

The Oregon Hatchery Research Center (OHRC) Advisory Committee

Date: June 8, 2011
Time: 9:30 a.m. to 3:00 p.m.
Location: Oregon Hatchery Research Center
 2418 E. Fall Creek Rd.
 Alsea, OR 97324
 (541) 487-5510



Type of Meeting:

Oregon Hatchery Research Center (OHRC) Advisory Committee

Attendees:

Members: Reese Bender, Dr. Tom Ebert, Tom Gilg, Judy Gordon, Dr. Wayne Hoffman, Ron Mason, Barry McPherson, Dennis Richey, Dave Russel, Stan Van de Wetering, Dr. Laurie Weitkamp, John Wooley
Staff: Bob Buckman, ODFW Mid-Coast Bio; Margaret Cleveland, ODFW; Charlie Corrarino, ODFW; Ryan Couture, ODFW OHRC; Matt Frank, ODFW Alsea Hatchery; Dr. David Noakes, OSU/ODFW OHRC; Joseph O'Neil, ODFW OHRC; Scott Patterson, ODFW Propagation; Micki Varney, ODFW MRP
Guests: Mark Chilcote, NOAA
Public: Marc Davis and Stan Steele, Alsea Sportsman's Association; Cyndi Karp, Dr. Bill Smoker

Welcome and Introduction

Chair Barry McPherson called the meeting to order at 9:30. Introductions were done around the table. March 14, 2011 minutes were approved [Minutes March 14, 2011 \(pdf\)](#)

OHRC AC Mission Outreach: AC member reports

- Judy Gordon represents the Federal Government on this committee, having been a member since its multi-stakeholder, conception meetings. She shared her work as the Center Director of the US Fish and Wildlife Service, Abernathy Fish Technology Center (AFTC). She works closely with Dr David Noakes on shared interests on the aquatic resources of western North America. She and David are working towards the publication of a multi volume e-book documenting the various research activities examining hatchery/natural origin interactions conducted around British Columbia, Washington, Oregon, Idaho and California on salmonid species, especially Pacific salmon and steelhead. AFTC and OHRC maintain web page links to facilitate interaction. Results of research are shared between the facilities. Her written report is at [Judy Gordon](#)
- Reese Bender represents Science-at-Large on this committee. As a retired fish

biologist (30 years with ODFW), he is still quite active in fisheries issues in the Coos Bay area. Reese is a member of the board on the Coos County STEP Commission, South Coast Anglers STEP Association and chair of the Coos County Parks Advisory Board. Reese networks and passes along information through these groups and other he comes in contact with. His written report is at [Reese Bender](#)

- John Wooley represents watershed councils on this committee. He is a long standing member of the Alsea Watershed Council and represents residents of Lane, Lincoln and Benton Counties. He works to enhance the cooperation of stockholders within the watershed basins. With a background in several aspects of water ecology and chemistry, he is working to be a resource for both the OHRC and watershed councils. He has initiated an effort to network with all watershed councils in Oregon regarding the OHRC. His written report is at [John Wooley](#)

Update: Ron Mason (Local Government representative) has contacted a Lincoln County Commissioner for questions and information exchange. His hope is to establish rapport in order to facilitate sharing of ideas and needs.

Next month: Doug Hunt and Laurie Weitkamp are scheduled to present their reports.

AC Recruitment and Replacement for Membership and ODFW Liaison Clements

Charlie Corrarino announced the outcome of the Spring 2011 membership recruitment/reappointment. Continuing with the Advisory Committee will be Ron Mason, Local Government; Barry McPherson, Science-at-Large; and Dave Russel, Resource Producers. New to the committee is Dr. Laurie Weitkamp of NOAA as Science-at-Large, replacing Dr. Jeff Hard.

With the resignation of Rick Goche, Commercial Fisheries, the process of replacement is in motion. The recruitment has closed and information has been passed to the Selection Committee. An announcement of the successful candidate will be made at a later date.

Dr. Shaun Clements, ODFW Science Liaison to the OHRC, has accepted a promotion. The replacement position is now listed as a Fish Stock Assessment Biologist in the Fish Propagation Program. The recruitment is in process, with the selected candidate hopefully in place by September 2011.

AC Responses to Dr. Noakes' March AC Meeting Questions

Chair McPherson thanked the committee for responses with insight. It was suggested that the person who has a question should work with the responder for understanding. Attempts to clear up any confusion or incorrect information should be done immediately to keep the information in context. If the question can not be answered adequately during the current meeting and would be helpful for others, it may be added to the next agenda. Also, response could be by email or phone. Staff should propose how and when they plan to address the question and get committee response to that plan before moving on.

Answers on relevancy of presentations showed an overall interest in focusing on practical ways to help hatcheries and not impact wild fish. There was a consensus that presentations had become more relevant to the OHRC mission in the past year compared with presentations in some earlier years. There were some concerns that the technical level of presentations is not aimed at individual member understanding level. Suggestion is to request the presenter end with a statement of 'here is the "take-home" message' with a quick summary in non-tech terms.

Regarding Committee members participating in activities and operations of the OHRC, there was clearly some interest, though some members indicated it was too far from their residences to participate. The Chair encouraged those who answered with some interest to make sure they made their interests known directly to the OHRC staff. Members will be notified of upcoming events and opportunities for involvement as much as possible. It is hoped that hands-on participation will help in understanding technical issues.

A full copy of the report may be viewed at [AC Member Answers to Dr. Noakes' Questions](#).

Annual ODFW-OSU Meeting on OHRC Progress & Plans

This was an annual meeting between ODFW and OHRC to identify OHRC's needs in management and funding. In attendance were Ed Bowles, Bruce McIntosh, Charlie Corrarino, Kevin Goodson, Scott Patterson, Dr. Shaun Clements and Dr. David Noakes (on the phone).

The OHRC has made progress towards addressing the majority of questions surrounding the triploid trout program during the past 2 years. There has been little progress beyond the planning stage addressing the other two primary objectives (straying and reintroductions) beyond discussing the issues with districts and outside researchers. Studies are planned for Fall 2011 to evaluate the steelhead fisheries in Alsea and Nehalem, particularly the shift from spatially confined, hatchery oriented fisheries to dispersed planting of smolts and spread fisheries.

District Fish Biologists will submit ideas for discussion at the September 2011 Fish Bio meeting to develop a prioritized list of projects.

OHRC should integrate into the work proposed by Mike Gray in relation to the use of planting eggs in the gravel, the use of unfed fry and other tools to enhance natural production of Coho salmon.

It is mission critical to make hatchery programs more satisfying to anglers while meeting conservation needs (avoid straying). The challenge is how to get returning adults to stage, be caught at a high rate and have the remainder not stray.

Wild broodstock programs are a challenge - must be certain the stock is abundant enough to mine. Integrated brood stock does NOT mean stray rates can increase. Staff need to figure out how to use the fish's innate homing ability to catch.

Andy Dittman (NMFS) has indicated a strong interest in exploring the use of drip stations (or other types of attractants) on the Clackamas and Sandy rivers to attract returning adults. Shaun will finish developing a proposal and since Shaun has taken a new position, David will follow up as needed. Both Shaun and Andy are interested in the role of hormones in imprinting and may also investigate using environmental conditioning to improve imprinting at release.

It is important for Dr. Noakes to track development and subsequent implementation of the Coastal Multi Species Plan for adaptive hatchery management through time, consistent with the establishment of “zones” in the plan. For example a split watershed with the upper portion being low risk and high risk is acceptable in the lower watershed.....or, hatchery watershed v wild watershed.

It would be appropriate to explore some intermediate level of broodstock other than none (domestic) or all (100% integrated), like 30%. There are several opportunities for conducting landscape style analyses (e.g. Sandy versus Clackamas CHS, Coastal Steelhead programs). In addition, there is opportunity to guide reintroductions in the Willamette River.

David and Shaun summarized the recent Homing and Straying Workshop. There were three outcomes: 1) a report which is nearly complete, 2) an inventory and analysis of ODFW facilities and broodstock management styles to look for a link to straying and 3) specific proposals. David has submitted a proposal to Oregon Sea Grant to address item 2 and to determine whether juvenile salmon are responsive to electromagnetic fields.

Dr. Noakes is exploring other potential funding with Sea Grant, NSF, Moore Foundation and NOAA.

With help from Ryan Couture and Scott Patterson, David should increase collaboration with hatchery managers. Ryan is currently working on proposals for quarterly manager training type sessions that would cover a range of topics (genetics, stress, ecology) related to hatchery practices.

OHRC's Budget and External Funding Sources

Ryan Couture presented an overview of the OHRC budget and external funding sources. ODFW provides funds that are 100% “Other Funds” of the State of Oregon, meaning not State General Fund, Lottery Funds or Federal Funds. These moneys are used for “Personal Services” (staff) and “Services and Supplies” (consumable office/hatchery supplies). OHRC Housing Budget funds come from staff housing rentals.

Other identified incoming funds are NOAA, OSU, R&E, IW&W, OCAMP, BioOregon Feed Co., and JMU (specifically for Christine May). There is also “In-Kind Match” where individuals provide labor and/or equipment in a non-cash donation.

The Facility Usage Agreement needs to be more self-sufficient. Students stay free if they

are from OSU. A boiler plate agreement is being developed for more accurately recovering costs incurred. The committee will be updated as changes are completed.

See the full report at [OHRC Budget Overview](#)

Adverse impact of hatchery fish on the productivity of 93 natural populations of salmon and steelhead

Mark Chilcote, NOAA, gave this presentation at the Oregon Chapter meeting of AFS in February, covering research across the Pacific Northwest. Proportionally, hatchery fish have a very poor showing. If they are released into a bad habitat, the homing instinct leads them back to the bad habitat. Hatchery spawners have very low of productivity when compared to their wild counterparts. Several models were considered and ranked, with the best model chosen for data collected. The overall impact results were based on recruits per spawners. Impact of hatchery fish is equal over all Salmonids (Coho/Chinook/Steelhead). Integrated verses segregated hatchery programs showed no difference, but this may reflect cases where best management policies were not actually followed. Results showed no signal for differences, magic bullets or numerical gains; perhaps long term generational changes. Hatchery and wild fish do not mix well, no surprise. There was no anomaly or pervasive effect for 89 populations. The “excuse base” for claiming no hatchery impact on wild populations has become smaller thru this study. [Adverse Impact of Hatchery Fish on Natural Production \(pdf\)](#).

Public Comment

Cyndi Karp asked about additional funding sources, possibly expanding into private sources and outside of state funds, suggesting non-profits, foundations or other sources not yet defined. The Operations Budget does not show incoming research projects that bring supporting funds. Ryan Couture responded that the new boiler plate facility rental agreement will allow recovery of expenses. Judy Gordon commented that money does not necessarily have net gain, has to be built into grants for new work. The Chair encouraged members to forward information to OHRC management on any possible sources of funding.

Mark Davis and Stan Steele of the Alsea Sportsman’s Association talked about four goals that were originally on the table for the OHRC of which three have been realized. They asked to delay their input until after the Alsea Basin Steelhead Report as their material dovetailed with it. Permission was granted and the agenda change noted.

Working Lunch – Staff Reports

Outreach and Education – Joseph O’Neil continues to work closely with area school in hands-on learning activities to expose students of multiple age groups to activities not available in classes. He always is in need of consistent help with knowledge base of activities and would gladly accept volunteers who can commit to schedule. [\(Outreach and Education \(pdf\)\)](#)

Recent Research Projects – Dr. David Noakes has continued a very active schedule of participation in IACUC, OCAMP, teaching, education and outreach, Coastal Caucus, Legislature, research funding applications (3), research discussions, visitors, ODFW/OSU/OHRC discussion, publications and online interactions such as <http://springerlink.com/content/102877/> . A full copy of his report may be viewed at [Noakes Research Report](#).

Dennis Richey expressed appreciation for David's very helpful assistance in arranging meetings.

Operations Update – Ryan Couture shared a report of the presentation of a boat originally built by Stan Steele's father Keith who had worked for ODFW at Leaburg Hatchery on the McKenzie River many years ago. The boat had deteriorated and now has been beautifully restored by volunteer George Farnsworth now serving as host at the OHRC. The original identification plate is still on the boat. It will be used as a display and education tool at the OHRC.

A new life size fish display project is nearing completion. It will reside in the display area in the OHRC main building. It will show different phases of each of the salmonids in life-like poses. The PowerPoint of the fish display and the rest of the Operations Reports are available at [Meeting Materials June 8](#).

Alsea Basin Steelhead M&E and Research Ideas

Bob Buckman, ODFW Mid-coast Fish Biologist presented a study on the Alsea Basin Steelhead. Steelhead is the only hatchery fish released in the Alsea Basin. Results of studies have been mixed, using methods of changes in broodstock and release locations. This basin has a long - standing program with extensive research history since the 1930's when the first hatchery was built on the North Fork Alsea River. It is time for a re-evaluation using current science and thinking about hatcheries.

Bob presented statistics that have been collected over the last 60 years. Exploration of questions and possible continued research are needed to continue this process and possibly expand it to include the rest of Oregon's ocean terminating rivers. His wish is to establish a basis for management and application of research. This spring, ODFW began an experimental program of releasing some of the hatchery steelhead smolts in the lower Alsea River. Monitoring will be done to determine if this approach contributes more adults in the river fishery and if straying or hatchery adults to lower river tributaries remains low. The adult trap at OHRC will contribute to this monitoring. A full copy of his report may be viewed at [Alsea Basin Steelhead Research](#).

Alsea Sportsman's Association Stan Steele and Mark Davis

Stan Steele and Mark Davis of the Alsea Sportsman's Association would like to see research conducted to further reduce loss of smolts to predation, specifically to double

crested cormorants, and research from this facility to increase benefits of hatchery production at reduced costs. They stressed the importance of having a holistic approach.

Suggested Research on Hatchery/Wild Differences in Response to Lead in Coastal Streams

Dr. Wayne Hoffman led a discussion regarding possible research on detrimental impacts of lead that is becoming a major issue with some folks interested in salmonids of coastal rivers. Areas of concentrations are heavier than previously thought. Fish absorb lead and have reduced capabilities when arriving in the ocean. Could there be a feasible study on this at OHRC? David has provided a list of existing publications from prior studies. Water with increased calcium levels provided less lead absorption. Angling sinkers are the most obvious source for lead in the rivers. Retailers have been asked to encourage reduced use of lead sinkers, change over to steel or other non-lead sinkers. Dennis Richey spoke up about a project with EPA funding on the Columbia River that identified lead found to be chipping off seven poorly maintained railroad bridges into the river. There is concern that there is enough lead in creeks left by angling that people actually dive and recover some of it. Matt Frank's (ODFW Alsea Hatchery) kids mined the North Fork Alsea River last year and found over 25 pounds of lead after several other parties had already mined the area.

Wayne's biggest concern is Lake Creek just down from Triangle Lake. One question is how to remove lead from the water once the study is done if done at OHRC. David Noakes stated that the OHRC was not designed to conduct studies of aquatic toxicology (including lead) and that such research can only be carried out in laboratories specifically designed and operated for such purposes. David Noakes obtained information from Oregon Department of Environmental Quality on databases of information about water quality and contamination. He copied that information in the form of e-mail messages to Barry McPherson, for distribution to Members of the Advisory Committee. In addition to concerns about point sources of contamination there are broader concerns about non-point sources (e.g., atmospheric deposition across the landscape) of contamination. The Oregon DEQ and the US EPA and the primary agencies responsible for such monitoring. It might be worthwhile for watershed councils or interested citizens to request presentations from either of those agencies for more detailed information.

Spatial and Trophic Overlap of Hatchery and Unmarked Columbia River Basin Spring Chinook Salmon During Early Marine Residence

Dr. Laurie Weitkamp presented research she helped conduct, focusing on spring Chinook early marine residence, with 5 distinct populations. Using ocean sampling of subyearling and yearling fish, they were able to distinguish hatchery fish with 98.5% accuracy. More recently, hatchery fish are fin-clipped before release into the river. Most of the first samples were Columbia River Chinook that go north in May and June. They travel in groups (both hatchery and wild). Marked hatchery fish tend to have a longer fork length unmarked (or wild). The weight and body condition of unmarked samples are significantly heavy in May, but not in June. Diets are similar in May and June. Fish caught together had similar stomach contents. For the most part, marked and unmarked fish had the same

distributions and ate the same foods. Growth rate did not show discernable difference. Conclusion/recommendations: there was no difference found between hatchery and unmarked spring Chinook in feeding or ocean distribution. This creates potential for competition, but no actual impact was detected for Columbia River spring Chinook in this study. Manipulations/reductions of hatchery releases, especially in years of predicted poor ocean conditions, may enhance survival of both hatchery and unmarked fish. Marking 100% of hatchery fish before release in the river would help in these kinds of studies. A copy of the full report is available at [Spatial and Trophic Overlap Study](#).

Research Ideas from Hatchery Staff around Oregon: An Update

Ryan Couture presented a list of research ideas gathered from ODFW hatchery staff across the state. Some of these suggestions are already in the research stage, some are ranked by priority and some have good potential for future consideration. Links will be shared with ODFW hatchery staff regarding studies that have already been published. Additional discussion included the possibility of incorporating some of the ideas presented into research plans. A full list is available at [Research Ideas](#).

Products and Research from the Homing and Straying Workshop

Dr David Noakes presented information shared at the Homing and Straying Workshop held at OHRC February 8-9, 2011. He, along with Dr Shaun Clements and Ryan Couture, led discussions on salmonid homing and straying. Attendees included research and resource participants from NOAA, USGS, OSU, ODFW, University of California at Davis, University of North Carolina, Evergreen College and members of the OHRC Advisory Committee. The outcome of the workshop produced 1) a report entitled "Salmon Orientation, Migration, Navigation and Homing" which is nearly complete, 2) a need for inventory and analysis of ODFW facilities and broodstock management styles to look for a link to straying and 3) specific proposals. David has submitted a proposal to Oregon Sea Grant to address item 2 and to determine whether juvenile salmon are responsive to electromagnetic fields. A copy of the presentation is at [2011 Hatchery and Straying Workshop Feedback.pdf](#).

Good of the order and adjournment

Chair Barry. McPherson asked members to consider possible nominations for the 2012 Vice Chair position. Nominations and selection will be held at the September 19th meeting. The leadership will shift to current Vice Chair Wayne Hoffman for the December 12th meeting. Barry also asked that all members come to the September 19th meeting prepared to set 2012 meeting dates.

With no other business to cover, Barry closed the meeting at 3:45 p.m. The next meeting will be on Monday, September 19, 2011 at OHRC.