under a changing climate.

The Teanaway Basin Westslope Cutthroat Trout monitoring partnership was established to develop a robust water temperature monitoring network throughout the Teanaway watershed (Yakima Basin, Washington), and to monitor Cutthroat Trout habitat use and movement. Nearly 1000 Westslope Cutthroat Trout were captured in their natal rearing areas and were fitted with Passive Integrated Transponder (PIT) tags before being released back at their location of capture.

The Yakima Headwaters Chapter of Trout Unlimited recently received the Washington Department of Fish and Wildlife's Region 3 award for Volunteer of the Year for 2023. Pat Hesselgesser (Statewide Chair - Washington) and Dave Bouta of Trout Unlimited (TU) received the award on the chapter's behalf at an award ceremony held in the Tri-Cities, Washington, during summer 2023.

The chapter leadership has established partnerships with multiple agencies/entities and engaged in several restoration and research projects in the Teanaway Basin,



TU volunteers conduct micro-habitat assessments to identify summer low-flow habitat use by trout.

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From the Field

Local Chapter Receives Award, Cont'd.

Headwaters Chapter volunteers then conduct roving PIT tag surveys during summer baseflow conditions throughout the monitoring streams to assess movement and habitat use.

Micro-habitat measurements are made in areas that the fish occupy to help identify habitat characteristics that the fish utilize during the summer low-flow period. This information can be used to help inform many of the large-scale habitat restoration activities planned for the watershed. The hope is to establish a database of baseline environmental conditions and Cutthroat rearing distribution that can be used to assess environmental and fish population trends over time. Preliminary study findings have been shared at several AFS meetings in recent years. Their continued hard work on the landscape and persistent dedication to Cutthroat Trout conservation made Pat, Dave, and the chapter well deserving of this award.



Pat Hesselgesser (Statewide Chair - Washington) and Dave Bouta of Trout Unlimited (TU) received the award on the chapter's behalf.

From the Field

City of Surrey B.C. Works with SHaRP Students to Improve Fish Passage in Bon Accord Creek

By Shane Scott

You have heard the saying many times, “Build it and they will come”. Well, in my experience this saying has been proven true once again! The City of Surrey has successfully reintroduced anadromous salmonids to Bon Accord creek after a 70-year absence. Bon Accord Creek, a tributary to the lower Fraser River located in north Surrey, British Columbia. In the 1950's, a railroad company diverted the creek through a 500-foot-long, straight, narrow concrete flume. Shallow water depth and high water velocity in the flume precluded coho salmon from accessing the estimated 2.5km of spawning habitat above the structure. Monitoring for eDNA indicated no anadromous salmonids above the flume.



City employees and volunteers working on Bon Accord Creek flume.

The City of Surrey has undergone significant habitat improvement efforts to facilitate fish passage and reintroduce coho salmon. Since 2017, several key actions were taken, including the removal of a timber dam and a large culvert, followed by the reconstruction of instream and riparian habitats. Additional habitat enhancements were made as part of road upgrades. The last fish passage obstacle to be addressed was the concrete flume. Removing the flume would require cutting back and recontouring slopes along the length of the structure. There were also landowner issues that limited the space available for this work. With costs estimates exceeding \$1M the project was in a holding pattern.



Concrete flume in Bon Accord Creek (before).

The City of Surrey's Environment Section contacted SSA Environmental in Vancouver, Washington, to explore the possibility of installing Flexi Baffles in the Bon Accord Creek flume.

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From the Field

Students Improve Fish Passage, Cont'd.



Concrete flume in Bon Accord Creek after installation of Flexi Baffles.

The Flexi Baffle is a “fish friendly” rubber baffle or weir that can be installed in culverts or other conveyances to improve fish passage by reducing water velocities and increasing water depth. The flexible design allows the baffle to bend over during high flow events. This preserves the hydraulic capacity of the conveyance and allows debris to readily pass in contrast to traditional solid baffles that reduce hydraulic capacity and catch debris.

In August 2023, the City engaged student volunteers from the Salmon Habitat Restoration Program (SHaRP) to assist in installing Flexi Baffles in Bon Accord Creek. SHaRP is a community-sponsored program where high school students volunteer for watershed enhancement projects, which include slope stabilization using bioengineering techniques, debris removal, riparian planting, invasive plant species removal, erosion protection, and other methods to improve fish habitat.

Staff with the City of Surrey and SSA Environmental worked with SHaRP students to install sixty Flexi Baffles at approximately three-meter intervals along the Bon Accord Creek flume. The project took about a week to complete. After Flexi Baffle installation was complete, water velocities were reduced to approximately 0.3 m/s (1 fps), and water depth increased to about 200 mm (8 inches). Success did not take long! The first coho salmon ascended the Bon Accord Flume after the first major freshet in November. Build it and they will come.

The Bon Accord Creek Fish Passage Improvement Project is currently the largest Flexi Baffle installation in North America. For more information, please contact Shane Scott of SSA Environmental at shane@ssaenvironmental.com.

WASHINGTON-BRITISH COLUMBIA CHAPTER OF THE AMERICAN FISHERIES SOCIETY

The WA-BC Chapter of the American Fisheries Society, which includes members in Washington State and British Columbia, is an organization composed of professional biologists interested in the scientific conservation and enhancement of fish populations and their environment.

The mission of the Chapter is to:

1. advance the conservation and intelligent management of aquatic resources within a context of sound ecological principles,
2. gather and disseminate information pertaining to aquatic science and fisheries management, and
3. promote the educational and technical aspects of the fisheries profession.

In pursuit of our mission, we will strive to equitably represent the views of members, develop opportunities for effective leadership and conservation, and generate the resources necessary to carry out our programs.

Contact Information

Want to join AFS and the WA-BC Chapter? Visit <http://membership.fisheries.org/> today!

Questions? Suggestions?

Contact President Janine Bryan at janine.bryan@whooshh.com.

Want to write an article or submit any type of fisheries-relevant information to this newsletter? Contact the Communications Officer Tyler Plum at plum.fisheries@gmail.com.

<http://wa-bc.fisheries.org>



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