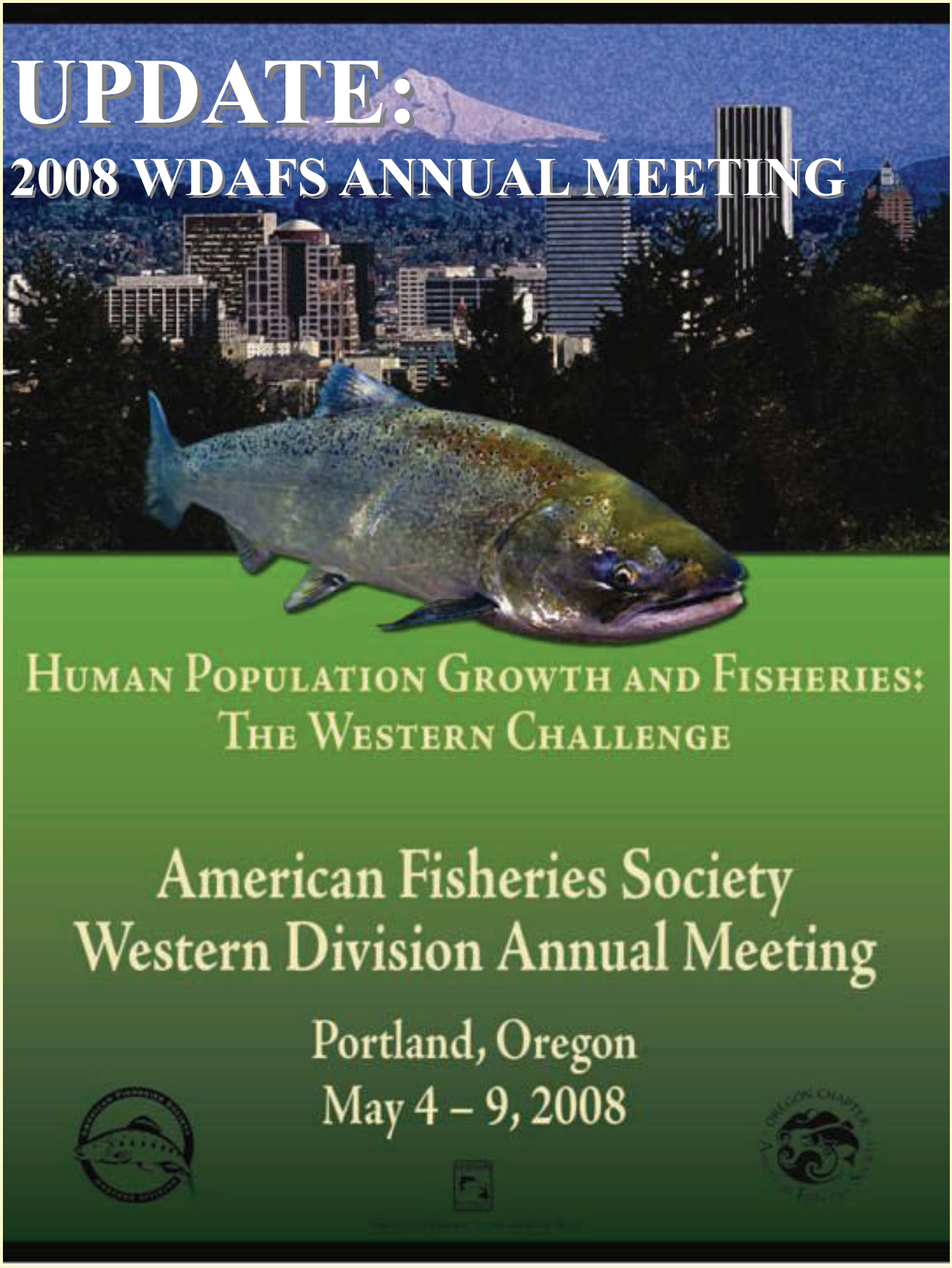
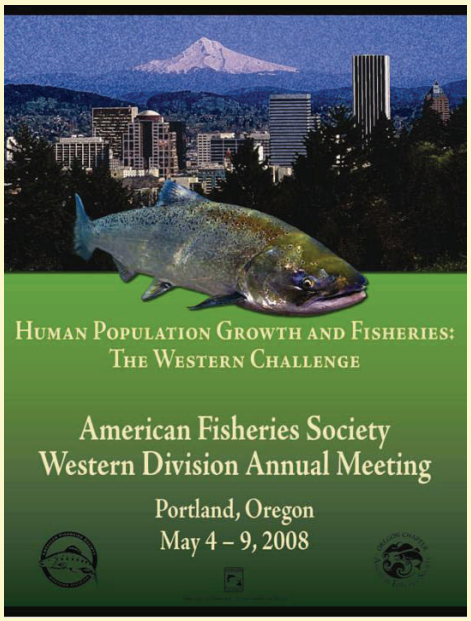

UPDATE:
2008 WDAFS ANNUAL MEETING
HUMAN POPULATION GROWTH AND FISHERIES:
THE WESTERN CHALLENGE
American Fisheries Society
Western Division Annual Meeting
Portland, Oregon
May 4 – 9, 2008

Contents

Greeting Colleagues,



The members of the 2008 WDAFS Annual Meeting Planning Committee are excited to facilitate your stay in Portland for what promises to be an exciting and stimulating conference. Portland provides an excellent venue for fisheries professionals to discuss the effects of human population growth on fisheries, advance your professional networking, and to keep current on emerging issues in fisheries science and management. Your enthusiasm has generated 31 symposia. We anticipate receiving more than 600 abstracts, and expect an attendance of nearly 1,000 during the week of May 4-9. As is customary for AFS conferences, all attendees (including oral and poster presenters) must pay registration fees.

The city of Portland has been proclaimed as North America's "Best Big City," according to a recent publication. One visit will explain why. Come get a first-hand look at the unmatched natural beauty, bustling local scene, sumptuous dining, and welcoming accommodations that are all effortlessly accessed via the city's light rail system. Though it's not easy being green, it's exactly why so many visitors flock here, year-round.

We hope the following information assist your travel plans. Please check the 2008 WDAFS Annual Meeting website at http://www.orafs.org/meeting2008/Annual2008.htm for the latest updates***. Our online registration system is now available.***

Thank you on behalf of the 2008 WDAFS Annual Meeting Planning Team.

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2008 WDAFS Annual Meeting Registration

Registration for the 2008 WDAFS Annual Meeting in Portland could not be any easier. Visit the meeting website at www.orafs.org and you can register early and save some money in the process. Pre-registration must be received by Tuesday, April 1 to receive the early rate. Full registration includes plenary and technical sessions, all symposia, socials, program, and abstracts on CD-ROM. One-day registration includes all activities scheduled for that day. Guest registration includes all socials and the plenary session—it does not include technical sessions.

On-Site Registration

Meeting Day	Desk Hours	Location
Saturday, 3 May	1:00 p.m.—5:00 p.m.	DoubleTree
Sunday, 4 May	7:30 a.m.—6:30 p.m.	DoubleTree
Monday, 5 May	7:30 a.m.—5:00 p.m.	DoubleTree
Tuesday, 6 May	7:30 a.m.—5:00 p.m.	DoubleTree
Wednesday, 7 May	7:30 a.m.—5:00 p.m.	DoubleTree
Thursday, 8 May	7:30 a.m.—9:00 a.m.	DoubleTree

Registration Fees

Member Type		Fee
AFS Member		$265
	(after April 1)	$315
Non-AFS member		$375
	(after April 1)	$425
Retired AFS member		$200
	(after April 1)	$250
Student member		$90
	(after April 1)	$140
Non-AFS member student		$135
	(after April 1)	$185
One-day registration		$160
	(after April 1)	$210

Please remember:

- Register for workshops/continuing education courses at the same time
- Refund policy: all but $20 refunded on cancellations prior to April 1. No refunds on cancellations after April 1.
- There will be a full refund on any workshops cancelled by the instructor.

Travel and Accommodations

Getting to Portland

The Portland area is serviced by the Portland International Airport (PDX) which is located just 15 minutes from the DoubleTree Hotel and Executive Meeting Center Portland-Lloyd Center. Once you arrive in Portland, please consider using public transportation. The entire Portland area is accessible by rail or bus. Complete transit information is available on the web at http://www.trimet.org, including detailed transit instructions and schedules.

The TriMet MAX Light Rail system is the fastest link between PDX and the DoubleTree Hotel. The 2008 WDAFS Annual Meeting website has detailed light rail, shuttle, taxi, and driving directions.

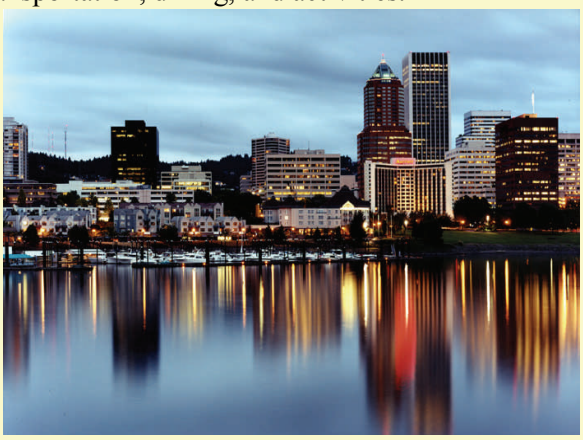
PDX to the DoubleTree Hotel Portland-Lloyd Center
Fare (PDX to Downtown Portland): $2.05
Trip Time: 29 minutes
Instructions: The Max light rail system leaves directly from the airport. Board the MAX Red Line to City Center and Beaverton TC. Get off at the Lloyd Center/NE 11th Ave Max Station and walk 0.1 miles northwest to 1000 NE Multnomah St.

Getting Around Portland

Your conference registration covers bus transportation to the 2008 WDAFS social at the Oregon Zoo. However, for city excursions outside of conference events, consider using TriMet's public transportation system consisting of buses, streetcars, and light rail. Several fare packages exit. For more information visit http://trimet.org/fares/index.htm

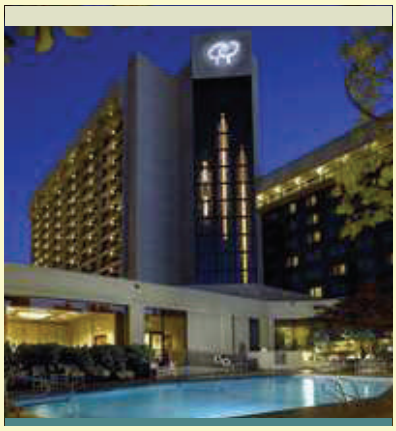
Where to Eat and What to See

Countless restaurants, shops, theaters, and the Lloyd Center Mall are only a few blocks from the DoubleTree. Visit Portland Oregon Visitor Association's site http://www.travelportland.com for more information about transportation, dining, and activities.



Lodging

Our block of rooms at the DoubleTree Hotel and Executive Meeting Center Portland-Lloyd Center is expected to fill fast. You can make a reservation by visiting http://doubletree.hilton.com/en/dt/groups/personalized/RLLC-DT-AFS-20080503/index.jhtml or calling (503) 281-6111. Please ask for the rate code AFS to receive the special negotiated rate.



DoubleTree Hotel and Executive Meeting Center Portland-Lloyd Center
1000 NE Multnomah St.
Portland, Oregon 97232
(503) 331-4904
Group Code: AFS
Online Registration: http://doubletree.hilton.com/en/dt/groups/personalized/RLLC-DT-AFS-20080503/index.jhtml

Student Information

www.orafs.org/meeting2008/Annual2008.htm

Portland, which boasts an array of cultural attractions, outdoor activities, and adventure, will prove to be an ideal location for the 2008 WDAFS Annual Meeting. Amidst ever-green forests, sparkling waterfalls and hiking trails, between mountaintops and the deep blue Pacific Ocean, lies a cultural and adventure hotbed awaiting your discovery.

Amazing things are happening in Portland. Portland's arts and cultural scene has taken an exhilarating turn in recent years, garnering worldwide attention for its meld of enriched classical institutions and innovate new venues. Whether in Portland's official Cultural District downtown, a transfigured warehouse in the trendy Pearl District, or an emerging neighborhood on the east side, Portland offers opportunities to simply dabble, or fully immerse yourself in the best of Northwest culture. Wherever you go in Portland, you are never far from an art house cinema, performance space or gallery, brewpub, gourmet coffee shop, farmers market, park, or garden.

Portland is also a city that wholeheartedly embraces the outdoors as it is home to more than 37,000 acres of open spaces. Included in that 37,000 acres is Forest Park. At 5,000 acres, Forest Park is an urban oasis that provides paths for hiking, jogging, and mountain biking.

If more adventurous activities are your style, the nearby Columbia River Gorge, Mt. Hood, or Pacific Ocean provide plenty of opportunities including whitewater rafting, kayaking, wind surfing, skiing, and surfing, to name just a fee. Best of all, these opportunities are just an hour's drive from downtown Portland.

What would a trip to the Pacific Northwest be without sampling the region's fishing opportunities, especially the Columbia River spring Chinook fishery. Early projections indicate that the 2008 spring Chinook return could be of record proportions with the peak of the return coinciding with the 2008 WDAFS Annual Meeting!

Student Workshop (Free)

Leave Your Mark: Lessons Learned about Creating Natural Resource Careers that Make a Difference

This interactive session brings to students the results from Mike Fraidenburg's book, *Intelligent Courage: Natural Resource Careers that Make a Difference.* Participants will examine challenges that they will encounter in their careers, success factors that helped the inspiring people interviewed in the book to meet these challenges, and the personal attributes that are an adaptive way to think about career development. The implications from this work show how the model of natural resource work is out-of-date and that there is substantial leadership opportunity in crafting a new model of natural resource work. Expect this workshop to have all of you thinking about strategies for creating the career direction you want. The student workshop will be convened Sunday, May 4, from 5:15 p.m.—7:00 p.m. at the DoubleTree Hotel and Executive Meeting Center Portland-Lloyd Center.

Student-Mentor Social

Due to the huge success during previous meetings, we will once again be facilitating a student-mentor social in Portland. Students and professionals will have the occasion to discuss experiences, opportunities, and challenges in fisheries careers in a one-on-one forum during the student-mentor social on Tuesday, May 6, from 6:00 pm.—7:00 p.m. at the DoubleTree Hotel and Executive Meeting Center Portland-Lloyd Center. Employers, professors, professionals, and graduate program representatives are encouraged to attend.

Accommodations and Transportation

Portland has a complete range of accommodations, from hotels such as the DoubleTree Hotel Portland-Lloyd Center with rooms that can be reserved at a low meeting or government rate, to youth hostels for those on a very tight budget. The DoubleTree Hotel and Executive Meeting Center Portland-Lloyd center is hosting the 2008 WDAFS Annual Meeting and reservations may be made online by visiting http://doubletree.hilton.com/en/dt/groups/personalized/RLLC-DT-AFS-20080503/index.jhtml or calling (503) 281-6111. Please ask for the rate code AFS to receive the special negotiated rate. In addition to the DoubleTree and the youth hostels, there are a number of other hotels and lodging options near the location of the annual meeting. With a conference of this size, rooms will book quickly so make your reservations well in advance.

Public transportation is excellent in the Portland area and there is no need to rent a car unless you like to pay for parking and sitting in traffic. The entire Portland area is accessible by rail or bus. Complete transit information is available on the web at http://www.trimet.org, including detailed transit instructions and schedules.

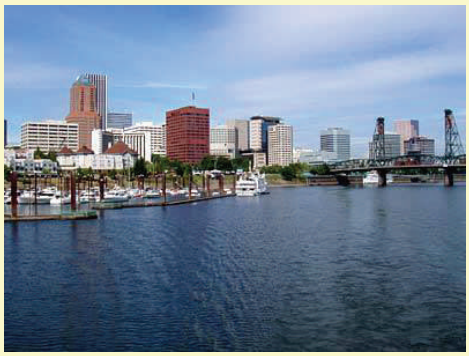
Employment Opportunities

Short on cash and feel that you cannot afford to attend this meeting? Well, we feel that you cannot afford not to! Student employees will be needed to work during presentations to adjust lighting, operate audiovisual equipment, and perform other duties throughout the duration of the meeting. Students interested in working at the meeting will be paid $8/hr. Scheduling is flexible and many times you can work a session that you would be attending anyway. ***In addition to monetary compensation, the first 30 students that sign-up to work will receive complimentary lodging.*** If you are interested in working at the meeting, please contact Ian Reid at fisheater67@hotmail.com or (541) 261-2722. A brief training session for all AV workers is tentatively scheduled for Sunday, May 4 at 4:00 p.m. at the DoubleTree Hotel.

Attention Employers and University Representatives

Looking for a great opportunity to meet the cream of the crop of young professionals and advertise any current or future available positions? If you will be hiring in the future, please consider providing announcements that can be posted on the jobs board. Academic institutions interested in advertising graduate program opportunities, assistantships, or post-doctorate positions in fisheries are encouraged to provide announcements. Please bring job descriptions, hiring procedures, position prerequisites, and other pertinent information to post for potential job candidates. If you are unable to attend the meeting but would like to have vacancies advertised, please submit your information to Neil Ward at:

Columbia Basin Fish and Wildlife Authority
851 SW Sixth Avenue, Suite 260
Portland, Oregon 97204
(503)-229-0191
Fax: (503) 229-0443
neil.ward@cbfwa.org

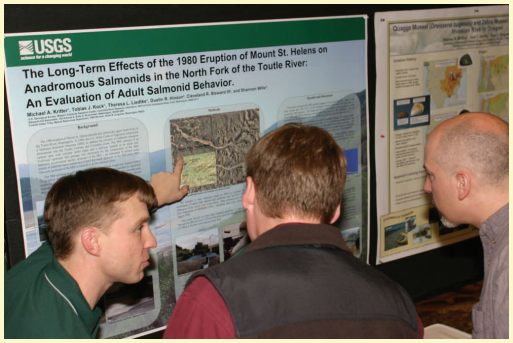


2008 WDAFS Annual Meeting Socials

To maximize networking opportunities and celebrate the Division's accomplishments, the 2008 WDAFS Annual Meeting will host five exciting socials in Portland. Admission to the socials requires a conference name badge.

Welcome to Portland Social

When: Sunday, May 4, 7:00 p.m.
Where: DoubleTree
Complimentary food and drinks from the Pacific Northwest will be offered as a welcome to Oregon on Sunday, May 4, at the DoubleTree.



Poster Social

When: Monday, May 5, 7:00 p.m.
Where: DoubleTree
The DoubleTree is the site for Monday's Poster Session.
See the latest fisheries research findings and interact with authors while enjoying complimentary food and drinks.

Jam Session

When: Monday, May 5, 9:00 p.m.
Where: DoubleTree
Meeting attendees that enjoy music, especially that produced by your friends in the fisheries profession, will not want to miss the open jam session on Monday, May 5. All those that are musically inclined are encouraged to participate. This is an excellent opportunity to marvel at the talents of your colleagues while enjoying free drinks and music. For more information, contact Mike Faler at micheal_faler@fws.gov

Student/Mentor Social

When: Tuesday, May 6, 6:00 p.m.
Where: DoubleTree
Students and all members who support their professional development will enjoy this social on Tuesday, May 6. This is an excellent opportunity to network and make personal connections that will last a lifetime while enjoying hors d'oeuvres and beverages.

Trade Show Social

When: Tuesday, May 6, 7:00 p.m.
Where: DoubleTree
Enjoy complimentary food and drinks while viewing the latest innovations.

Texas Hold'em Fundraiser

When: Tuesday, May 6, 9:00 p.m.
Where: DoubleTree
If you know when to hold'em, then this is the event for you. Join meeting attendees in this fund-raising event to see who the best, or luckiest, Texas Hold'em player is among the members while enjoying free beverages and snacks. Who will walk away with the bragging rights? For more information, contact Dave Ward at dave.ward@cbfwa.org.

Banquet, Auction, and Raffle

When: Wednesday, May 7, 6:30 p.m.
Where: Oregon Zoo
On Wednesday, May 7, everyone will have an opportunity to enjoy the Oregon Zoo. We have secured exclusive access to several of the Zoo's exhibits and programs for this showcase event. Tour the Zoo, enjoy great food and drinks, and possibly go home with a raffle or auction item.

Stream Restoration Workshop Social

When: Thursday, May 8, 7:00 p.m.
Where: DoubleTree
Workshop attendees will have a chance to discuss the day's presentations while enjoying complimentary food and drinks.

2008 WDAFS Annual Meeting Workshops

The 2008 WDAFS Planning Committee has developed a slate of six workshops to be delivered at the 2008 WDAFS Annual Meeting. Workshops range from career development to stream restoration. With the slate of courses that have been developed for this meeting, we know that you will return to your job with new insights and increased professionalism, whether it is a managerial, technical, or field-oriented position. When you register for the meeting, consider taking one of the courses below.

Note: Information regarding Continuing Education Unit credits for these workshops will be available at http://www.orafs.org/meeting2008/Annual2008.htm.

Conflict Resolution Skills for Natural Resource Professionals

Instructor: Michael Fraidenburg
Sunday, May 4, 8:00 a.m.— Noon
Cost: $60

This workshop will cover mediation principles and techniques for natural resource professionals in their every-day jobs. Workshop participants will learn how to shift "me-against-you" disagreement to an "us against- the-problem" dialog. The workshop uses a self-assessment tool, discussion, lecture, and role-playing exercises to teach natural resource professionals how to recognize different conflict management styles and how to work with these differences. This workshop will also acquaint learners with the philosophy, concepts, processes, and behavioral skills used to resolve disputes in third-party mediations, including:

- Suspending judgment and diagnosing the different world views in conflict.
- Facilitating quality, respectful communications.
- Engaging disputants in a search for common values.
- Distinguishing between issues and interests and how to use these.
- Analyzing conflict styles and the anger arousal cycle.
- Performing a constructive, third party role.
- Balancing power differences.
- Applying a simple, but effective eight-step conflict resolution model.
- Understanding and using the three features of durable agreements.
- Knowing when to bring in a professional mediator.
- Personal conflict survival attitudes and skills.

Analysis and Interpretation of Fisheries Data: Relative Abundance/CPUE and Food Web Interactions

Instructor: Dave Beauchamp and Wayne Hubert
Sunday, May 4, 8:00 a.m.— 5:00 p.m.
Cost: $90

This workshop will address key elements of the recently released book "*Analysis and Interpretation of Freshwater Fisheries Data*". Two contributing authors to this new AFS publication will broadly discuss the new book and present detailed instruction on the chapters they separately co-authored. Reduced-cost copy of the textbook will be available for registered participants.

Dr. Dave Beauchamp will present information on his chapter "Predator-Prey Interactions", including how to investigate predator-prey and general food web interactions in lakes and reservoirs. Specific Predator-Prey Interactions topics will include integrated netting and hydroacoustics sampling programs, age, growth, diet analysis, and bioenergetics modeling. Predator-prey case studies will be provided from a number of western lakes and reservoirs, including Washington, Sammamish, Flathead, Yellowstone, Tahoe, Billy Chinook, Strawberry, and Bear lakes.

Dr. Wayne Hubert will discuss the chapter "Relative Abundance and CPUE", including discussion on abundance estimation, estimation of exploitation and total mortality rates, and indices of abundance and population structure.

Basic GIS Techniques for Fish Biologists

Instructor: Joanna Whittier
Sunday, May 4, 8:00 a.m.— 5:00 p.m.
Cost: $90

This workshop is designed to provide basic skills in using Geographic Information Systems for fisheries biologists. The course will teach participants basic GIS skills using examples common to fisheries problems. These skills include importing a base map and other map layers; creating data tables and importing data from other sources; creating point, line, and polygon themes; and an overview of map projections and map coordinate systems.
Workshop topics will include:

- Maps, map coordinates, map projections.
- GIS, map layers / themes, layer types (point, line, polygon), and formats (vector, raster).
- Databases, spreadsheets, text files, geo-referencing data, adding and converting coordinates, record organization, exporting / importing data, and creating data tables

Hydroacoustic Tools for Fish and Habitat Assessment

Instructor: Jim Dawson and Bob McClure
Sunday, May 4, 8:00 a.m.— 5:00 p.m.
Cost: $90 CEUs:0.8

This course will provide background in hydroacoustic theory for use in fisheries and aquatic habitat applications. State-of-the-art techniques for assessing the distribution and abundance of fish and aquatic plants, classifying sediments, and monitoring fish behavior will be introduced. Interface with GIS applications will also be discussed. Examples of applications include fish counting, fish behavior, fish response to anthropogenic and natural environmental variables, analysis of submersed aquatic vegetation, classification of bottom sediments, and use of hydroacoustic data with GIS.

Leave Your Mark: Lessons Learned about Creating Natural Resource Careers that Make a Difference

Instructor: Michael Fraidenburg
Sunday, May 4, 5:15 p.m.— 7:00 p.m.
Cost: Free

This interactive session brings to students and practitioners the results from Mike's book, "*Intelligent Courage: Natural Resource Careers That Make a Difference".* Mike will examine challenges you will encounter in your career, success factors that helped the inspiring people interviewed in the book meet these challenges, and the personal attributes that are an adaptive way to think about career development. The implications from this work show how the model of natural resource work is out of date and that there is substantial leadership opportunity in crafting a new model of natural resource work.

This session is right for you if. . .

- you would like ideas for designing greater meaning and purpose into your career in natural resources,
- you want a content-rich presentation that tells 'real-world' stories of how the eight pros interviewed in *Intelligent Courage* were successful, or
- you are curious about the 'street smarts' of creating positive change for natural resources.

This session will focus on three key areas:

- Correctly reading your work environment
- Career attributes of successful natural resource professionals
- Premises for creating a career or meaning, purpose, and conservation accomplishment.

Expect this session to have as all thinking about strategies for creating the career direction you want. Mike will provide free copies of his 22 page pamphlet, *57 Tips For Creating a Natural Resource Career That Makes a Difference.* Discount coupons will be available for purchasing the book. For more information on the book see: www.Intelligentcourage.com and www.amazon.com.

Stream Restoration: Integrating Practical Approaches

Coordinators: Bianca Streif and Janine Castro
Thursday, May 8, 8:00 a.m.— 5:00 p.m. and Friday, May 9, 8:00—Noon
Cost: $135

This is a training workshop featuring prominent stream restoration scientists and practitioners with aquatic restoration applications pertinent to western states, Mexico, and Canada. The plenary format will cover current restoration practices set in a watershed context and aimed at restoring our native fish assemblages. Topics include: foundations of physical and ecological river functions; data requirements for design and effectiveness monitoring; restoring channel complexity in wet, arid and urban stream systems; restoration of tidal areas; aquatic invasive species issues; and physical and biological implications associated with dams and their removal. The practical aspects of working with private landowners, as well as project management and implementation will also be addressed. Attendees will receive an electronic notebook of key restoration literature.

Speakers include: Dave Montgomery, Jason Dunham, Gordon Grant, Brian Bair, Leslie Reid, Derek Booth, and many others.

Tentative Agenda

DAY 1 – Thursday, May 8

- Watershed Context
- Overview of River Concepts
- Overview of River Ecosystems
- Monitoring – data for design and effectiveness monitoring
- Lunch Provided
- Lunch speaker featuring a landowner perspective
- Project management and implementation
- Channel complexity projects: Habitat complexity at various flow levels and side channels
- Large Wood projects – Westside example
- Meander / channel reconstruction – eastside / arid
- Floodplain restoration in urban settings
- Complimentary Evening Social at the Doubletree Hotel

DAY 2 – Friday, May 9–

- Tidal Restoration
- Aquatic Invasive Species
- Dam Issues – gravel augmentation
- Dam removal – physical implications – Marmot
- Dam removal - biological implications – Elwha

2008 WDAFS Annual Meeting Plenary Speakers

Human Population Growth and Fisheries: The Western Challenge

Peter Moyle

Monday, May 5, 8:00 a.m.— 8:50 a.m.

Peter Moyle has been studying the ecology and conservation of freshwater and estuarine fishes in California for over 35 years. His efforts to understand, conserve, and restore native fishes and aquatic habitats have led to documenting the declining status of many native species as well as the invasions of alien species. He is well know for his book "*Inland Fishes of California*", which has had an enormous impact on the conservation of California's inland fishes. Professor Moyle has used his knowledge of California's inland fishes to influence policy decisions, educate the public, and find solutions to conflicts over water. His expertise has been especially useful in dealing with problems in the San Francisco Estuary, in regulated rivers, in waters of the Sierra Nevada, and in coastal streams. He is a co-author of the book "*Envisioning Futures for the Sacramento-San Joaquin Delta*" and is author/coauthor of over 160 scientific papers and 6 books. Moyle is professor of fish biology in the Department of Wildlife, Fish, and Conservation Biology, University of California, Davis, where he teaches courses in fish biology, wildlife conservation, and watershed ecology and has served as the associate director of the Center for Watershed Science since 2002. In 2007, he received the AFS's Award of Excellence.

Robert Adler

Tuesday, May 6, 8:00 a.m.— 8:50 a.m.

As the Associate Dean for Academic Affairs and the James I. Farr Chair in Law at S.J. Quinney College of Law, Robert Adler's goal is to stimulate more interdisciplinary work in this increasingly global world. As a scholar, Adler urges a broader, more holistic approach to the restoration and protection of aquatic and other ecosystems than is used in traditional environmental law alone, which focuses on discrete kinds of environmental harm. He has published dozens of articles and reports in law policy and science journals and a book on the history and impact of the Clean Water Act. Adler's recently released "*Restoring Colorado River Ecosystems: A Troubled Sense of Immensity*" explores the questions and challenges surrounding the issue of large-scale restoration of the Colorado River Basin, and of large-scale restoration in general. Adler examines and critiques the often-changing interactions among law, science, economics, and politics within which restoration efforts must operate; however, in doing so, Alder describes what it will take to restore ecosystems in the company of these challenges.

Ernie Niemi

Wednesday, May 7, 8:00 a.m.— 8:50 a.m.

Ernie Niemi has been a Vice President and Senior Policy Analyst at ECONorthwest since 1978. He specializes in applying the principles of cost-benefit analysis, economic valuation, and economic-impact analysis in the context of natural resource management, economic development, and public-policy decisions. He has presented analytical findings to congressional, judicial, arbitrative, administrative, and scientific/professional bodies. Recent publications include "*Net Economic Benefits of Using Ecosystem Restoration to Meet Stream Temperature Requirements*" and "*Secondary Economic Impacts of Coastal Spills"*

Oral and Poster Presentation Format and Information

Oral Presentations

Presentation Format
Microsoft PowerPoint on the PC platform is **required**. Macintosh users should convert and test their presentations on a PC before the meeting.

Presentation Loading
All speakers must provide a copy of their presentation to the session convener prior to the meeting (contact session convener for directions). All presenters should save/name their file using the following rules: last name, session date/time, and session name (e.g., Fuller_Sept3_1030_Steelhead Cons.ppt). To keep sessions running smoothly and on time, presenters will **not** be allowed to load presentations onto in-session computers nor will presenters be allowed to use personal laptops.

Projection screens and computers will also be available in the Practice Room for presenters to review their presentations.

Presentation Guidelines
1. Oral presentations should contain: introduction, objectives, methods, results, conclusions/implications. Objectives should be clearly stated. Avoid unnecessary detail in methods unless the methodology is the central topic of your talk. Primarily discuss the results and conclusions. Conclusions should relate back to objectives.

2. Presentations are scheduled in 20-minute blocks. Three things must happen during this block: the speaker introduction (1 minute); the talk (15-16 minutes); and the question and answer period (3-4 minutes). The moderator will notify you when your presentation reaches 15 minutes. You will be asked to leave the podium at 20 minutes.

3. Presentations must start and end on time, no exceptions, because they are coordinated with all other concurrent sessions.

4. Rehearse your talk before the meeting to be sure that it does not exceed the allotted time. Have peers evaluate your talk.

5. Podium-mounted computers, lighting, and microphones are not always dependable. Be prepared to give your talk without such aids, if necessary.

6. An excellent article for speakers is “Strategy and checklist of effective scientific talks ” (Ecol. Soc. Am. Bull. 72: 8-12, 1991). See also a recent article **(Fisheries 30(5):34-38, 2005 - 5.2 MB PDF)** by Michael Fraidenburg on effective use of PowerPoint.

Poster Presentations

Poster Size and Guidelines
The maximum poster size this year is 48" high x 48" wide, which is ½ of one side of a poster board. **NO EXCEPTIONS**. Presenters are required to assemble and disassemble their own poster. In addition, presenters are required to provide their own push pins or Velcro. General guidelines for poster development can be found at the "Guidelines for Developing Posters" section of the AFS 2007 website: http://web.fisheries.org/sf/index.php?option=com_content&task=view&id=19&Itemid=39

Poster Set-up
Poster set-up is on Monday, May 5, from 7:00 a.m.-5:00 p.m. in the Holladay Room. Posters not set up by 5:30 PM will be considered a no-show and a replacement poster from the wait list may be selected. Poster check-in will be inside the Holladay Room. There will be an updated map of poster space assignments available at the check-in table.

Author Presence
Authors should be by their posters from 7:00 to 9:00 p.m., Monday, May 5, during the Poster Social.

Viewing Times
Posters can be viewed on Monday, May 5, from 7:00 p.m. - midnight during the Poster Social and from 9:00 a.m.- midnight on Tuesday, May 6.

Poster Take-down
The official poster take-down times will be Wednesday, May 7, from 7:00 a.m. - 11:30 a.m. and 1:20 p.m. – 5:00 p.m. Unless alternative arrangements are made in advance, posters that are not removed from the display boards by 5:00 p.m. on Wednesday, May 7, will be discarded.

Please contact Christy Fellas if you have any questions.
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2008 WDAFS Annual Meeting Symposia

These 31 symposia will be presented from Monday morning through the end of Wednesday. All symposia and contributed papers sessions will be in the DoubleTree. Please check the Program Page (Abstract Scheduling Update) on the Annual Meeting website: http://www.orafs.org/meeting2008/ Annual2008.htm for updates.

Please refer to the PDF file for scheduling information for your symposium and abstract(s). Symposia, contributed papers sessions, and oral presentations will be assigned a data, room, and time in March. Once assigned, the date and room are unlikely to change but times may be adjusted due to abstract withdrawals prior to the production of the final Program Guide. Be sure to check the website for updates. The schedule will be finalized in early-April.

1. Klamath Basin: What Next?

Organizers: Cindy Williams and Rip Shively
This symposium will present information on management objects and next steps following the FERC Settlement, Reclamation's ESA consultation with NMFS & FWS on listed coho salmon, Lost River and shortnose suckers, current status of what we know and don't know in the Basin, & Restoration Activities. The symposium will focus on new material learned, and geared towards recovery and future direction. Questions we hope to answer with the presentations and panel discussion: What should recovery look like? and, What planning elements are necessary for recovery?

2. Meeting the Aquatic Invasive Species Challenge

Organizer: Scott Smith
This symposium will address aquatic invasive species (AIS) research and management. The symposium objectives are to educate attendees on the latest research and management actions that are being implemented to address the growing impact of AIS in the west. AFS members and participants are often forced to deal with the impact of AIS. They will benefit from hearing from researchers and managers that are developing new solutions to minimize the economic and environmental impacts caused by AIS.

3. Overview of the Army Corps of Engineers' Columbia River Mitigation Program

Organizers: Mike Langeslay, Marvin Shutters, and Paul Ocker
This symposium provides an opportunity for Western Division AFS members to learn more about the Corps' strategy to improve salmon and steelhead survival in the Snake and Columbia rivers. Project managers and researchers will describe the Corps' Columbia River Fish Mitigation Program (CRFM) by presenting examples of on-the-ground improvements and the applied research that supports decisions on these improvements. Major elements of the CRFM that will be described include juvenile and adult fish passage at dams, juvenile fish transportation, predation, and estuarine habitat.

4. Hatchery Research: Hatchery Reform

Organizers: Judith Gordon and David Noakes
Fish hatcheries have been operated in the Pacific Northwest for 130 years for a variety of purposes, including production of fishes for harvest, mitigation for the impacts of hydropower dams, and conservation and restoration of native fishes. It is becoming increasingly clear that fish hatcheries can have effects and consequences well beyond their initial designs. The concerns about hatcheries are well known and widely recognized. A growing body of scientific information is directed towards these concerns about hatchery design and operation.

Judy Gordon and Don Campton organized a Symposium at the 2007 Annual Meeting of the AFS in San Francisco, "Hatchery Reform: A Paradigm Shift in Action". This proposal builds on the success of that Symposium, focuses specifically on the Pacific Northwest, and adds the potential publication of the proceedings from this Symposium as an AFS Special Publication. This Symposium will provide examples of how best scientific information is being developed and applied to hatchery design and operation. It will also document how hatchery managers, research scientists and resource managers are collaborating to deal with risks and problems associated with hatcheries. We propose that this is part of an important philosophical shift to incorporate hatcheries as an important component in adaptive management for sustainable conservation and management. This is particularly relevant to the Western Division of the AFS in general, and Oregon specifically, because of the large number of hatcheries in this area, the high profile they have in public debates on this topic, and the important role that hatchery research has in any reform of hatchery design and operation.

5. Population Growth, Climate Change, and Fish Habitat in the Columbia River Basin

Organizers: Susan Hanna, Erik Merrill, and Steve Waste
The Columbia River Basin hosts a wide variety of actions to recover and protect habitat of anadromous and resident fish. Many take place under the aegis of the Northwest Power and Conservation Council's Fish and Wildlife Program. The operating hypothesis of these actions is that protection and restoration of habitat will result in increased habitat capacity and productivity leading to increased fish abundance. The operating assumption underlying the hypothesis is that human population and climate are stable, enabling long-term planning for known habitat conditions. However, it is clear that population and climate are not stable but instead are large-scale drivers of change. Population increases throughout the Basin are projected to continue, accompanied by increasing water demand. At the same time climate effects will alter the timing and quantity of water delivery.

The objective of this symposium is to present an overview and synthesis of how changes in population and climate are affect-

ing and will continue to affect the availability and quality of fish habitat in the Columbia River Basin. The session will be based on three recent reports produced by science advisory boards of the Northwest Power and Conservation Council and will begin with an overview of the findings of each report. These overview presentations will be followed by a series of more specific presentations on population growth, climate change and their implication for habitat and habitat protection strategies. The symposium will close with a panel discussion synthesizing the main points of the papers and drawing implications for research, monitoring and evaluation of fish habitat protection in an environment of change. The value of the symposium to meeting participants will lie in a synthesized perspective on two major forces of change affecting the Columbia River Basin, and the implications of that change for strategies to protect fish habitat.

6. Honoring the Treaties in the 21st Century: Columbia River Tribal Perspectives and restoration Programs

Organizers: Peter Galbreath, William Bosch, Jens Lovtang, and Neil Ward

The salmon's spirit – *Wy-Kan-Ush-Mi Wa-Kish-Wit* – is sacred life. The salmon was provided a perfect world in which to enjoy its existence, and for thousands of years, the salmon unselfishly gave of itself for the physical and spiritual sustenance of humans. The salmon's spirit has not changed; the human spirit has, and this change has lead to dramatic reductions in the geographic and numerical abundance of salmon. The Native American tribes throughout the Columbia River basin, who are keepers of ancient truths and laws of nature, employ the depths of their hearts and the expanse of their minds to save the salmon. This symposium will discuss the challenges and efforts of the various tribes of the Columbia basin to restore salmon (and other Columbia basin fishes) to a semblance of their previous grandeur. For the four CRITFC treaty tribes, this is expressed in their salmon restoration plan, *Wy-Kan-Ush-Mi Wa-Kish-Wit*. AFS members and symposium participants will be offered an opportunity to better understand Columbia River fishery management issues from a tribal perspective, as well as an opportunity to hear about several innovative and successful fishery and habitat restoration efforts (including reintroduction of extirpated populations) being implemented by the tribes. Presentations within this symposium will be subdivided into the following sessions: Plenary Talks, Anadromous Fishery Restoration - Rebuilding Depressed Populations, Anadromous Fishery Restoration - Reintroducing Extirpated Populations, Resident Freshwater Fish (and Mussels) Restoration, and Habitat Restoration.

7. American Shad in the Columbia and Snake Rivers

Organizers: Christopher Caudill and Michael Parsley

American shad are the most common anadromous fish in the Columbia-Snake River basin, yet relatively little is known about their life history, behavior, ecological interactions, or ecosystem effects. This symposium will provide a forum for the presentation of recent research results on shad biology in the basin including behavior, life history, trophic interactions, commercial and recreational fisheries, disease biology, and potential direct and indirect effects on salmonid fishes. The symposium will begin with an overview of the history and status of the species in the basin and conclude with an overview and panel discussion of current uncertainties and potential future research/management paths.

8. The People-centric Component of Fisheries Management

Organizer: Tony Faast

Collaborations, partnerships, teams, task forces, advisory committees are all attempts to initiate a "conservation conversation" with all parties who need to be involved in managing fishery resources these days. Going it alone is neither wise nor possible in this age of "partnering". This symposium looks at various components of involving the many and varied "publics" as we enlist their assistance and cooperation in managing fishery resources across the landscape.

9. Biological Assessment of Boatable Waters

Organizers: Alan Herlihy and Robert Hughes

The objective of this symposium is to bring together researchers who have been studying boatable river systems throughout the world to share findings and approaches for making biological assessments of these complex systems. Because of logistical difficulties in working with boatable rivers, they tend to be less studied than stream systems. The need for assessing rivers, however, is the same as for streams. The need is also timely in that the U.S. EPA plans to conduct a national probability survey of rivers next summer. In addition, most human population growth occurs in urban areas near large rivers, and that growth fundamentally alters these systems by altering their hydrology, morphology, water quality, and biota. Presentations in this symposium will focus on a wide range of topics related to river assessments including sampling methodology, within-river spatial variability, ecological relationships, and regional assessment results and approaches. This symposium should provide insight to any AFS members working on, or interested in, these boatable river systems.

10. Marine Mammal Predation on Fish in Pacific Coast Bays and Rivers

Organizer: Barry McPherson

This symposium will provide recent information about predation by marine mammals on fish in bays and rivers on the Pacific Coast. Predation by sea lions on salmon, steelhead, and sturgeon near the base of Bonneville Dam, 150 miles up the Columbia River, has become a "hot" issue that will be addressed by speakers in this session. There will also be speak-

ers presenting comparative and contrasting information on marine mammal predation on fish in other Pacific Coast rivers and estuaries, and the dependence of an Orca pod in Puget Sound on salmonid abundance. Approaches to reducing marine mammal predation in critical situations, particularly on salmonid populations that are at risk of extirpation, will be addressed. Some approaches involve new technologies that are still being tested. Status of the application by state fish and wildlife agencies for permission from the federal government to lethally remove California sea lions in the Columbia River below Bonneville Dam, and arguments against granting such permission, will be addressed.

11. A Western Challenge: Large-scale Disturbances Require large-scale Restoration Programs

Organizers: Dave Ward and Mark Fritsch

Over the past 200 years, stresses to the ecological processes in western North America have been increasing. Examples include human-caused depletion of water sources needed by fish and wildlife, and degradation or elimination of fish spawning and rearing habitat resulting from urban growth. These stresses have been noticed by scientists and by society in localized areas for some time, but the impacts are now evident throughout the west. All parts of the environment have been affected and now we need to seek a balance if ecological processes are to be maintained. This challenge has been experienced elsewhere as the land base has been occupied beyond the capacity of the environment to maintain the balance that had been taken for granted.

The magnitude of environmental stresses are further compounded by the complexity of the situation at hand, including continued population growth and increases in global average air and ocean temperatures. This situation is stressing not only the environment, but also the capacity of society, both politically and financially, to implement restoration approaches to ensure that trends are stabilized or even reversed. Challenges of implementing large-scale restoration programs exist at all levels from implementing actions on the ground to supporting actions through completion.

Four large-scale restoration programs from throughout the western U.S. will be highlighted in this session. These include the Upper Colorado River Endangered Fish Recovery Program, the Columbia Basin Fish and Wildlife Program, the Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative, and a Sacramento River Delta program. These programs all involve multiple government and non-government partners, and are charged with balancing fish and wildlife restoration with continued resource utilization. The session will explore policies, case studies, and management/implementation challenges for each program. The session will conclude with a panel discussion facilitated by questions to promote the difficult issues being raised.

12. Strategies for Broad-scale Monitoring of Salmonid Populations

Organizers: Julie Firman and Kara Anlauf

Long-term, spatially extensive monitoring data have become increasingly important to describing the status and trends of salmonid populations. Monitoring water-dwelling organisms and their habitats brings its own unique set of challenges to bear. The goal of this symposium is to examine the challenges inherent in making accurate and precise estimates of status and sensitive measures of trends. Our aim is to gather representatives from agencies that conduct broad-scale monitoring, agencies and non-governmental organizations that compile data from multiple monitoring entities, and statisticians who are exploring new approaches to broad-scale monitoring. Presenters are encouraged to emphasize methods, i.e. to focus on the questions that they ask, the problems that they encounter in trying to answer those questions, and possible responses to those challenges. Description of specific the tools, techniques and designs would be particularly useful. Evidence that supports the choice of a particular method would also enrich our exploration of different approaches.

13. Getting Native Lampreys on the Management Radar

Organizers: Bianca Streif, Matthew Mesa, and Mary Moser

The organizers of this symposium hope to highlight recent research on native lampreys in the Pacific Northwest and use this symposium to generate discussion about lamprey management and conservation. Practical information about field identification of native lampreys of the west, proven methods to improve lamprey passage, opportunities for lamprey restoration, and conservation actions will be shared. Opportunities to include native lampreys in monitoring, restoration, and conservation plans are sometimes missed due to the lack of knowledge about basic identification, life history, and status of these important native fishes. In addition, the ecological and cultural value of lampreys is often overlooked. This symposium will serve to bring this information to a broad range of management agencies and will hopefully generate discussion about ways to incorporate our native western lampreys into existing monitoring, restoration, conservation, and research programs.

14. Flow and Temperature Effects on Salmonid Production

Organizer: Ian Courter

This symposium will bring together recent information on the relationship between salmonid production and stream temperature and flow. The relationship between flow, temperature and salmonid production has been an ongoing debate in many of the Pacific Northwest's regulated river systems, and the correlation between temperature and flow has made delineation of independent effects problematic. Recent emphasis on flow manipulations and mitigation for temperature impacts on ESA listed salmonid populations has resulted in a considerable number of investigations that attempt to quantify the independent effects of temperature effects of temperature and flow on salmonids. Additionally, hydrodynamic modeling has

revealed insight into the effects of flow changes on stream temperature regimes. The symposium will focus on salmonids and include both resident and anadromous populations. In addition to studies of the direct effects of flow and temperature on salmonids, presentations that emphasize flow and temperature effects on variables important to fish survival, such as disease or invertebrate production, are acceptable. The symposium will be of interest to a wide audience because of the surge in recent investigations to support ESA consultations, FERC relicensing processes and TMDL implementation.

15. Achieving Tangible Fisheries Benefits through Public Involvement: Volunteerism, Education, and Outreach

Organizers: Tom Friesen and Laura Tesler

Active public participation has become a vital component of many fisheries management activities, with volunteers making considerable donations of time, labor, and expertise. Managers in many areas have come to rely on volunteer assistance as the complexity and expense of fisheries issues have increased. Recognizing the value of public involvement, formal volunteer programs such as Canada's Salmon Enhancement Program and Oregon's Salmon and Trout Enhancement Program have been implemented, emphasizing fish culture, monitoring, education, and habitat improvement. Volunteers also staff watershed councils, boards, and advisory committees, providing direction to conservation efforts and feedback to government agencies. Natural partners of volunteer programs, public education and outreach serve to promote awareness, foster communication, and provide guidance and instruction relative to fisheries and aquatic ecology. Declining angling revenues throughout the U.S. in recent years has elevated the importance of public outreach efforts to fisheries agencies; many now have directed efforts to recruit new anglers and maintain public interest in aquatic resources and watershed health. This symposium will provide a forum for presenting examples of public involvement from the perspectives of fisheries biologists, watershed stewards, educators, and volunteers.

16. Fish Monitoring to Support Large-scale Management Decisions: What's Worked and What Hasn't

Organizers: Ken MacDonald and Charlie Paulsen

Monitoring of fish populations is done routinely to answer myriad questions, ranging from whether fish numbers are trending up or down, to establishing geographic ranges, or to assess the effects of habitat enhancement. In this symposium, we propose to examine large-scale monitoring efforts intended to inform management decisions regarding restoration actions to benefit freshwater fish. These decisions may cover habitat enhancement, hatchery management, and hydrosystem/irrigation passage. The fish monitoring will likely include population status and trends over time, survival rates of different life-stages, recruitment/reproductive performance, population range or extent, and the extent of invasive species influence. We take large-scale monitoring to include large lake or river basins and individual tributaries, so our focus will not include smaller reach-scale subpopulation assessments. Similarly, the temporal scale will include annual or seasonal estimates, but in most cases will not include finer-scale measurements of fish movement, habitat use, etc., although coarse-scale summary information based on finer-scale measurements will almost certainly play a role in management decisions (e.g., to determine effective means to improve survival at dams, road crossings, and irrigation diversions). We will place an emphasis on the application of monitoring information to real-world restoration and management decisions, as opposed to monitoring designed mainly to answer research questions. We realize that large-scale population monitoring is time consuming and expensive, and we are interested in learning about failures as well as successes. In addition to monitoring per se, we will be interested in presentations describing how information is used in decision-making, and in how ongoing monitoring could be re-designed to better support management decisions and actions.

17. Freshwater Fish of Arid and Semi-arid Systems

Organizers: Amy Unthank

This symposium is accepting oral presentations that focus on fishes that inhabit waters of western North America. Focusing on ecoregions delineated by Abell et al. (2000) including the Great Basin Complex (Bonneville, Lahontan, Oregon Lakes, Death Valley); the Colorado Complex (Colorado, Vegas-Virgin, Gila); and the Rio Grande Complex (Rio Grande, Guzman, Rio Conchos, Pecos, Rio Salado, Cuatro Cienagas, and Rio San Juan), as well as the Mexican Transition Bioregion (i.e. Sonoran and Sinaloan Coastal). Fishes in these bioregions have declined markedly from historic occurrences due to the introduction and establishment of non-native aquatic organisms, habitat loss, and modifications or degradation from channelization, mining, deforestation, grazing, agriculture, and growing human populations that create overuse of surface and ground water. Scientists, managers, and non-governmental organizations that are involved in conservation and management of fishes occupying these bioregions will benefit by sharing their information on life histories, restoration efforts, basic research, applied research, and assessment of land management impacts on the fishes of these ecoregions.

18. Native Freshwater Mussels of the West: Silence of the Clams or Enlightened Protection through New Knowledge

Organizer: Al Smith

This symposium will include research and management presentations on western native freshwater mussels. The objective of the symposium is twofold: increase the inadequate knowledge base for freshwater mussels among aquatic scientists in the West and stimulate interest among these biologists which will lead to increased surveys, research and protection for freshwater mussels. This symposium will be the first opportunity for most Western AFS members and attendees to hear first hand and understand the complexities of freshwater mussel life history and human impacts on this group of overlooked aquatic animals. In North America, the center of the world's distribution of freshwater mussels, approximately 80% of the 300 original species carry some imperiled label,

world's distribution of freshwater mussels, approximately 80% of the 300 original species carry some imperiled label, from a species of concern to endangered. More than 10% are extinct. There is inadequate information about western mussels to determine their status. Interest in western mussels is new and the presenters will cover the latest on mussel research approaches and results. Topics will cover life history, genetic relationships, status, human impacts and restoration efforts.

19. The Use of PIT Tags in Fisheries Research and Management Applications: Advances, Adaptations, and Aggravations

Organizer: Dave Marvin

The use of passive integrated transponder (PIT) tags to mark and identify individual fish was pioneered almost 25 years ago. PIT tags are now used to address a broad variety of fisheries research and management concerns. As with any mark/recapture methodology, researchers often encounter, and must resolve, problems with the tagging, detection (recapture), and analysis techniques appropriate to their studies. This symposium will allow participants from throughout the Western Division's states and provinces to share personal observations and recommendations gleaned from their experiences using both half- and full-duplex PIT tags to mark and monitor fish behavior and movement. The symposium will focus on the PIT tag techniques and technologies used to implement research studies, and how (or if) those implementations supported the study objectives. The goal of the symposium is to provide AFS members and other participants with a broad understanding of how PIT tags are and can be used, and how these techniques can be applied or modified to improve both current and future research and monitoring studies.

20. Recent Success Stories in Western Aquatic Invasive Species Management

Organizer: Ian Reid

Invasive species and their management cost the U.S. over $138 billion. Aquatic invasive species issues have increased at alarming rates, and may continue to multiply given forecasted human population growth and changing environmental conditions. Although a diversity of resources (e.g. taskforces, working groups, databases, symposia) have been established to combat invasive species, the mainstream and refereed literature documenting actual success stories defeating invasive species—particularly aquatic ones—is depressingly depauperate. This symposium will examine recent success stories in invasive aquatic species management in the western U.S, in a variety of aquatic systems (e.g. lentic, riverine, headwater stream), geographic areas, and treatments (e.g. piscicide, mechanical removal, barriers, other). The presentations will be heavy on methodology but will also address the philosophy, persistence, and fortitude needed by biologists and fisheries scientists to accomplish these often lengthy, controversial, and wickedly complex projects. All of the presentations will incorporate some type of indicator monitoring to evaluate their success and identify common themes in designing projects to meaningfully manage aquatic invasives in the West.

21. Relicensing of the Hells Canyon Hydroelectric Complex

Organizer: Colleen Fagan

The Hells Canyon Hydroelectric Project (HCC), owned and operated by Idaho Power Company (IPC), is a three-dam complex located on the Oregon-Idaho border of the Snake River. It is one of the largest privately owned hydroelectric projects in America and central to IPC's hydroelectric system. Combined, the three dam and project reservoirs inundate over 97 miles and 180,000 surface acres. IPC operates the HCC to maximize power production, provide springtime flood control, provide a suitable flow regime for spawning and incubating fall Chinook salmon, and to provide recreational benefits. Project facilities contribute to the property tax base of several Oregon and Idaho counties. Popular warmwater fisheries in all three reservoirs provide economic benefits to Oregon and Idaho. The project does, however, have substantial impacts on fishery resources. The HCC forms the upstream boundary (RM 247) for anadromous fish migration and production in the Snake Basin, fragments resident fish population, and affects remaining habitats downstream. Wild fish populations impacted by the Project include federally ESA listed spring, summer, and fall Chinook salmon, summer steelhead, and bull trout. This symposium provides an opportunity to update AFS members on the HCC relicensing process, including impacts of the project and measures proposed by IPC, the Federal Energy Regulatory Commission (FERC), natural resource agencies, and tribes for addressing those impacts. IPC initiated consultation for relicensing with state and federal agencies and other stakeholders in January 1997. A substantial number of mitigation and enhancement measures have been proposed by IPC and included in the Final EIS released by FERC in August 2007. Considerable disagreements remain, however, on important issues such as fish passage, water quality, and project operations. Some of these issues are important on a regional scale and tied to operation of federal projects in the Upper Snake and Columbia basins.

22. Identifying, Protecting, and Restoring Thermal Refuges for Coldwater Fishes

Organizers: Joseph Ebersole, Christian Torgersen, and Dru Keenan

High summer water temperatures are a widespread factor implicated in reduced distribution, abundance, and health of coldwater fishes such as salmon. Increased human water use, landscape alteration, and climate change are further stressing the thermal environment for native fishes. Can thermal refuges, defined as discrete locations of suitably cold water within an otherwise warm river or stream, help ameliorate or buffer the effects of thermal stress on coldwater fishes? How can thermal refuges be identified and characterized, such that their function and role can be protected and restored? This symposium will address the need to better identify, characterize, protect and restore critical thermal refuges for coldwater fishes. The objectives of this symposium are to:

- Review and develop physical and biological concepts for understanding coldwater refuges and salmonids in Pacific Northwest rivers and streams.
- Characterize approaches for identifying refuges (e.g., technological tools, landscape predictors, in-stream surveys/census).
- Illustrate characteristics (geomorphic, hydrologic, ecologic) of coldwater refuges at regional to local scales.

Through case studies, example applications of new technologies, and applications of modeling approaches, this symposium will provide participants the opportunity to share, discuss, and synthesize information on protecting and restoring coldwater refuges for salmonids. Outcomes of this symposium will assist governmental entities in implementing the new water quality standard for temperature as laid out in the "EPA Region 10 Guidance for PNW State and Tribal Temperature Water Quality Standards". Participants will acquire new information that will encourage new research approaches, stimulate additional synthesis, and provide useful tools for better identifying, protecting and restoring thermal refuges.

23. Sockeye on the Brink: Restoration of Declining Sockeye Salmon Populations in the Pacific Northwest and Southern British Columbia

Organizers: Jeff Fryer, Kim Hyatt, and David Marmorek

This symposium will present the plight of sockeye salmon populations of the Pacific Northwest and southern British Columbia as well as restoration options. Currently, two stocks are listed as endangered and several more likely qualify while sockeye are already extirpated from over 20 lakes in the Columbia Basin alone. Two more stocks have been proposed for listing under the Species at Risk Act in Canada. The remaining stocks in the area are threatened by the rapidly expanding human population in the Pacific Northwest. In addition, these stocks, being at the southern end of their range, are most vulnerable to the impacts of climate change. Although many sockeye stocks in the region are declining and face an uncertain future, there are considerable efforts being made to reverse this decline. Listing under the Endangered Species Act has resulted in an influx of funds for Ozette and Snake River sockeye salmon. Hatcheries are being used to boost production of Wenatchee, Okanogan, Snake, Lake Washington, and Quinault stocks. In the Okanogan Basin, sockeye are being restored to Skaha Lake, while there are proposals to restore extirpated populations in the Yakima, Deschutes, and Grande Ronde Basins. Okanogan sockeye salmon are also benefiting from habitat restoration as well as an innovative water management tool

24. New Tools for Evaluating River and Stream Restoration

Organizers: Martin Liermann, Sarah Morley, and Todd Bennett

While effectiveness monitoring for watershed restoration efforts has become more prevalent, data collection still tends to follow a scripted list of established methods. As interest shifts towards measuring larger scale watershed-level responses, estimating more biologically meaningful measures of "success" such as fish survival and growth, and providing a more mechanistic based explanation of how projects affect ecological processes, new approaches are necessary. Tools such as PIT tagging to measure fish growth, movement and survival, otolith microchemistry analysis to identify different life history strategies, the use of stable isotopes to trace nutrient and contaminant pathways in aquatic foodwebs, and the application of imaging sonar to measure fish escapement have proven invaluable in recent aquatic research. However these are rarely if ever applied to assessing restoration effectiveness. Better use of these types of tools would allow for the evaluation of restoration success based on more relevant metrics, and provide us with opportunities to leverage these costly manipulations of aquatic habitat towards a better understanding of river ecology. The goal of this symposium is to present a number of technologies/methodologies that have potential to redirect restoration monitoring towards more pertinent questions and indicators of restoration effectiveness. Proposed methodologies include passive integrated transponders (PIT), radio and acoustic fish tagging, nutrient limitation experiments, instantaneous growth factor (IGF) hormone for fish growth measurement, imaging sonar to develop accurate escapement estimates, otolith ring interpretation and microchemistry, stable isotope analysis, characterizing physical habitat at appropriate spatial scales, and novel statistical approaches for data analysis. Speakers will be asked to address the strengths and weakness of these tools, suggest potential applications in restoration monitoring, and present examples of successful use in aquatic research.

25. Bull Trout and Climate Change: Risks, Uncertainties, and Opportunities, for Mapping the Future

Organizers: Dan Isaak and Jason Dunham

Bull trout (*Salvelinus confluentus*) are a threatened species with a highly fragmented distribution throughout the Pacific Northwest. Habitat loss and fragmentation by human activities in watersheds have been identified as major threats or limiting factors. Mitigating these threats is a major ongoing effort, with annual costs totaling millions of dollars according to USFWS estimates. Among the critical requirements for bull trout are a need for large, interconnected habitats of cold water. Restoration of connectivity among cold water habitats has been identified as a primary need and is the focus of habitat management activities for bull trout in their range. Whereas the needs of bull trout for cold water and ongoing restoration actions are well known and being addressed, much uncertainty remains about the future security of bull trout and their habitats within the US due to environmental trends associated with climate change. Changing hydrologic regimes, water temperatures, and channel configurations could result in major losses and redistributions of habitat for this species. Accurate modeling and forecasting of these changes will be critical if conservation resources are to be efficiently allocated. Many previous climatic assessments have relied on relationships between air temperature and fish distributions, but recent

assessments incorporate a wider array of physical processes that enable detailed predictions of stream habitat at broad scales. The goal of this symposium is to provide an overview of bull trout, their relationship to climate, and to discus alternatives for modeling future habitat and population distributions.

26. Advances in Modeling Populations and Habitat

Organizers: Kelly Burnett and Julie Firman

It is often difficult, if not impossible, to design experiments or monitoring designs that adequately describe widely distributed species inhabiting large and complex landscapes. Comprehensive field data with the necessary spatial extent are generally lacking, and obtaining them can be prohibitively expensive. Recent advances in modeling provide new tools and techniques for describing populations and landscapes, prioritizing conservation or restoration, and for developing testable hypotheses that can guide field studies. This symposium in intended to be a forum in which to explore modeling approaches that have recently made significant contributions to our understanding of fish populations, their interactions with habitat, and the interaction between landscape features and populations of both fish and habitat.

27. Discoveries and Diversity in the State of Jefferson

Organizers: Robert Coffan and Jeannine Rossa

This symposium will embrace the timely theme set by the Western Division of the AFS for the Annual Meeting (Human Population Growth and Fisheries: the Western Challenge). However, it will be specifically related to the State of Jefferson, a rugged region in southern Oregon and northern California encompassing the Rogue and Klamath systems, as well as the Umpqua and other, smaller, coastal rivers. The "State" almost came into being in 1941 until the secession vote was derailed by the Pearl Harbor invasion. Due to its geographic distance from both Salem and Sacramento, the State of Jefferson remains a region where independence is valued and cooperation is essential. The eco-regions are diverse, and cultural groups live in....well, relative harmony. Like many places in the West, some areas of the State of Jefferson are experiencing unprecedented growth and consequent urban problems; others areas are experiencing economic hardship, putting people in apparent conflict with our desire as aquatic professionals to restore stream function and fish habitat. This symposium will address a breadth of fish and fishery-related topics and interesting discoveries about the biodiversity of our region.

28. Restoration of Salmon in the Cowlitz River Basin: Historical Perspectives, Current Status, and Future Plans

Organizers: Theresa Liedtke and Julie Henning

This symposium will focus on the restoration of anadromous salmon in the Cowlitz River Basin, including the Cowlitz and Toutle rivers. The upper part of this basin was severely impacted by the 1980 eruption of Mount St. Helens. Specifically, the upper North Fork of the Toutle River was inundated with vast amounts of mud, ash, and debris generated by the eruption. Management actions aimed at controlling the downstream transport of sediment have influenced fish movements in the system. The construction of Mayfield and Mossyrock dams on the Cowlitz River and the Sediment Retention Structure on the North Fork of the Toutle River adversely affected native anadromous salmon stocks, creating permanent barriers to volitional upstream and downstream fish movements. Trap and haul operations are currently operated on both the Cowlitz and Toutle rivers in an effort to reintroduce salmon to spawning and rearing habitat upstream of barriers. There have been some successes and some failures with these restoration efforts, and the goals of this symposium will be to: 1) provide a historical perspective on native salmon runs and the construction of the barriers, 2) describe the current efforts, especially the trap and haul operations, 3) present findings from evaluations of the current operations, and 4) describe future research needs and plans. Invited speakers will be selected to represent the expertise of the variety of state, federal, tribal, and non-government entities involved with these issues. This symposium will provide AFS members with insights into a system-wide salmon reintroduction effort which can serve as an example for other systems. The challenges of restoration in this system are significant due to the diversity of entities involved and the limited data available to guide management actions.

29. Bovines and Waterways

Organizers: Jimmy Eisner

This symposium will cover numerous topics and studies involving livestock and stream channels from across the West. The list of presenters are from Oregon, Montana, Nevada, California, Idaho, and New Mexico. Topics include stream function, riparian grazing prescriptions, additional management techniques to protect riparian areas, macroinvertabrates and livestock distribution, state and transition models, affects of riparian grazing after fires, results of effectiveness monitoring, bank alteration under different management prescriptions, livestock impacts to fish and fish habitat, the effects of supplements on livestock distribution, and a collaborative project in northeastern Nevada involving BLM, TU, and the livestock operator.

30. Large-scale Habitat Assessments

Organizer: Steve Lanigan

This symposium will provide a forum for describing latest methods of conducting state, federal and tribal large scale aquatic habitat assessments/monitoring. This would include which attributes are being collected, what sort of analyses are conducted, and how data are assembled and presented to decision makers and other specialists. AFS members would learn what others are doing and what assessment/monitoring results are showing.

31. Student Paper Symposium

Organizer: Shivonne Nesbit

2008 WDAFS Annual Meeting Schedule-at-a-Glance

Subject to change: Visit www.orafs.org/meeting2008/Annual2008.htm for updates

Date/Time	Event	Location
Saturday, May 3		
1:00 p.m. – 5:00 p.m.	Registration/Information/Spawning Run sign-up	DoubleTree
6:00 p.m. – 9:00 p.m.	ORAFS/WDAFS Coordination Meeting	DoubleTree
Sunday, May 4		
7:00 a.m. – 6:30 p.m.	Registration/Information/Spawning Run sign-up	DoubleTree
7:00 a.m. – 6:30 p.m.	A/V Preview Room	DoubleTree
8:00 a.m. – 12:00 p.m.	Conflict Resolution Skills for Natural Resource Professionals	DoubleTree
8:00 a.m. – 5:00 p.m.	Analysis and Interpretation of Fisheries Data: Relative Abundance/ CPUE and Food Web Interactions	DoubleTree
8:00 a.m. – 5:00 p.m.	Basic GIS Techniques for Fisheries Biologists	DoubleTree
8:00 a.m. – 5:00 p.m.	Hydroacoustic Tools for Fish and Habitat Assessment	DoubleTree
8:00 a.m. – 1:00 p.m.	Western Division ExCom Meeting (lunch provided)	DoubleTree
10:00 a.m. – 6:00 p.m.	Trade Show set-up	DoubleTree
5:15 p.m.—7:00 p.m.	Leave Your Mark; Lessons Learned about Creating Natural Resource Careers that Make a Difference	DoubleTree
7:00 p.m. – 10:00 p.m.	Welcome Social	DoubleTree
Monday, May 5		
7:00 a.m. – 5:00 p.m.	Registration/Information/Spawning Run sign-up	DoubleTree
7:00 a.m. – 5:00 p.m.	A/V Preview Room	DoubleTree
7:00 a.m. – 5:00 p.m.	Poster Session set-up	DoubleTree
7:30 a.m. – 8:00 a.m.	Plenary Coffee and Refreshment Service	DoubleTree
8:00 a.m. – 8:50 a.m.	Plenary Session	DoubleTree
9:00 a.m. – 10:00 p.m.	Trade Show	DoubleTree
9:00 a.m. – 5:00 p.m.	Guest/ Spouse Tours	
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon.	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon.	Contributed Papers Session/Symposia	DoubleTree
Noon – 1:20 p.m.	Lunch on your own	

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1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
7:00 p.m. – Midnight.	Poster Social	DoubleTree
9:00 p.m. – Midnight	Open Mic Jam Session (acoustic)	DoubleTree
Tuesday, May 6		
6:45 a.m.	Spawning Run	
7:00 a.m. – 5:00 p.m.	Registration/Information	DoubleTree
7:00 a.m. – 5:00 p.m.	A/V Preview Room	DoubleTree
7:30 a.m. – 8:00 a.m.	Plenary Coffee and Refreshment Service	DoubleTree
8:00 a.m. – 8:50 a.m.	Plenary Session	DoubleTree
9:00 a.m. – 5:30 p.m.	Poster Session	DoubleTree
9:00 a.m. – 11:00 p.m.	Trade Show	DoubleTree
9:00 a.m. – 5:00 p.m.	Guest/Spouse Tours	
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:15 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
Noon – 1:20 p.m.	Lunch on your own	

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1:20 – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
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1:20 – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
6:00 p.m. – 7:00 p.m.	Student/Mentor Social	DoubleTree
7:00 p.m. – 11:00 p.m.	Trade Show Social	DoubleTree
9:00 p.m. – Midnight	Texas Hold'em Fundraiser	DoubleTree
Wednesday, May 7		
7:00 a.m. – 5:00 p.m.	Registration/Information	DoubleTree
7:00 a.m. – 5:00 p.m.	A/V Preview Room	DoubleTree
7:00 a.m. – 9:00 p.m.	Poster Session Take Down	DoubleTree
7:30 a.m. – 8:00 a.m.	Plenary Coffee and Refreshment Service	DoubleTree
7:30 a.m. – 9:00 a.m.	Oregon Chapter Business Meeting-Breakfast	DoubleTree
8:00 a.m. – 8:55 a.m.	Plenary Session	DoubleTree
9:00 a.m. – 5:30 p.m.	Trade Show	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
9:00 a.m. – Noon	Contributed Papers Session/Symposia	DoubleTree
Noon – 1:20 p.m.	Western Division AFS Business Lunch	DoubleTree

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1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
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1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
1:20 p.m. – 5:20 p.m.	Contributed Papers Session/Symposia	DoubleTree
6:30 p.m. – 11:00 p.m.	Banquet, Raffle, and Auction at the Oregon Zoo	Oregon Zoo
Thursday, May 8		
7:00 a.m. – 5:00 p.m.	Registration/Information	DoubleTree
8:00 a.m. – 5:00 p.m.	Stream Restoration: Integrating Practical Approaches	DoubleTree
TBD	Tours (TBD)	TBD
7:00 p.m. – 9:00 p.m.	Workshop Social	DoubleTree
Friday, May 9		
7:00 a.m. – 5:00 a.m.	Information	DoubleTree
8:00 a.m. - noon	Stream Restoration: Integrating Practical Approaches	DoubleTree
TBD	Tours (TBD)	TBD

Trade Show and Poster Session

The annual Trade Show will run from Monday to Wednesday at the DoubleTree Hotel and Executive Meeting Center Portland-Lloyd Center. On Monday and Tuesday nights the Poster Session and Trade Show, respectively, will host an evening social, featuring complimentary food and beverages. Booth space is still available! Contact Trade Show Coordinator Doug Olson at doug _olson@fws.gov or (360) 604-2537.