Oregon Chapter of the American Fisheries Society

Research and Management in a Changing Climate

March 13–16, 2018 | Eugene, Oregon
54th Annual Meeting
### Get Involved!

**Become a More Active Member of the Oregon Chapter**

Now is the time to get involved with the Oregon Chapter! At the beginning of the Annual Meeting, all of the External Committees will meet in the Vista Room at a Meet Your External Committees Networking Event. This will be a great time to meet members of each committee and learn how you can get involved. Some committees will also hold separate committee meetings (listed in the program) to discuss annual work plans. **Every committee can use some fresh ideas, more participants, and new faces.** If you are interested in stepping up your participation but can’t attend the meetings, email ExternalDirector@orafs.org.

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# Schedule at a Glance

## Tuesday, March 13

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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>11:00 a.m. – 5:00 p.m.</td>
<td>Registration / Information</td>
<td>Lobby</td>
</tr>
<tr>
<td>1:00 p.m. – 5:00 p.m.</td>
<td>Workshops (Restoration &amp; Communication)</td>
<td>Bloch / Sousa</td>
</tr>
<tr>
<td>3:00 p.m. – 3:20 p.m.</td>
<td>Coffee &amp; Refreshment Service</td>
<td>Lobby</td>
</tr>
<tr>
<td>5:00 p.m. – 6:00 p.m.</td>
<td>Workshop Social</td>
<td>Vista</td>
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</table>

## Wednesday, March 14

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 a.m. – 6:30 p.m.</td>
<td>Registration / Info / Sales Desk Open</td>
<td>Lobby</td>
</tr>
<tr>
<td>7:00 a.m. – 8:00 a.m.</td>
<td>Coffee &amp; Refreshment Service</td>
<td>Lobby</td>
</tr>
<tr>
<td>8:00 a.m. – Noon</td>
<td>Workshops (Restoration &amp; eDNA)</td>
<td>Bloch / Sousa</td>
</tr>
<tr>
<td>8:00 a.m. – Noon</td>
<td>Reservoir Dogs Meeting</td>
<td>Wilder</td>
</tr>
<tr>
<td>8:00 a.m. – 2:30 p.m.</td>
<td>Trade Show Display Setup</td>
<td>Lobby</td>
</tr>
<tr>
<td>10:00 a.m. – 11:00 a.m.</td>
<td>External and Internal Committee Chairs Brunch</td>
<td>Vista</td>
</tr>
<tr>
<td>11:00 a.m. – Noon</td>
<td>Meet Your External Committees Networking Event</td>
<td>Vista</td>
</tr>
<tr>
<td>Noon – 7:30 p.m.</td>
<td>Poster Session Setup</td>
<td>Hellman</td>
</tr>
<tr>
<td>1:00 p.m. – 1:10 p.m.</td>
<td>Welcome</td>
<td>O’Neill / Williams</td>
</tr>
<tr>
<td>1:10 p.m. – 2:40 p.m.</td>
<td>Plenary Session (2 speakers)</td>
<td>O’Neill / Williams</td>
</tr>
<tr>
<td>2:30 p.m. – 11:30 p.m.</td>
<td>Trade Show</td>
<td>Lobby</td>
</tr>
<tr>
<td>2:40 p.m. – 3:00 p.m.</td>
<td>Break &amp; Refreshment Service</td>
<td>Lobby</td>
</tr>
<tr>
<td>3:00 p.m. – 5:00 p.m.</td>
<td>Concurrent Sessions (6)</td>
<td>See Sessions at a Glance</td>
</tr>
<tr>
<td>6:00 p.m. – 7:30 p.m.</td>
<td>Student-Mentor Mixer</td>
<td>Vista</td>
</tr>
<tr>
<td>8:00 p.m. – 11:30 p.m.</td>
<td>Poster Session and Trade Show Social</td>
<td>Williams / Hellman / Lobby</td>
</tr>
<tr>
<td>9:00 p.m. – 10:30 p.m.</td>
<td>Cornhole Tournament / Film Festival</td>
<td>Williams / Hellman</td>
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## Thursday, March 15

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<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>7:00 a.m. – 5:00 p.m.</td>
<td>Registration / Info / Sales Desk Open</td>
<td>Lobby</td>
</tr>
<tr>
<td>7:00 a.m. – 8:00 a.m.</td>
<td>Spawning Run / Carcass Crawl</td>
<td>Lobby</td>
</tr>
<tr>
<td>7:30 a.m. – 8:30 a.m.</td>
<td>Coffee &amp; Refreshment Service</td>
<td>Lobby</td>
</tr>
<tr>
<td>8:00 a.m. – 5:00 p.m.</td>
<td>Trade Show</td>
<td>Lobby</td>
</tr>
<tr>
<td>8:00 a.m. – Noon</td>
<td>Concurrent Sessions (6) + Break &amp; Refreshment Service 10:00 – 10:20 a.m.</td>
<td>See Sessions at a Glance</td>
</tr>
<tr>
<td>Noon – 1:45 p.m.</td>
<td>Awards Luncheon (no charge), Professional Awards, Scholarship Awards</td>
<td>Playwright’s Hall</td>
</tr>
<tr>
<td>1:45 p.m. – 3:00 p.m.</td>
<td>OR AFS Business Meeting, followed by coffee break at 2:45 p.m.</td>
<td>Playwright’s Hall</td>
</tr>
<tr>
<td>3:00 p.m. – 5:00 p.m.</td>
<td>Concurrent Sessions (6)</td>
<td>See Sessions at a Glance</td>
</tr>
<tr>
<td>5:30 p.m. – 6:30 p.m.</td>
<td>Meet Your Manager Networking Event</td>
<td>Playwright’s Hall</td>
</tr>
<tr>
<td>6:00 p.m. – 8:30 p.m.</td>
<td>Silent Auction</td>
<td>Playwright’s Hall</td>
</tr>
<tr>
<td>6:30 p.m. – 9:00 p.m.</td>
<td>Banquet, Awards, Oral Auction, Raffle</td>
<td>Playwright’s Hall</td>
</tr>
<tr>
<td>9:00 p.m. – 10:30 p.m.</td>
<td>Cornhole Tournament</td>
<td>Playwright’s Hall</td>
</tr>
<tr>
<td>9:00 p.m. – 11:30 p.m.</td>
<td>Entertainment: D.J. / Open Mic</td>
<td>Playwright’s Hall</td>
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## Friday, March 16

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<th>Time</th>
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<tr>
<td>8:00 a.m. – Noon</td>
<td>Registration / Info / Sales Desk Open</td>
<td>Lobby</td>
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<tr>
<td>7:30 a.m. – 8:30 a.m.</td>
<td>Coffee &amp; Refreshment Service</td>
<td>Lobby</td>
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<tr>
<td>8:00 a.m. – 10:20 a.m.</td>
<td>Trade Show</td>
<td>Lobby</td>
</tr>
<tr>
<td>8:00 a.m. – Noon</td>
<td>Concurrent Sessions (5) + Break &amp; Refreshment Service 10:00 – 10:20 a.m.</td>
<td>See Sessions at a Glance</td>
</tr>
</tbody>
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Welcome to the 54th Annual Meeting of the Oregon Chapter of the American Fisheries Society. Wow—54 years! On behalf of the Executive Committee and the 2018 Planning Team, we want to welcome you and encourage you to get the most out of this meeting. We know that whether this is your first meeting or your 54th, the program and networking events will have you coming back for more!

I would like to express a heartfelt thank-you to Kris Homel and the Planning Team. The planning and execution of a meeting of this size and caliber would not be possible without the energy and efforts of so many people. Thank you, team! Thanks to the workshop organizers, session moderators, and all the speakers and poster presenters. We have a diverse slate of symposia and presentations, so thanks to everyone for your contributions. I would also like to thank all of our vendors, sponsors, and raffle auction donors for your continued support!

This meeting theme, Research and Management in a Changing Climate, is a timely topic, and the technical program is packed with talks on climate change science as it relates to fisheries research, management, and resiliency. For first-time attendees and students, please consider attending the Skills for All Stages session on Thursday morning. Students, please attend the Student-Mentor Mixer on Wednesday night. For those of you interested in getting more involved, please attend the Meet Your External Committees networking event on Wednesday morning or attend any External Committee meeting that might be of interest to you. On Thursday we will be announcing recipients of scholarships and awards during the awards luncheon, followed by the business meeting. All are invited and welcome to attend.

It continues to be an honor and a privilege to serve as the President of the Oregon Chapter, the most decorated Chapter in AFS. I look forward to connecting with old friends and making new friends this week. Enjoy the meeting and please take advantage of all the learning and networking opportunities the meeting has to offer. Lastly, I would like to thank all of you for your commitment to the Chapter and our profession.

SHIVONNE NESBIT
President, Oregon Chapter of the American Fisheries Society
2017–2018 Executive Committee

The President of the Chapter presides at all Chapter meetings, chairs the ExCom, is Chapter Representative to the Western Division and to the parent society, makes appointments and performs other duties and functions as authorized and necessary for overall Chapter effectiveness, crafts a one-year work plan and budget, arranges sponsorships, and writes columns for the newsletter.

The President-Elect chairs the Program Committee, assumes the duties of the President in the event of the President’s absence or inability to act, plans the Annual Meeting theme, program, and presentations.

The Past President chairs the Nominating Committee and also chairs the ExCom if neither the President nor President-Elect is available, imparts historical wisdom, manages the Trade Show, and prepares for retirement.

The Vice President chairs the Resolutions and Bylaws Committee, assumes the duties of the President-Elect in the event that office is vacated prior to completion of the term, and manages Student Activities and Raffle & Auction committees.

The Secretary keeps the official records of the Chapter.

The Treasurer collects and banks any funds allotted to the Chapter, disburses funds as authorized by the Executive Committee, serves on the Financial Sustainability Committee, and disseminates information regarding the performance of the ORAFS investment portfolio.

The External Director supervises and motivates all External Committees. Ensures that committees respond to ExCom (and vice-versa) and participate in the Annual Meeting.

The Internal Director appoints the Historian and chairs of the Awards, Scholarships, and the Arrangements committees. Manages facility, food breaks, and A/V needs and costs for the Annual Meeting.

The Student Subunit Representatives serve as liaisons between the Chapter and the approved student subunit(s) of the Chapter. Assist Vice President with student planning for the Annual Meeting.

2017–2018 Committee Chairs

INTERNAL COMMITTEES

AFS/TWS LIAISON
Laura Tesler (ODFW)

AWARDS
Colleen Fagan (ODFW)

RESOLUTIONS & BYLAWS
Shannon Richardson (ODFW)

HISTORIAN
Jason Seals (ODFW)

INVESTMENT
Anthony Siniscal (ODFW)

NEWSLETTER EDITOR
Natalie Scheibel (ODFW)

SCHOLARSHIPS
Scott Heppell (OSU)

WEBMASTER
Lora Tennant (NPT)

EXTERNAL COMMITTEES

EDUCATION & OUTREACH
Ryan Battleson (ODFW)

FISH CULTURE
Ryan Couture (ODFW)

FRESHWATER HABITAT
Cory Sipher (BLM)

LEGISLATIVE
Haley Lutz (NNWC)
Troy Brandt (RDG)

MARINE HABITAT & ECOLOGY
Ashley Knight (OSU)
Michael Harte (OSU)

NATIVE FISH
Jim Capurso (USFS)

NATURAL PRODUCTION
Ian Tattam (ODFW)

SOCIAL MEDIA
Demian Ebert (PC)

DIVERSITY, EQUITY, AND INCLUSION
Gabe Sheoships (FTC / PSU)

COMMUNICATIONS
William ‘Jim’ Yeo (OSU)
Greetings, Colleagues!

It is my pleasure to welcome you to the 54th Annual Meeting of the Oregon Chapter of AFS. The theme of our meeting is *Research and Management in a Changing Climate*. We typically think about changing climates in a scientific context. However, socio-economic and political climates are also changing, and these can have profound effects on fisheries research and management. The planning team (page 7) has worked hard to build a program that explores these concepts, and I would like to personally thank all the volunteers who donated their time, effort, and resources to bring this program to fruition!

Our theme connects to the diversity initiatives that have formed the core of Shivonne Nesbit’s leadership with ORAFS. Just as diversity increases the ability of a species to adapt, so too must we embrace diversity to encourage the greatest range of ideas, perspectives, and technologies so that our profession can adapt to meet changing demands.

This adaptation is actively ongoing and takes many forms. For example, it occurs through continuing to investigate physical and biological changes to the environment and then incorporating this into our research, conservation, and management plans. At times, this may require revisiting past assumptions about how ecosystems function, as climate change results in novel conditions. Adaptation also occurs as we take advantage of new technologies, which may rapidly enhance our ability to sample or understand the environment, or when we develop new communication strategies to help us overcome political or socio-economic barriers. And, now more than ever, adaptation of our profession occurs as we strike a balance between scientific neutrality, detailed interpretation of results, and advocacy. How we navigate this balancing act will shape the public’s impression of us as scientists and, in return, how effectively we can conduct our research and management.

Our Annual Meeting program reflects this adaptation through workshops and technical sessions, in the plenary with Dr. Bachelet and Dr. Biedenweg, and through networking events. We hope you will take advantage of opportunities to attend a diverse range of sessions, to meet your external committees, and to enjoy our socials, which are designed to foster new collaborations and solution-oriented thinking. Thank you to everyone for attending this meeting and for contributing your ideas to our profession as we conduct *Research and Management in a Changing Climate*!

KRISTEN HOMEL
President-Elect, Oregon Chapter of the American Fisheries Society
2018 Annual Meeting Planning Committee

PROGRAM COMMITTEE CHAIRS
Kris Homel (ODFW) and Natalie Scheibel (ODFW)

ANNUAL BUSINESS MEETING
Shivonne Nesbit (NOAA)

BUDGET
Katie Pierson (ODFW)

FACILITY & FOOD ARRANGEMENTS
Kevin Stertz (ODFW)

IMBIBEMENTS
Michael Scheu (OSU)

POSTER CHAIR
Christina Murphy (OSU)

RAFFLE & AUCTION
Kevin Rybacki (ODFW)
Sarah Sapienza (ODFW)
Shannon Richardson (ODFW)
Christine Hirsch (USFS)
Doug Garletts (USACE)
Benji Ramirez (ODFW)

REGISTRATION
Katie Pierson (ODFW)
Josie Thompson (ODFW)

SIGNS & BANNERS
Britta Baechler (PSU)
Lauren Zatkos (OSU)
Francisco Pickens (OSU)

VENDOR EXHIBITS
Ben Clemens (ODFW)
Troy Brandt (RDG)

TECHNICAL PROGRAM
Kris Homel (ODFW)
Natalie Scheibel (ODFW)
Shivonne Nesbit (NOAA)

ENTERTAINMENT
Shivonne Nesbit (NOAA)
Ryan Flaherty (PNNL)
Kris Homel (ODFW)

STUDENT COORDINATION & ACTIVITIES
Jitesh Pattni (ODFW)
Shannon Richardson (ODFW)

STUDENT PAPER JUDGING
Johnny Armstrong (OSU)

SPAWNING RUN & CARCASS CRAWL
Katherine Nordholm (ODFW)
Shannon Richardson (ODFW)

WEBSITE & ONLINE ABSTRACT SERVICE
Lora Tennant (NPT)
Mike Meeuwig (ODFW)

WORKSHOPS
Julie Sharp (UA)
Kris Homel (ODFW)

SPONSORSHIPS
Troy Brandt (RDG)
Ben Clemens (ODFW)

VOLUNTEER COORDINATORS
Jitesh Pattni (ODFW)
Shannon Richardson (ODFW)

PHOTOGRAPHY
Rich Grost (PC)

LOGO DESIGN
Kris Homel (ODFW)

ADVERTISING
Josie Thompson (ODFW)
Holly Huchko (ODFW)
Demian Ebert (PC)
Fisheries-Relevant Facts About the Current State of Climate Change Science

Dr. Dominique Bachelet will welcome attendees to the 2018 Oregon AFS meeting with an overview of the state of climate science as it relates to fisheries. Dominique will briefly review the state of climate modeling and the strengths and limitations of the climate projections as well as touch on Representative Concentration Pathways land-use implications. She will review the downscaling methods, highlighting the differences between the various approaches. Finally, she will continue with a brief description of Dynamic Global Vegetation Models (DGVMs) and how their results will affect projections of streamflow.

Dominique is an ecologist with 38 years of combined education and work experience. Her research has focused on global climate change impacts since 1989, and she has been involved in several Intergovernmental Panel on Climate Change reports since 1995. She has published over 80 peer-reviewed papers and 30 book chapters, co-edited two books, and participated in model documentation and data archiving. She helped develop the first DGVM (MC1) that included a dynamic fire model. Her modeling team at the Conservation Biology Institute (CBI) updated it (MC2) by including a land-use component.

Since 2007, she has spent much time in the nongovernmental organization world, focusing on science information delivery and communication. As the director of climate change science at The Nature Conservancy, Dominique worked with her team to create the “climate wizard” (climatewizard.org) to deliver climate projections. At CBI, she worked closely with web application developers to ensure that the most relevant state-of-the-art climate change information, including impacts, was delivered to the stakeholders who needed it (e.g., climateconsole.org/conUS).

Her most recent work produced a variety of web tools, including an online state-and-transition modeling platform (landscapesim.org) and a decision support tool (eemsonline.org) developed by her doctoral student. She is now at Oregon State University, working on a backlog of papers that should document the modeling work done by her team at CBI over the last five years. She hopes to continue doing research simulating future fires and creating user-friendly web tools to deliver the results.

Dominique holds a PhD from Colorado State University and has worked as a quantitative ecologist with the U.S. EPA Environmental Lab in Corvallis, Oregon. She is currently an associate professor in the Department of Biological and Ecological Engineering at OSU and also serves as the senior climate change scientist at CBI.
Dr. Kelly Biedenweg will present an overview of how a changing social climate affects research and management. Social science is increasingly discussed as critical for holistic fisheries research and management, as we recognize that since humans benefit from and impact the fisheries themselves, we cannot study biophysical processes in a vacuum. While the field is still grappling with understanding how to make this integration, we are also faced with a glaring shift in sociocultural values, attitudes, and benefits about fish and their ecosystems throughout the U.S. This presentation will explore these broad sociopolitical trends and their implications for fisheries research and management.

Kelly is an assistant professor of human dimensions at Oregon State University, where she instructs Communication Skills for Fisheries and Wildlife Professionals, Multicultural Perspectives in Natural Resource Management, and Psychology of Environmental Decisions. Her research interests are in human well-being and social values associated with the natural environment, social learning, natural resource management processes, adult education and communication, and program evaluation and facilitation. She has focused her research in Latin America and the Pacific Northwest, often collaborating with The Nature Conservancy, the U.S. Forest Service’s Pacific Northwest Research Station, the Puget Sound Partnership, and King County, among others. Kelly recently received a three-year Environmental Protection Agency early career award for her research on integrating human well-being and ecosystem services.

Kelly also received a three-year NSF Science, Education and Engineering for Sustainability Postdoctoral Fellowship to explore quantitative and spatial metrics of human values that could be integrated into resource management planning. Through this fellowship, she worked with the Puget Sound Partnership, where she led a study to develop holistic human well-being indicators that were relevant to the broad Puget Sound population. In 2015, 15 of these indicators were adopted by the Leadership Council and will now be monitored biennially to evaluate changes as a result of changing (or not) environmental conditions and to promote strategy development that explicitly acknowledges diverse social trade-offs.

Kelly is a former NSF IGERT, American Association of University Women, and University of Florida Alumni fellow. She earned a PhD from the University of Florida in the human dimensions of natural resource management, with certificates in environmental education and communication and Latin American studies, and a concentration in tropical conservation and development. She also holds a master of science in conservation biology and a bachelor of science in marine ecology.
Please Welcome Our 2018 Vendors!

Advanced Telemetry Systems (ATS)
Isanti, Minnesota | 763-444-9267
jadsem@atstrack.com | www.atstrack.com

Advanced Telemetry Systems (ATS) offers innovative and reliable wildlife tracking products designed for researchers worldwide. Visit ATStrack.com to see complete product details and to request your same day product quote.

Aquatic Contracting, LLC
Portland, Oregon | 503-799-0934
justin@aquatic-con.com | www.aquatic-con.com

Aquatic Contracting, LLC was founded in 2001 by a fisheries biologist, and we are committed to restoring aquatic habitats. As a full-service contractor, our expertise in design/build and our ability to provide planning, permitting, and construction services makes us leaders in the field of habitat restoration.

Biomark, Inc.
Boise, Idaho | 208-275-0011
customerservice@biomark.com | www.biomark.com

Biomark specializes in RFID tag (PIT tag) and related PIT tagging equipment and services for the fisheries and wildlife communities and integrates these products by designing, manufacturing, installing and maintaining the systems that detect the tags at specific and strategic locations for invaluable data collection and comprehensive results. Biomark also provides additional specialized services including fish tagging, statistical analysis, software development, study execution, report writing and computational model development to support analysis and decision making.

Bio-Oregon
Longview, WA | 360-556-0811
loren.jensen@bio-oregon.com | www.bio-oregon.com

Bio-Oregon commits itself to producing top quality fish feeds backed up by extensive research and highly developed logistics. Bio-Oregon’s experienced technical support and sales team are readily available to help all aspects of your operations and ensure that you get the best out of our fish feed products.

John L. Fryer Aquatic Animal Laboratory
Corvallis, OR | 541-737-0743
aahl.manager@oregonstate.edu | www.microbiology.science.oregonstate.edu/aahl

The J.L. Fryer AAHL is a research facility with wet and dry labs, available to researchers and agencies studying disease, environmental or climatic factors in a range of freshwater species.

Little Pond Nature Prints
Newport, Oregon | 541-961-7567
koike.bruceme@gmail.com | www.koikebruce.wixsite.com/koike-fish-prints

Bruce Koike specializes in the Japanese art of fish printing (Gyotaku). Presented are original impressions taken directly from various aquatic animals. Contact Bruce about the post-conference fish printing workshop.

Lotek Wireless, Inc.
Seattle, Washington | 206-783-9356
matt@biosonicstelemetry.com | www.biosonicstelemetry.com

Lotek fish and wildlife monitoring systems allow researchers in over 100 countries worldwide to track animals, birds and fish of almost any size, in almost any environment. Our craft is technology, but our passion is the environment. We’re committed to providing innovative solutions for a sustainable future.

Oregon RFID
Portland, Oregon | 503-788-4380
teddi@oregonrfid.com | www.oregonrfid.com

Oregon RFID has manufactured equipment for tracking fish and wildlife using low frequency PIT tags and readers since 2003. Our products are used worldwide for scientific research and commercial operations. Oregon RFID also provides technical support and is an AFS member corporation.

Pacific Corrugated Pipe Co.
Eugene, Oregon | 541-461-0990
wwilliams@pcpipe.com | www.pcpipe.com

Pacific Corrugated Pipe Co. has been manufacturing corrugated metal pipe and related drainage products since 1935. Our company offers the highest quality products at competitive prices, great customer service, and timely deliveries.
Pacific Netting Products is the world leader in design, construction, installation and service of fish and debris exclusion, guidance, and collection solutions.

Portland State University – Environmental Professionals Program
Portland, Oregon
503-725-5388 | epp@pdx.edu
The PSU Environmental Professional Program (EPP) offers respected university-level, technical short courses to Northwest, national, and international professionals. Our classes are offered in short-course format and focused on the skills and knowledge required to implement a wide-range of environmental projects. Major topics include: ecology, analytical methods, field techniques, regulations and project management. Google PSU EPP.

River Design Group, Inc.
Corvallis, Oregon | 541-738-2920
tbrandt@riverdesigngroup.com | www.riverdesigngroup.com
River Design Group, Inc. (RDG) provides clients with a team of skilled professionals that combine science-based knowledge with proven restoration techniques to advance the field of ecosystem and river restoration. RDG assists project stakeholders with fish passage, dam removal, stream and river restoration, and other ecological restoration practices across the Pacific Northwest and Intermountain West.

Smith-Root
Vancouver, Washington
360-573-0202
doja@smith-root.com
www.smith-root.com
Smith-Root is offering the only purpose-built eDNA filtration system with pre-loaded filter packets that will standardize eDNA sample collection. Check out our new line of Apex electrofishers that record electrofishing inputs / outputs every second while displaying them on a color LCD screen.

Soul River Inc.
Portland, Oregon
503-954-7625 | www.soulriverinc.org
Soul River Inc. connects inner city youth and US military veterans to the outdoors through incredible outdoor educational transformation experiences. By engaging U.S. veterans as mentors for inner city youth, we believe that rich, powerful opportunities of healing authentically happen in the midst of Mother Nature. We believe that by connecting youth and veterans to our public lands, wild rivers and fresh waters, and beyond through genuine community, we will ultimately establish and inspire a new generation of environmental leaders that will advocate for our public lands, freshwater and wildlife charging as conservation advocacy leaders.

Upper Snake River Tribes
Portland, Oregon | 503-880-8164
Bob@usrtf.org | www.usrtf.org
The Upper Snake River Tribes (USRT) coordinates and pursues fish, wildlife, land, water, air, Cultural Resource, and federal trust responsibility objectives and strategies to meet the policy and guiding principles of their Compact through information gathering and dissemination, facilitation of technical and policy meetings, and drafting of technical and policy statements. USRT Compact tribes include the Burns Paiute Tribe, Fort McDermitt Paiute-Shoshone Tribe, Shoshone-Paiute Tribes and the Shoshone-Bannock Tribes.

Wolf Water Resources
Portland, Oregon | 503-207-6688
dcase@wolfwaterresources.com
www.wolfwaterresources.com
Wolf Water Resources is a multi-disciplinary consulting firm based out of Portland, Oregon. We specialize in watershed science and water resources engineering to restore streams, rivers, and floodplains.

World Salmon Council
Portland, Oregon | 850-321-4993
rachel@worldsalmoncouncil.org | www.worldsalmoncouncil.org
World Salmon Council is a 501(c)(3) nonprofit environmental for-purpose organization. Our mission is to provide experiential education and encounters with Pacific wild salmon to connect students and adults with nature and empower community engagement.
Something is bound to reel you in!

Organizations and individuals throughout Oregon have graciously donated fantastic auction and raffle items to show their support for the 54th ORAFS Annual Meeting. All proceeds from the auction and raffle will be used for student scholarships, to support travel to our meeting, and to provide assistance for young professionals to attend the meeting. Silent and live auction items will be displayed at the Meet Your Manager Networking Event and Banquet prior to the Auction and Raffle Event on Thursday evening. This is your chance for a sneak peek at some of the items that will be available.

Art
Christopher Michael Creath – 3 prints
Peter McNamee Photography – Ollalie Creek, Mt. Rainier National Park print
Red Parasol Productions – 2 prints
Roads End Pottery – Handmade pottery plate
Spoonman Creations – Fishy wind chimes
Charles Broda – Fish carving
Jan Roberts-Dominguez – Stoneyburn Gallery art
Mari Williams – 7 art greeting cards, fishy 5x7 postcard art prints
Raven Maps and Images Inc. – Laminated wall map of Oregon
Steve Kucas – Large salmonid picture, wood fish carving, original signed “native fish” print
West of the Moon – Hanging fish bones decoration

Studio Abachar – Print
Ruth Farr – Fish print
Soho Coho-Troll Art – “Fish are not for farming” poster and “From the tidepool” T-shirt
Dede Olson – Art note cards
Laura Tesler – Middle Fork Willamette Bass print
PSM: Joy Cha Studio – 3 handmade salmon “Cheers from PNW” cards
Freshwaters Illustrated – Prints
Tweten Photography – Prints

Books
Carl Schreck – *Biology of Stress in Fish* signed by author
Frank Amato Publications – Books
Steve Kucas – *The Greatest Fishing Stories Ever Told, Fishing the Northwest, Rivers of America & Coho tray

Haugen Enterprises – Hunting books

Brew/Wine and Swag
10 Barrel Brewing – Beer
Cascade Lakes Brewing – 20-inch Brown hat & 6-pack
Ex Novo Brewing Company – Beer and pint glasses
Flyboy Brewing – Growlers, hats, gift cards
Hopworks Urban Brewery – 2 cases of beer
Oregon Brewfest – Gift card good for two mugs and 36 tokens
Deschutes Brewery – Beer
Falling Sky Brewing – $20 gift card
Stag Hollow wines – Wine
Pelican Brewing Company – Gift basket
Willamette Valley Vineyards – Tour and tasting gift certificate for 8
RAFFLE & AUCTION

Claim 52 Brewing – Gift certificates + hats
Sunriver Brewing Company – $30 gift card, hat, T-shirt, pint glass
East Side Distilling – Private party/tasting for 10
7 Devils Brewing – Growler, refill, 2 pint glasses, hat, coasters, sticker
Buoy Beer – 6-pack, 2 bottles of seasonal release, 2 koozies, socks
Worthy Brewing Company – Case of beer, merch
Bull Run Distillery – Gift basket with spirits, tasting cards, glasses
Sky High Brewing – Gift basket
Cor Cellars – 6-person private tasting

Fishing Gear
Sportsmans Warehouse: Albany – Gift card
Sportsmans Warehouse: Kalamath Falls – Gift card
Sportsmans Warehouse: Portland – Lamiglass Redline Rod ($149.99), Pflueger Reel($59.95) and (4) $50 gift cards
Sportsmans Warehouse: Salem – Gift card
Tenkara Rod Co. – Tenkara fly rod: Sawtooth package
St. Croix Rods of Park Falls – 2 separate 40% discount certificates
Silver Horde – Lure bag & various lures fishing gear
Rajeff Sports – Reel combo & Swing Switch 11’7 #7 fly rod
Rajeff Sports – Echo Traverse 690 Kit Rod/reel combo & Swing Switch 11’7 #7 fly rod
Rajeff Sports – Echo Traverse 690 Kit Rod
The Fly Fishing Shop – Box of flies
Tenkara USA – Tenkara fly rod
Englund Marine: Astoria – $30 gift card
Englund Marine: Charleston – 3 crab rings with rope
Oregon Rod, Reel and Tackle – $80 gift card

Food
Arrowhead Chocolates – $25 gift card
Fire on the Mountain – $25 Gift card
New Seasons Market – $50 gift card
Skyway Bar & Grill – 2 $25 gift certificates
Human Bean – 2 $20 gift cards
Cowboy Dinner Tree – Dinner for 2
Stumptown Coffee Roasters – Coffee
Bob’s Red Mill – 2 variety 4 packs and 2 $25 gift cards
Portland Saturday Market – Portland Saturday Market Display: DIY plate-holder hangers

Guide Trips
Kevin Gray’s Guide Service – Salmon or Steelhead Drift boat trip on North Coast or Willamette Valley
Northwest Connection – 2 seats on drift boat for Fall Chinook or Winter Steelhead on the Alsea or Siletz River
Gary Vanderhoe – 2 seats on Coos Bay Guided crab trip
Fly Side Angling – Half-day trip on the Wallowa River (between June and Sept)
Minam Store – 1 seat on 4-day raft and guided fishing trip on roadless section of Wallowa and Grande Ronde Rivers

Misc.
Bowtech Archery – Hunting gear
PSM: Closed Loop Wodworks – Salmon cribbage board
Smith Root – Stay tuned!
Tillamook Estuary Partnership – Gift basket
Backyard Bird Shop – Suet feeder and 4 suets
PSM: Spirit Song Flutes – Handmade wood flute
Rumble Roller – Foam roller
Alder Creek Canoe and Kayak – Gift certificate for 2 basic skills kayak or SUP classes
Sunriver Rock & Gem – Gift certificate
Breitenbush Hot Springs – Gift certificate
Otter Box – $90 gift certificate
Theracane – Theracane
Helen Spieth – 1 acupuncture assessment and treatment and 1 follow-up and treatment
PSM: Cosmic Garden Designs – Earrings
PSM: Sabrina Leaf – Earrings and necklace
PSM: Tangioista Designs – Jewelry tree
Winding River Expeditions – Swag, hydroflask, hat, etc.
Proof Eyewear – 2 pairs of wood sunglasses (McCall and Ontario)

continued on Page 14
**Belknap Hot Springs** – 2 day passes

**Trailblazers** – Autographed Evan Turner shoe

**Miller Coors** – Metal fire pit

**Smith Optics** – 5 pairs of polarized sunglasses (Dockside, Colson, Prospect x 2, Evolve)

**PSM: Strike Master Survival Tool** – Survival fire tool

**Coastal Farm and Ranch: Oregon City** – $75 item(s)

**Michele Weaver** – Fish-themed jewelry

**Ranger Station** – 2 $25 gift cards

**Sky High Sports** – 4 passes

**UO Duck Store** – $30 gift card

**Wilco** – Gift card

**Overnight Stays**

**Wallowa Lake Lodge** – 2-night stay in deluxe room and dinner for 2

**The Mill Casino and Resort** – 1-night stay and dinner for 2

**Summer Lakes Hot Springs** – 2-night stay at any cabin (Sun–Thurs)

**Sunset Lodging at Sunriver** – 2-night stay

**Hallmark Inn** – 1-night stay in ocean-front room

**Riverhouse on the Deschutes** – 2-night stay

**Spirit Mountain Casino** – 1-night stay and dinner for 2

**Wildhorse Casino and Resort** – 1-night stay in Tower Room or RV Park and $60 dinner voucher

**Theater/Festivals/Museums**

**Alpine Entertainment** – Pass for party of 4

**Columbia River Maritime Museum** – 4 passes to museum and light ship

**High Desert Museum** – 4 tickets

**Oregon Country Fair** – 2 tickets

**Oregon Symphony** – 2 vouchers for 2018

**Oregon Zoo** – 4 tickets

**Portland Center Stage** – Theater tickets

**Science Factory** – 2 admission tickets

**World Forestry Center** – Family pass 4-pack

**Watertime Outfitters** – Half-day shad fly-fishing trip + STHDR-brand hooded sweatshirt and T-shirt

**Willamette Sailing Club/Rivers West** – Family boat-building weekend

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*PSM = Portland Saturday Market*
Meet Your External Committees

Wednesday, March 14
11:00 a.m.–Noon.................................................. Vista
Prior to the start of the plenary, external committees will be meeting in the Vista room on the 12th floor. This is a great time to meet the committee chairs and find a committee to join!

Student-Mentor Mixer

Wednesday, March 14
6:00–7:30 p.m. .................................................. Vista
After the sessions on Wednesday afternoon, we will hold our Student-Mentor Mixer, where students can meet professionals to ask questions, get advice, build relationships, and network. If you decide to sign up as a mentor and forgot to do so when you registered for the meeting, check at the registration desk to see if spaces are available. The mixer is a great opportunity for students, early-career biologists, and established professionals to share ideas, provide insight, bridge generation gaps, and build new relationships.

Poster Session and Trade Show Social

Wednesday, March 14
8:00–11:30 p.m. ...................... Williams / Hellman / Lobby
Interact with poster presenters, share ideas, and network with peers! The trade show will be set up so that you can connect with vendors who provide us the innovative tools of today. This is also a social, so be sure to imbibe the complimentary beer and wine, enter day one of the Cornhole Tournament, or check out the first night of the Film Festival.

Spawning Run and Carcass Crawl

Thursday, March 15
7:00–8:00 a.m. ......................... Lobby
Dress warm for the popular Spawning Run 5K or the 2-mile Carcass Crawl fun walk. Get your blood flowing and your mind open for a great day of talks. Information and course routes are available at the registration desk. Runners and walkers will gather at the Convention Center Lobby, and the run/walk will begin and end at the Convention Center. And if you ordered one, don’t forget to bring your commemorative T-shirt.

Meet Your Manager

Thursday, March 15
5:30–6:30 p.m. ......................... Playwright’s Hall
The Meet Your Manager Social is a new event designed to connect managers and researchers to further collaboration. Join us for complimentary beverages before the banquet, and take advantage of this opportunity to meet your manager!

Banquet, Awards, Oral Auction, Raffle

Thursday, March 15
6:30–9:00 p.m. ......................... Playwright’s Hall
Don’t miss out on Thursday night’s events! A banquet ticket is required to receive a banquet meal, but not to participate in the raffle and auction. Be sure to get your raffle tickets, sharpen your pencil for the silent auction items, and be ready for the competitive live auction. Our Raffle Auction Committee has done a REMARKABLE job of obtaining amazing items, including great gear, guided fishing trips, artwork, and much more. Enjoy the banquet and the complimentary craft beer and wine.

D.J., Open Mic, and Cornhole Tournament

Thursday, March 15
9:00–11:30 p.m. ......................... Playwright’s Hall
We are excited to showcase great music spun by D.J. Alvaro Campomanes, intermixed with an open mic. If you have a special musical talent, bring your own instrument and take the stage! Back by popular demand, we will also have a Cornhole Tournament.
POSTER SESSION

SETUP
Noon – 7:30 PM • Wednesday, March 14
Boards will be provided and names of poster authors will be indicated on each board. Authors are responsible for their own hanging hardware.

POSTER SOCIAL
8:00 PM – 11:30 PM • Wednesday, March 14
During the social, authors are asked to be with their posters between 8:00 and 9:00 pm.

DISPLAY HOURS
8:00 PM – 11:30 PM • Wednesday, March 14
8:00 AM – 6:00 PM • Thursday, March 15
8:00 AM – 10:20 AM • Friday, March 16
Posters will be on display in Hellman on Wednesday and in the Lobby on Thursday and Friday.

TAKE-DOWN
10:20 AM – Noon • Friday, March 16

Cory Sipher
BLM
1 2
Brooke Schlipf*
OSU
Camoran Hollan*
BTC
3 4
Xanth Kirschenman*
BTC
Joseph Gregoire*
MHCC
5 6
Micah Bennett
PGE
Tim Danner*
BTC
7 8
Brent Priz
ODFW
Elizabeth Lee*
OSU
9 10
James White
USGS
Grace Ghrist*
HSU
11 12
Kara Jaenecke
ODFW
Gwendolyn Bury
OSU
13 14
Casie Smith
USGS
Alex Koeberle*
OSU
15 16
Andres Olivos*
OSU
Francisco Pickens*
OSU
17 18
Lauren Zatkos*
OSU
Michael Manning
OSU
19 20
Judith Barkstedt
USFWS
Alvaro Cortes*
OSU
21 22
Allison Swartz*
OSU
Damien Barrett*
OSU
23 24
Christine Trahan*
UI
Benjamin Briscoe
MHE
25 26
Christopher Derrickson*
OSU
Native Fish Committee
27 28
Fish Culture Committee
Legislative Committee
29 30
Social Media Committee
Marine Habitat and Ecology Committee
31 32
Education and Outreach Committee
Natural Production Committee
33 34
Diversity, Equity, and Inclusion Committee
Communications Committee
35 36
Amanda Hyman
OSU

KEY TO ACRONYMS ON PAGE 24

*Student

TITLE
1 Freshwater Habitat Committee
2 Oregon State University ORAFS Student Subunit
3 Effects of Sediment and Filtration on Chum Salmon Embryo Development
4 Impact of Artificial Lighting on Early Chum Development
5 Fisheries Technology Program, Mount Hood Community College
6 Advancements in Technology Increase Accuracy and Efficiency of O. Mykiss and Fall Chinook Redd Mapping on the Deschutes River
7 The Influence of Broodstock Management and Ocean Condition on Whatcom Creek, WA, Chum Return Dates and Escapement
8 Assessing Variability in Length Measurements of Chum Salmon Carcasses over Time

AUTHOR, ORGANIZATION
Cory Sipher, BLM
Brooke Schlipf,* OSU
Camoran Hollan,* BTC
Xanth Kirschenman,* BTC
Joseph Gregoire,* MHCC
Micah Bennett, PGE
Tim Danner,* BTC
Brent Priz, ODFW
<table>
<thead>
<tr>
<th></th>
<th>Title</th>
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<tbody>
<tr>
<td>9</td>
<td>Examining the Genomic Connectivity Among Dungeness Crab (<em>Cancer magister</em>) Recruits Along the Coast of Oregon</td>
<td>Elizabeth Lee,* OSU</td>
</tr>
<tr>
<td>10</td>
<td>Fusing Remote Sensing and Acoustically Measured Depth to Map High-Resolution Bathymetry and Habitats on the Willamette River</td>
<td>James White, USGS</td>
</tr>
<tr>
<td>11</td>
<td>The Effect of Juvenile Life History on the Marine Survival Rate of Coho Salmon</td>
<td>Grace Ghrist,* HSU</td>
</tr>
<tr>
<td>12</td>
<td>Examining Growth, Timing, and Run Characteristics of Iteroparous Wild Adult Steelhead in the Lewis &amp; Clark River</td>
<td>Kara Jaenecke, ODFW</td>
</tr>
<tr>
<td>13</td>
<td>Assessing Lotic Water Quality Using Satellite Imagery: Oregon as a Case Study</td>
<td>Gwendolyn Bury, OSU</td>
</tr>
<tr>
<td>14</td>
<td>Effects of Beaver on Water Quality in Urban Streams in the Tualatin River Basin, Oregon</td>
<td>Casie Smith, OSU</td>
</tr>
<tr>
<td>15</td>
<td>Otolith Shape and Microchemistry Revealing Life History Traits of Introduced Chinook Salmon in Patagonia</td>
<td>Alex Koeberle,* OSU</td>
</tr>
<tr>
<td>16</td>
<td>Predicting the Establishment of Pacific Salmon in Chilean Patagonia: Is Propagule Pressure Enough?</td>
<td>Andres Olivos,* OSU</td>
</tr>
<tr>
<td>17</td>
<td>Synchronicity of Environmental Regimes Affecting Aquatic Vertebrates in Mediterranean Rivers: An Experimental Approach</td>
<td>Francisco Pickens,* OSU</td>
</tr>
<tr>
<td>18</td>
<td>Coexistence of Top Aquatic Predators in Headwater Streams: Intraguild Predation and Implications of Shrinking Habitat Ranges</td>
<td>Lauren Zatkos,* OSU</td>
</tr>
<tr>
<td>19</td>
<td>Climate Change and Salmonid Hybridization Risk</td>
<td>Michael Manning, OSU</td>
</tr>
<tr>
<td>20</td>
<td>Installation of a Lamprey Passage System and Evaluation of Adult Pacific Lamprey Upstream Passage at Warm Springs NFH, Oregon</td>
<td>Judith Barksted, USFWS</td>
</tr>
<tr>
<td>21</td>
<td>Influence of Climate Variability on Cutthroat Trout and Coastal Giant Salamander in Headwater Streams</td>
<td>Alvaro Cortes,* OSU</td>
</tr>
<tr>
<td>22</td>
<td>Primary Production and Consumer Responses to a Riparian Canopy Gap</td>
<td>Allison Swartz,* OSU</td>
</tr>
<tr>
<td>23</td>
<td>A Genome-wide Association Study (GWAS) for Resistance to the Parasite <em>Ceratonova shasta</em> in Rainbow Trout</td>
<td>Damien Barrett,* OSU</td>
</tr>
<tr>
<td>24</td>
<td>CRISPR/Cas9 Mutation to Knockdown Estrogen Receptors in the Hepatocytes of Rainbow Trout</td>
<td>Christine Trahan,* UI</td>
</tr>
<tr>
<td>25</td>
<td>Impacts of Angling Techniques and Gear Types on Coho Salmon (<em>Oncorhynchus kisutch</em>) Mortality in the Lower Cowlitz River</td>
<td>Benjamin Briscoe, MHE</td>
</tr>
<tr>
<td>26</td>
<td>The Blob and El Nino on Siletz River Salmon</td>
<td>Christopher Derrickson,* OSU</td>
</tr>
<tr>
<td>27</td>
<td>Native Fish Committee</td>
<td>Jim Capuro, USFS</td>
</tr>
<tr>
<td>28</td>
<td>Fish Culture Committee</td>
<td>Ryan Couture, ODFW</td>
</tr>
<tr>
<td>29</td>
<td>Legislative Committee</td>
<td>Haley Lutz, NNWC, Troy Brandt, RDG</td>
</tr>
<tr>
<td>30</td>
<td>Social Media Committee</td>
<td>Demian Ebert, PC</td>
</tr>
<tr>
<td>31</td>
<td>Marine Habitat and Ecology Committee</td>
<td>Ashley Knight,* OSU, Michael Harte,* OSU</td>
</tr>
<tr>
<td>32</td>
<td>Education and Outreach Committee</td>
<td>Ryan Battleson, ODFW</td>
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<tr>
<td>33</td>
<td>Natural Production Committee</td>
<td>Ian Tattam, ODFW</td>
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<tr>
<td>34</td>
<td>Diversity, Equity, and Inclusion Committee</td>
<td>Gabe Sheoships, FTC/PSU</td>
</tr>
<tr>
<td>35</td>
<td>Communications Committee</td>
<td>Jim Yeo,* OSU</td>
</tr>
<tr>
<td>36</td>
<td>Improving Climate Resilience through the Culture of Native and Adaptive Species</td>
<td>Amanda Hyman, OSU</td>
</tr>
</tbody>
</table>

OREGON CHAPTER OF THE AMERICAN FISHERIES SOCIETY | EUGENE, OR | 2018
# Sessions at a Glance

## Tuesday, March 13

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 p.m.</td>
<td><strong>Concurrent Workshops</strong> – Bloch / Sousa</td>
</tr>
<tr>
<td>5:00 p.m.</td>
<td><strong>Workshop Social</strong> – Vista</td>
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</tbody>
</table>

### Wednesday, March 14

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 a.m.</td>
<td><strong>Welcome and Plenary Sessions</strong> – O’Neill / Williams</td>
</tr>
<tr>
<td>1:00 p.m.</td>
<td><strong>Concurrent Workshops</strong> – Bloch / Sousa</td>
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<tr>
<th>Room</th>
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<th>Wilder</th>
<th>Hansberry</th>
<th>Ferber</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:00 p.m.</td>
<td><strong>Speed Talks</strong></td>
<td>Ecological Responses to Regulated Flow in the Willamette R.</td>
<td>Research to Support Recovery</td>
<td>What’s in Your Water?</td>
<td>Habitat Restoration</td>
<td>Policy and Advocacy</td>
</tr>
<tr>
<td>6:00 p.m.</td>
<td>Student-Mentor Mixer – Vista</td>
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<tr>
<td>8:00 p.m.</td>
<td><strong>Poster Session &amp; Trade Show Social</strong> – Williams / Hellman / Lobby</td>
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### Thursday, March 15

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
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<tbody>
<tr>
<td>7:00 a.m.</td>
<td><strong>Spawning Run / Carcass Crawl</strong> – Lobby</td>
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<tr>
<td>8:00 a.m.</td>
<td><strong>Resilience Thinking in Salmon Management</strong></td>
<td>Ecological Responses to Regulated Flow in the Willamette R.</td>
<td>Food Web</td>
<td>Skills for All Stages</td>
<td>Habitat Restoration</td>
<td>Policy and Advocacy</td>
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<tr>
<td>10:00 a.m.</td>
<td>Break log &lt;((&gt;)&lt;</td>
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<tr>
<td>10:20 a.m.</td>
<td><strong>Resilience Thinking in Salmon Management</strong></td>
<td>Planning Downstream Fish Passage Improvements for Willamette Project Dams</td>
<td>Climate Change and Freshwaters: Are We Ready to Adapt?</td>
<td>Skills for All Stages + Panel Discussion</td>
<td>Behavior</td>
<td>Native Fish</td>
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<tr>
<td>Noon</td>
<td><strong>Awards Luncheon</strong> – Playwright’s Hall</td>
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<tr>
<td>1:45 p.m.</td>
<td><strong>OR AFS Business Meeting</strong> – Playwright’s Hall</td>
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<tr>
<td>3:00 p.m.</td>
<td><strong>Unmanned Aircraft for Fish and Habitat Monitoring and Research</strong></td>
<td>Planning Downstream Fish Passage Improvements for Willamette Project Dams</td>
<td>Climate Change and Freshwaters: Are We Ready to Adapt?</td>
<td>Diversity, Equity, and Inclusion</td>
<td>Behavior</td>
<td>Native Fish</td>
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<td>5:30 p.m.</td>
<td><strong>Meet Your Manager Networking Event</strong> – Playwright’s Hall</td>
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<tr>
<td>6:00 p.m.</td>
<td><strong>Silent Auction</strong> – Playwright’s Hall</td>
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<tr>
<td>6:30 p.m.</td>
<td><strong>Banquet, Awards, Oral Auction, Raffle</strong> – Playwright’s Hall</td>
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<tr>
<td>9:00 p.m.</td>
<td><strong>Entertainment: D.J. / Open Mic / Cornhole Tournament</strong> – Playwright’s Hall</td>
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### Friday, March 16

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 a.m.</td>
<td><strong>Fisheries Management</strong></td>
</tr>
<tr>
<td>10:00 a.m.</td>
<td>Break log &lt;((&gt;)&lt;</td>
</tr>
<tr>
<td>10:20 a.m.</td>
<td><strong>Catch and Release</strong></td>
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<tr>
<td>Noon</td>
<td><strong>ORAFS 54th Annual Meeting Ends</strong></td>
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</tbody>
</table>

### Session Topics

- Fisheries Management
- Climate Change and Freshwaters: Are We Ready to Adapt?
- Film Festival
- Genetics
- Aquaculture
<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>3:00 PM</td>
<td>ORAL PRESENTATIONS</td>
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<tr>
<td>3:00 PM</td>
<td>Ecological Responses to Regulated Flow in the Willamette River</td>
<td>Rich Plaszkowski, OSU</td>
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<tr>
<td>3:10 PM</td>
<td>Pacific Lamprey Recolonization of a Pacific Northwest River Following Dam Removal</td>
<td>Julie Ye, OSU</td>
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<tr>
<td>3:20 PM</td>
<td>Movement and Survival of Acoustic-Tagged Juvenile Chinook Salmon Released Upriver of Shasta Dam, 2017</td>
<td>Doug Olson, USFWS</td>
</tr>
<tr>
<td>3:30 PM</td>
<td>Effective Population Size, Connectivity, and Occupancy of Bull Trout: tools to Assist in Recovery</td>
<td>Andrew Jank, OSU*</td>
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<tr>
<td>3:40 PM</td>
<td>Does Freshwater Life History Affect Marine Survival Rate of Coho Salmon?</td>
<td>Richard Apke, ODFW</td>
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<tr>
<td>3:50 PM</td>
<td>The Role of Beaver in Assemblage Alteration and Stormwater Attenuation and Sediment Transport in Urban Streams of the Tualatin River Basin</td>
<td>Troy Brandt, RDG</td>
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<tr>
<td>4:00 PM</td>
<td>Rearing and Movement of Juvenile Chinook Salmon in the Willamette River</td>
<td>Luke Whitman, ODFW</td>
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<td>4:10 PM</td>
<td>The Stored Water Volume Required to Meet Willamette BiOp Minimum Flows Using a Reservoir Simulation Model</td>
<td>Pete Baki, ODFW</td>
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<td>4:20 PM</td>
<td>Development and Application of Programmatic Agreement for the National Fish Hatchery Program</td>
<td>Edward Jones, USGS</td>
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<td>Movement and Survival of Juvenile Chinook Salmon in the Trinity River, CA</td>
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<tr>
<td>5:00 PM</td>
<td>Committee Meeting</td>
<td>Jim Yeo, OSU</td>
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<td>Time</td>
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<tr>
<td>8:00 AM</td>
<td>Resilience Thinking in Salmon Management</td>
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<td>Factors and Processes Determining Water Temperature in the Willamette River, Oregon</td>
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<td>Understanding Large-Scale Dynamics of Diverse Shelf Ecosystems—the Importance of Physical Context and Response to Change</td>
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<td>Introduction to Skills for All Stages</td>
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<td>8:20 AM</td>
<td>Regime Shifts and Resilience Thinking for Salmon in the Sacramento/San Joaquin Delta</td>
<td>Past, Present, and Future Willamette Tributary Temperatures</td>
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<td>Relative Abundance and Isotopic Characteristics of Fishes in the Odell Lake Food Web</td>
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<td>The Future’s So Bright; or, How Do You Become What You Decided You Wanted to Be When You Grew Up?</td>
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<td>Best Practices in Aquatic Restoration to Protect Declining Native Freshwater Mussels</td>
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<td>A Supplemental Conservation Framework May Be Necessary to Protect Adaptive Variation within Closely Related Populations</td>
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<td>8:40 AM</td>
<td>Climate Contribution to Hard Times in US West Coast Salmon Fisheries</td>
<td>Water in the Willamette: Identifying Environmental Flows for the Ecosystem and Listed Salmonids</td>
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<td>What’s for Lunch? An Assessment of Piscivorous Fish Diets in the Columbia River Related to Targeted Northern Pikeminnow Removals</td>
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<td>Beyond Borders: Working as a Natural Resource Professional in a Foreign Country</td>
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<td>9:00 AM</td>
<td>Resilience Thinking About Estuarine Habitat Support for Fisheries Species</td>
<td>Willamette River Floodplain Restoration—Reconnecting Overwintering Habitats for Juvenile Salmonids</td>
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<td>Effects of Carcass Additions on Stream Food Webs Along a Temperature and Fish Assemblage Gradient in NE Oregon</td>
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<td>Finding Your Niche in the Private World</td>
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<td>Writing for the Record: Lessons Learned on How to Publish Your Work</td>
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<td>Review of Tools for Identifying, Planning and Implementing Habitat Restoration for Pacific Salmon and Steelhead</td>
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<td>A Fearless Approach to Stage 0 Fish Passage at High-Head Dams in the Willamette River Basin, OR</td>
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<tr>
<td>9:20 AM</td>
<td>Resilience and Vulnerability in Salmon Watersheds</td>
<td>Planning and Implementation of Fish Passage at High-Head Dams in the Willamette River Basin, OR</td>
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<td>Fish Culture Committee Meeting</td>
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<td>What Do You Want to Do with Your Life? Career Trajectories and Transitions</td>
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<td>Review of Recent Literature on Dams, salmon, and steelhead in the Pacific Northwest</td>
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<td>Evaluating an Experimental Commercial Pound Net Trap for Stock-Selective Harvest in the Lower Columbia River</td>
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<tr>
<td>9:40 AM</td>
<td>Resilient Responses by Pacific Salmon to Climate Change Require Diverse Thermal Landscape</td>
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<td>Evaluating Fish Population Mortality in Response to Thermal Stress in the Lower Columbia River</td>
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<td>What’s next for the Columbia/Snake River Basin?</td>
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</table>

Abstracts from the technical sessions and symposia, as well as other conference information, may be found on the ORAFS website at www.orafs.org.
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
<th>Institution(s)</th>
</tr>
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<tbody>
<tr>
<td>10:20 AM</td>
<td><strong>Resiliency: The Application to Aquatic Ecosystems</strong></td>
<td>Gordie Reeves</td>
<td>USFS</td>
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<tr>
<td>10:40 AM</td>
<td><strong>Evaluation of Chinook Salmon Fry Survival in Lookout Point Reservoir</strong></td>
<td>Tobias Kock</td>
<td>USGS</td>
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<tr>
<td>11:00 AM</td>
<td><strong>Behavior and Passage of Juvenile Salmon and Steelhead at Detroit and Cougar Dams, Oregon</strong></td>
<td>Amy Hansen</td>
<td>USGS</td>
</tr>
<tr>
<td>11:20 AM</td>
<td><strong>The Influence of Geologic Events upon the Distribution of Westslope Cutthroat Trout in Eastern Oregon</strong></td>
<td>Michael McCauley, ODGM</td>
<td>CDLM</td>
</tr>
<tr>
<td>11:40 AM</td>
<td><strong>Spatiotemporal Variability of Aquatic Habitat and Fish Distribution Over a 16-Year Record in the Elk River Basin in the Oregon Coast Range</strong></td>
<td>Kim Yazzie</td>
<td>UW</td>
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</tbody>
</table>

**Panel Discussion**

- Collective Behavior of Zebra Fish in the Wild
  - Della Shelton, OSU
  - Nick Halkowich, OSU*

**Behavior, Distribution, and Passage Metrics of Juvenile Chinook Salmon Above and Below Lookout Point Dam**

- Eric Fischer, PNNL
  - Michael Schulte, OSU*

**To Move or Not To Move: Downstream Rearing Chinook Salmon in the Upper John Day River Basin in the Oregon Coast Range**

- Kim Yazzie, UW*

**Climate, Drought, and Streams in the Western United States**

- Jason Dunham, USGS

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**Student**

- Fieldwork:
  - Nick Yuan, HSI
  - In Consideration of the Pikeminnows
  - Stewart Reid, WF

**ORAL PRESENTATIONS**

- Panel Discussion
- Phillips et al. (2013)
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Moderaotr</th>
<th>Chairman</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>03:00 PM</td>
<td>Fish and Habitat Monitoring with Unmanned Aircraft: Session Introduction and Overview of ODFW's Program</td>
<td>Erik Suring, ODFW</td>
<td>Rich Piaskowski, USACE Fenton Khan, USACE</td>
<td>Opportunities and Limitations of Using LiDAR to Model Sea-Level Rise on the Oregon Coast Rebecca Flitcroft, USFS</td>
</tr>
<tr>
<td>03:20 PM</td>
<td>Use of Small Unmanned Aircraft Systems (sUAS) for Fall Chinook Salmon Spawning Surveys in the Snake River</td>
<td>Brad Alcom, IP</td>
<td>Alternatives and Design of Cougar Downstream Fish Passage Scott Fielding, USACE</td>
<td>Assessing Climate Vulnerability of Columbia River Basin Steelhead: A 3-Step Decision Process Framework for Management Actions Jill Hardiman, USGS</td>
</tr>
<tr>
<td>03:40 PM</td>
<td>Using a Small Unmanned Aerial System to Survey Fall Chinook Salmon Redds and Recover Carcasses in the Snake River</td>
<td>Jon Rerecich, USACE</td>
<td>Detroit and Big Cliff Long-Term Temperature Control and Downstream Fish Passage</td>
<td>Diversifying the Professions: Unwrapping Economic Barriers Christine Moffitt, UI emerita / AFS Hutton Use of the Deschutes River by PIT Tagged Migrating Adult Snake River Steelhead Blane Bellerud, NOAA</td>
</tr>
<tr>
<td>04:00 PM</td>
<td>Above the Mud: Using UAS to Visualize Small Features for Estuary Monitoring in Oregon</td>
<td>Foster Dam Improvements for Upstream and Downstream Fish Passage Fenton Khan, USACE</td>
<td>Meeting Challenges of Climate Change Gordie Reeves, USFS</td>
<td>Shifts in the US Academic Fisheries Network Over Time Ivan Arismendi, OSU How to Train Your Fish: Olfactory Learning and Conditioning to Assess Potential Imprinting Odorants for Chinook Salmon Maryam Kamran, OSU</td>
</tr>
<tr>
<td>04:20 PM</td>
<td>The Use of sUAS Based LiDAR to Capture Channel Cross Sections and Detailed Terrestrial Surfaces in a Riverine Environment</td>
<td>Andres Vargas, QSI</td>
<td>Use of Deep Drawdowns for Juvenile Chinook Salmon Passage at Fall Creek Reservoir, Willamette Basin, Oregon Greg Taylor, USACE</td>
<td>Restoration Strategies to Mitigate Future Changes in Climate: How Long Will They Take? Steve Wondzell, USFS The Importance of Diversity in Focused Internships and Mentoring Siena Lopez-Johnston, BPA The Effect of Rearing Environment on Spatial Learning Ability in Juvenile Chinook Salmon Karen Cogliati, OSU</td>
</tr>
<tr>
<td>04:40 PM</td>
<td>Using Unmanned Aircraft for Habitat Restoration Implementation Monitoring</td>
<td>Erik Suring, ODFW</td>
<td>Individual Based Modelling Approach to Thermal Refuge Use by Migrating Adult Salmon and Steelhead Marcia Snyder, EPA</td>
<td>Temporally Dynamic Spatial Distributions of American Plaice (Hippoglossoides platessoides) and Yellowtail Flounder (Limanda ferruginea) Devin Flawd, MIMUN</td>
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</table>
## Technical Sessions, Friday, 3/16/2018, 8:00–10:00 am

<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Fisheries Management</th>
<th>Fish Passage</th>
<th>Climate Change and Freshwaters: are we ready to adapt?</th>
<th>Film Festival</th>
<th>Genetics</th>
</tr>
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<tbody>
<tr>
<td>8:00 AM</td>
<td>Bloch</td>
<td>Evaluating Angler Harvest in an Intensely Stocked Trout Fishery in Coos Bay, Oregon</td>
<td>Tidal Exchange through a MTR Tide Gate: Do Passage Windows and Seasonal Water Management Strategies Mimic Natural Tidal Dynamics?</td>
<td>The Oregon Hatchery Research Center in A Changing Environment: of What Use is Research?</td>
<td>Wilder</td>
<td>Genetic Tools to Inform Fisheries Management and Conservation in Oregon</td>
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<td>Gary Vonderohe, ODFW</td>
<td>Edward Hughes, CWA</td>
<td>David Noakes, OSU</td>
<td>Blane Bellerud, NOAA</td>
<td>Kathleen O’Malley, OSU</td>
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<tr>
<td>8:20 AM</td>
<td>Sousa</td>
<td>Mixed-Effect Models to Estimate Angler Tag-Reporting Rates Applied to the Oregon Tag-Reward Program</td>
<td>Putting Time Back in Space-for-Time Mark Recapture to Estimate Survival, Collection and Travel Time for Migrating Fish</td>
<td>Temperature Change may Affect Migration Differently across Chinook Salmon Phenotypes</td>
<td></td>
<td>Genome Wide Markers of Reproductive Success and Mate Choice in Coho Salmon</td>
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<td></td>
<td></td>
<td>Michelle Jones, ODFW</td>
<td>Dalton Hance, USGS</td>
<td>Carl Schreck, OSU</td>
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<td>Heather Auld, OSU</td>
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<tr>
<td>8:40 AM</td>
<td>Seeger</td>
<td>Estimating Size Selectivity of Longline Sampling Gear Targeting White Sturgeon in the Lower Columbia River Colin Chapman, ODFW</td>
<td>Expanding the Portfolio: Increased Chinook Outmigrant Diversity through the North Fork Floating Surface Collector</td>
<td>Warning Winter Climate Reduces Landscape-Scale Variability in Pacific Salmon Incubation Duration</td>
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<td>Stream Transport and Retention of Environmental DNA Pulse Releases in Relation to Hydrogeomorphic Scaling Factors</td>
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<td>Nick Ackerman, PGE</td>
<td>Dalton Hance, USGS</td>
<td>Luca Adelfio, USFS</td>
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<td>Joseph Parzych, IFI</td>
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<td>9:00 AM</td>
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<td>Learning to Fly, but I Ain’t Got Wings: Injury and Survival of Trout after Air-Stocking. Is Coming Down Really the Hardest Thing?</td>
<td>Effects of Stocking and Translocation on White Sturgeon Movement through the Federal Columbia River Power System (FCRPS)</td>
<td>Forecasting Salmon and Tuna Abundances and Marine Habitat Quality based on Climatic and Oceanographic Drivers</td>
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<td>Genetic Monitoring of Bull Trout Populations in the upper Willamette River Basin</td>
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<td>Jeff Yanke, ODFW</td>
<td>Peter Stevens, ODFW</td>
<td>Stephen Brandt, OSU</td>
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<td>Justin Bohling, USFWS</td>
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<td>9:20 AM</td>
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<td>Detecting Change in Coastal Coho Population Dynamics</td>
<td>A Decade of Steelhead Entrainment: Fish Diversion Patterns at Irrigation Dams of the Umatilla River Basin, Oregon</td>
<td>Predicting Effects of Climate Change on Myxozoan Disease Dynamics using an Epidemiological Model</td>
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<td>Stream Samples to Species Lists: Multiple Species Detection Using Multiplex PCR and High-Throughput Sequencing</td>
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<td>Matt Falcy, ODFW</td>
<td>Wil Simpson, USFWS</td>
<td>Julie Alexander, OSU</td>
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<td>Kevin Weitemier, OSU</td>
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<td>9:40 AM</td>
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<td>Commercial Salmon Fisheries in Off-channel Areas of the Lower Columbia River; 10-Year Trends in Harvest and Stock Composition</td>
<td>Downstream Movement and Foster Dam Passage of Juvenile Winter Steelhead in the South Santiam River</td>
<td>Not Always Nasty: Exploring the Conservation Significance of Seasonally Warm Habitats</td>
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<td>The OBGF: Genomic Data Assembly for the Development of Enhanced Molecular Monitoring Tools</td>
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<td>Tony Siniscal, ODFW</td>
<td>Fred Monzyk, ODFW</td>
<td>Johnny Armstrong, OSU</td>
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<td>Emily Dziedzic, OSU</td>
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<td>Room</td>
<td>Bloch</td>
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<td>Moderator</td>
<td>Ashley Knight, OSU</td>
<td>Demian Ebert, PC</td>
<td>Ryan Couture, ODFW</td>
<td>Blane Bellerud, NOAA</td>
<td>Rebecca Flitcroft, USFS</td>
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<td>10:20 AM</td>
<td>Relative Catchability of Wild Summer Steelhead Caught and Released by Sport Anglers in the Deschutes River, Oregon Jason Seals, ODFW</td>
<td>Upstream Passage of Bull Trout at Large Dams in the Upper Willamette Basin—Successes, Challenges, and Knowledge Gained Nk Zymonas, ODFW</td>
<td>Structure in Hatchery Tanks Appears to Moderate Handling and Crowding Stress Response in Juvenile Chinook Salmon Crystal Herron, OSU</td>
<td>Enhancing Fish Detection with Newly Developed Electrofishers, eDNA Detection Devices, and Automated Data Collection</td>
<td>Tracking Northern Pike Invasions in the Columbia River Basin Kellie Carim, USFS</td>
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<td>10:40 AM</td>
<td>Playing with Our Food: Catch-and-Release Angling for White Sturgeon Peter Stevens, ODFW</td>
<td>Adult Spring Chinook Migratory Response to Passage Improvements at the Clackamas River Hydroelectric Project Maggie David, PGE</td>
<td>Recent Research and Management of Japanese Chum Salmon Propagation in a Changing Climate Hiroshi Ueda, HU-HAPC</td>
<td>Comparing Multispecies eDNA to Traditional Approaches to Evaluate Species-Level Aquatic Biodiversity in a Stream Network Brooke Penaluna, USFS</td>
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<td>11:00 AM</td>
<td>Salmon and Steelhead Hooking Mortality in the Lower Cowlitz River Forrest Carpenter, MHE</td>
<td>Wild Surrogate Chinook and Steelhead for Dam Passage Studies David Noakes, OUS</td>
<td>The Impact of Different Hatchery Rearing Environments on Smolt-to-Adult-Survival of Spring Chinook Salmon Ryan Gerstenberger, CWFS</td>
<td>Deciphering the Signal: How Quantitative, Accurate and Sensitive is eDNA Metabarcoding? Laura Hauck, USFS</td>
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<td>11:40 AM</td>
<td>Hooks, Slime, and Sinkers: Life After Barotrauma, Lessons Learned in the Field Kelly Lawrence, ODFW</td>
<td>Effects of Dietary Lipid Concentration on Growth, Survival, and Smoltification of Hatchery-Raised Steelhead Ronald Twibell, USFWS</td>
<td>Film Festival</td>
<td>Education and Outreach Committee Meeting Ryan Battleson, ODFW</td>
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Agenda
Oregon Chapter of the American Fisheries Society
Annual Business Meeting

March 15, 2018 | Eugene, Oregon

1:45 PM Call to Order (Shivonne Nesbit)
• Identify Parliamentarian
• Determination of Quorum (50 voting members)
• Recognitions:
  o 2017 Division & National Outstanding Chapter of the Year Awards
  o Executive Committee, External and Internal Committees
  o Annual Meeting Planning Team, Sponsors, Vendors

1:50 PM Approve Minutes from 2017 Business Meeting (Shivonne Nesbit)
• Summarize Financial Statement, FY 2017-2018 (Katie Pierson)
• Disbursement Strategy (Katie Pierson)

1:55 PM President’s Report (Shivonne Nesbit)
• Strategic Plan Goals and Accomplishments
• New Business

2:05 PM WDAFS Update (Cleve Steward)
• WDAFS activities
• 2018 WDAFS Meeting – Anchorage, Alaska

2:10 PM Student Subunit Report
• OSU (Brooke Schlipf, Rachel Lertora)
• MHCC (Anthony Pedro)

2:15 PM External Director’s Report (Dan Bingham)
• Legislative Committee
• Other Committee Actions

2:20 PM Election of New Officers (Shivonne Nesbit)
Candidates
• President-Elect: Becky Flitcroft (USFS)
• Vice President: James Barlett (PGE)
• Secretary: Natalie Scheibel (ODFW)
• Internal Director: Kevin Stertz (ODFW); Terry Luecker (Partnership for the Umpqua Rivers)
• External Director: Jason Brandt (ODFW)

2:35 PM Presentation of Past President Award (Shivonne Nesbit)

2:45 PM Adjourn
Annual Business Meeting Minutes
Oregon Chapter of the American Fisheries Society

March 2, 2017 | Riverhouse on the Deschutes Conference Center, Bend, Oregon

Date: March 2, 2017
To: Oregon Chapter of the American Fisheries Society Membership
From: Katie Pierson, Secretary
Subject: Minutes from ORAFS Business Meeting at the 53rd Annual Meeting of the Oregon Chapter of the American Fisheries Society, Thursday, March 2, 2017, from 1:47 to 2:45 PM

Location: Riverhouse on the Deschutes Conference Center, Bend Oregon

President Ben Clemens called the 2017 Business Meeting to order at 1:47 PM and selected Carl Schreck and Bob Hughes as parliamentarians; Carl declared that a quorum was present. Ben thanked everyone for attending the 2017 Business Meeting and announced that ORAFS received the 2016 AFS Outstanding Chapter of the Year Award, the 13th time ORAFS has received this award since 1992. Ben introduced the 2016–2017 ORAFS Executive Committee. Ben acknowledged the external committee chairs, web administrator, and newsletter editor. In addition, Ben acknowledged the sponsors, vendors, and donors. Ben expressed thanks to the Riverhouse on the Deschtues staff, tribes, agencies, nongovernmental organizations, and contractors in attendance. Ben recognized the hard work of all the session moderators, workshop instructors, judges, and other volunteers (student and non-student).

Ben sought approval for the business meeting minutes from the Seaside 2016 meeting, as submitted by Tony Siniscal, and the motion passed unanimously. Ben introduced Treasurer Tony Siniscal, who summarized the Chapter’s finances and expenditures as related to the strategic plan goals of the Chapter for Fiscal Year 2016 (May 1, 2015–April 30, 2016). Fiscal Year 2016 included both the 2015 AFS Portland meeting and the 2016 ORAFS Seaside meeting and was a profitable year for the Chapter. Tony went over the Chapter’s eight-year financial history. In 2014, declining revenues became apparent, and the Executive Committee worked to tighten up the operating and annual meeting budgets and increase revenue. The Chapter subsequently held a profitable symposium and an annual meeting in a new location, hosted a very successful AFS meeting in Portland, and established the Financial Sustainability and Investment Committee. The revenue from the last few years has been put into an investment account to ensure the financial sustainability of the Chapter. The dividends and interest from this account could be used in the future to support additional scholarships, research, and grants. The investment account has experienced some early success, and the Financial Sustainability Committee is looking for input from the membership on how to reinvest the gains back into the Chapter.

Ben provided a high-level overview of the seven strategic goals and deliverables accomplished over the last year. He included some metrics from the Seaside Annual Meeting: 362 attendees, two plenary speakers, and two well-attended continuing education workshops addressing culvert replacement and drones in fisheries research. ORAFS provided sponsorships for the 2017 Fish Passage Conference, the 2017 West Coast Salmon Summit, and the 2017 Oregon State University Fish and Wildlife Graduate Student Association’s symposium. ORAFS provided $1,500 in support of Dr. Douglas Markle’s book, A Guide to Freshwater Fishes of Oregon. ORAFS has continued to maintain a website, Twitter and Facebook accounts, and an email list serve reaching more than 1,000 students and professionals. ORAFS has also maintained its quarterly newsletter, the Piscatorial Press, and utilized online polls for votes on bylaws, Executive Committee elections, and annual meeting satisfaction surveys.

Ben highlighted that ORAFS retained a legislative liaison, updated the Chapter’s suction dredge mining white paper, and produced a joint position paper with the Oregon Chapter of the Wildlife Society on Oregon’s marine reserves. ORAFS is currently working with some of its external committees to produce a white paper on herbicides and pesticides.

Through the Education and Outreach Committee, ORAFS has offered $3,000 in educator grants and provided $12,000 for student scholarships. ORAFS provided a $2,000 sponsorship for the ORAFS student subunit and implemented a new Fisheries Career Counselors program to connect students and young professionals with established aquatic scientists. In addition, ORAFS continues the tradition of implementing the student/mentor mixer at the annual meeting. During 2016–2017, ORAFS reimbursed three AFS fisheries professional certifications and recognized distinguished professionals through six different awards (Award of Merit, Fishery Worker of the Year, Fishery Team of the Year, Lifetime Achievement Award, Award of Merit for the outgoing treasurer, and Past President Award). The Executive Committee created a new ad hoc external committee on Human Diversity to increase outreach, recruitment, and retention of a membership reflective of the human diversity and to actively educate the Chapter about diversity and biases. This committee has over a dozen members, and interest in the committee continues to grow.

Ben recognized that ORAFS currently has 537 members from multiple and diverse entities, and that our newly implemented Financial Sustainability Plan & Investment Policy was touted by AFS Deputy Executive Director Daniel Cassidy.

Ben opened the floor to the membership and asked for new business. Laura Tesler, Chair of the AFS Hutton Scholarship Committee, made a motion to have the Chapter sponsor one Hutton Scholarship at the cost $6,800. The motion was seconded. There was discussion about the merits of the program, the high administrative cost, and potential cost sharing with other entities in Oregon. There was a suggestion of putting the sponsorship to vote by membership e-ballot; it was explained that the Executive Committee would need to approve the sponsorship as part of the work plan and budget. Laura amended her motion to have the Executive Committee consider the Hutton Scholarship at the Spring Retreat, where the FY 2017 work plan and budget are created and approved. The amended motion was seconded and passed unanimously.

Ben introduced Western Division AFS (WDAFS) President-Elect Brian Missildine. He invited attendees to attend the Western Division Meeting being held May 22–25 in Missoula, Montana. This meeting coincides with the Montana Chapter’s 50th meeting. Brian also reported that their Western Division website has been hacked, so they are transitioning to a website being housed under fisheries.org. Brian encouraged people to take advantage of the small grants and travel awards that are available at the Western Division level.

Ben introduced the ORAFS Student Subunit Liaison, Jacob Peterson. Jacob described the mission of the Oregon State University Fisheries and Wildlife Club and explained the change in the Club’s name. The Club has had a successful year, with workshop events at the Oregon

continued on Page 28
# Financial Statement for Fiscal Year 2017

## May 01, 2016 to April 30, 2017

## Expenses

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Costs</strong></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$(8,633.46)</td>
</tr>
<tr>
<td>Goal 1 - Develop programs that advance understanding of fishery science and responsible stewardship of fishery resources</td>
<td>$(3,365.16)</td>
</tr>
<tr>
<td>Goal 2 - Advocate policies and laws that benefit the conservation and sustainability of Oregon fishery resources</td>
<td>$(6,339.96)</td>
</tr>
<tr>
<td>Goal 3 - Increase public awareness, understanding, and appreciation of fishery resources</td>
<td>$(2,999.00)</td>
</tr>
<tr>
<td>Goal 4 - Promote development of fishery and aquatic science professionals</td>
<td>$(12,254.90)</td>
</tr>
<tr>
<td>Goal 5 - Support and encourage development of professional members</td>
<td>$(1,048.53)</td>
</tr>
<tr>
<td>Goal 6 - Maintain an active and diverse membership</td>
<td>$–</td>
</tr>
<tr>
<td>Goal 7 - Fiscal responsibility and investments</td>
<td>$–</td>
</tr>
<tr>
<td><strong>Other Expenses</strong></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$(558.00)</td>
</tr>
<tr>
<td><strong>Designated/Restricted Funds</strong></td>
<td></td>
</tr>
<tr>
<td>Diversity scholarship</td>
<td>$(2,000.00)</td>
</tr>
<tr>
<td>External Committee Award</td>
<td>$(350.00)</td>
</tr>
<tr>
<td>Total</td>
<td>$(2,350.00)</td>
</tr>
<tr>
<td><strong>Operating Costs Subtotal</strong></td>
<td>$(37,541.01)</td>
</tr>
<tr>
<td><strong>Annual Meeting Expenses</strong></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$(89,707.49)</td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td>$(127,256.50)</td>
</tr>
</tbody>
</table>
### INCOME

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Meeting</td>
<td>$161,271.00</td>
</tr>
<tr>
<td>Dues</td>
<td>$5,793.40</td>
</tr>
<tr>
<td>Other Income</td>
<td>$2,376.62</td>
</tr>
<tr>
<td>Investments</td>
<td>$19,844.90</td>
</tr>
<tr>
<td>Money Market Savings Interest Accrued</td>
<td>$–</td>
</tr>
<tr>
<td>WDAFS Endowment Fund Interest Accrued</td>
<td>$3,176.17</td>
</tr>
<tr>
<td>ORAFS Investments Account Interest Accrued</td>
<td>$16,668.73</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$189,285.92</strong></td>
</tr>
</tbody>
</table>

**NET INCOME/DEFICIT** $62,029.42

### ASSETS

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checking Account (Beginning of Fiscal Year 2017)*</td>
<td>$89,331.40</td>
</tr>
<tr>
<td>Money Market Savings Account (05/01/16)</td>
<td>$224,958.08</td>
</tr>
<tr>
<td>WDAFS Endowment Fund (05/01/16)</td>
<td>$15,848.08</td>
</tr>
<tr>
<td>ORAFS Investments Account (05/01/16)</td>
<td>$–</td>
</tr>
<tr>
<td><strong>BEGINNING BALANCE</strong></td>
<td><strong>$330,137.56</strong></td>
</tr>
<tr>
<td><strong>TOTAL ASSETS END OF FISCAL YEAR 2017</strong></td>
<td><strong>$392,166.98</strong></td>
</tr>
</tbody>
</table>

*Beginning balance is calculated after all previous Fiscal Year payments and deposits have been settled

### 2017 MEETING MINUTES continued from Page 26

Hatchery Research Center, presentations by Club members at several meetings, and the selection of the Club as Oregon State University College of Agriculture’s Club of the Year. Jacob summarized the Club’s spring break trip and mentioned that the club will be participating with sage grouse and redband trout surveys and organizing ArcGIS and R workshops.

Ben introduced the External Director, Cory Sipher. Cory acknowledged the external committee chairs and highlighted a few achievements of the committees. Notably, the Marine Habitat and Ecology Committee has worked to update the Chapter’s joint position paper on marine reserves with the Oregon Chapter of the Wildlife Society. The Native Fish Committee held its annual Non-game Native Fish Workshop. The Legislative Committee updated the suction dredge mining white paper. Cory reminded attendees about the Legislative Science and Policy session to be held during the Annual Meeting. Cory closed by and noting that all of the committees are seeking new members and suggested that Chapter members get involved.

Ben announced the winners of the election for Executive Committee 2017–2018. The officers are Kris Homel for President-Elect, Shannon Richardson for Vice President, Josie Thompson for Secretary, Katie Pierson for Treasurer, Kevin Stertz for Internal Director, and Dan Bingham for External Director. Ben congratulated the winners and reminded the attendees that many positions ran unopposed and that the Chapter would like to see more people running for office.

Ben presented the Past President Award to Troy Brandt and thanked Troy for always being the one to act and always leading by example. Troy’s leadership will be missed on ExCom. Troy accepted the award and gave a brief speech, telling the membership that the reason why he was there was because he griped about vendor space at a past meeting and was told, “If you don’t like something, get on ExCom to change it!”

Ben thanked the membership for attending the business meeting and asked for a motion to adjourn. There was a motion and a second to adjourn. All voted in favor, and the 2017 ORAFS Business Meeting adjourned at 2:45 PM.
Save the Date!
ORAFS Annual Meeting 2019

Tuesday, March 5 – Friday, March 8
Riverhouse | Bend, OR
2018 OREGON CHAPTER
AMERICAN FISHERIES SOCIETY
Annual Meeting

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