



Ocean Resources Enhancement and Hatchery Program Joint OREAP-SAC Workshop Meeting Summary

Wednesday, May 26, and Thursday, May 27, 2026

The following were in attendance:

Ocean Resources Enhancement and Hatchery Program Scientific Advisory Committee (SAC) Members: Lee Blankenship; Ken Cain, Ph.D.; Michael Franklin, Ph.D.; Ken Leber, Ph.D.; Kai Lorenzen, Ph.D.; Nicole Williamson; Greg Wiens, Ph.D.; Gabby Yang, and Ron Zweig.

Ocean Resources Enhancement Advisory Panel (OREAP) members and alternate members: John Ballotti, Ken Franke, Merit McCrea, Michael Quill, Theresa Talley, and Tony Vaught.

California Department of Fish and Wildlife (CDFW): Bryan Barney, Ph.D., Kathryn Johnson, Kirsten Ramey (OREAP member), Valerie Taylor, and Mark Christie, Ph.D. (CDFW Contractor – Purdue University).

Hubbs-SeaWorld Research Institute (HSWRI): Mark Drawbridge, Ruairi MacNamara, Alex Primus, and Mike Shane.

Site Visit to Hatchery: In advance of the workshop portion of the meeting, workshop participants visited the Leon Raymond Hubbard, Jr. Marine Fish Hatchery in Carlsbad, CA. After a welcome and introduction, HSWRI staff provided an overview of the hatchery and a tour through the facility.

Joint Workshop Introductions and Announcements

Valerie Taylor introduced the Convening Team, including CDFW staff and Facilitator Scott McCreary. Kirsten Ramey thanked participants for attending and underscored the importance of their expertise and engagement with the OREHP.

Kirsten Ramey, Valerie Taylor, and Scott McCreary introduced the premise of the workshop, emphasizing joint deliberations among all participants. Scott McCreary reviewed the agenda with participants.

As a reference, CDFW staff posted a table recapping the full suite of recommendations presented in the OREHP Evaluation Report and California Sea Grant and University of Florida Stakeholder Visioning Report.

Copies of the reference table and all reports and presentations mentioned in this meeting summary can be requested by emailing the OREHP Coordinator at OREHP@wildlife.ca.gov.

Participant Introductions

Meeting attendees introduced themselves, touching on affiliation, areas of disciplinary expertise, and respective contributions to the OREHP.

OREHP Budget and Legislative Amendments

Valerie Taylor and John Balotti provided a briefing on the OREHP budget. The Fiscal Year (FY) 2026/27 budget is about \$3.6M. Approximately \$228,000 is available for additional project work. Using projections based on current expenditures, the program will spend down the OREHP stamp account by FY 2028/29.

The OREHP is funded by two sources: the Ocean Enhancement Validation Stamp and the Sport Fish Restoration Grant. Since revenue from these sources is consistent over time, John Ballotti suggested that to increase revenue in support of the program, the Ocean Enhancement Validation Stamp should be expanded north of Port Arguello and required of all saltwater anglers throughout the State of California.

John Ballotti reported that the Coastal Conservation Association California (CCA CAL) is working with a legislative representative to propose a bill to expand the Ocean Enhancement Validation Stamp and to amend and extend the sunset date of the OREHP statute (Fish and Game Code 6590-6598). If legislation is not passed, the OREHP would end effective December 31, 2027.

Hatchery and Growout Operations

Mark Drawbrige presented a summary of the main recommendations from the 2017 Evaluation Report related to hatchery and growout operations and sorted them into three categories: no progress, some progress, or completed. He also noted accomplishments to date and identified critical needs of the program including effective broodstock size (re-evaluation of the broodstock management plan), pathogen management, and the coded-wire tag (CWT) program.

Discussion included the potential contribution of the hatchery to the white seabass fishery.

Workshop Recommendation:

- Work with the SAC Genetics Subcommittee to re-evaluate the broodstock management plan, as well as the CWT program. Also, work with the SAC Fish Health and Welfare Subcommittee on fish pathogen and malformation management.

OREHP Genetics

Bryan Barney and Mark Christie provided a briefing on CDFW's white seabass genetics study and shared preliminary results. Additional analyses and cleanup of data need to be completed before the final results of the CDFW study will be published.

Michael Franklin presented a summary of the main recommendations from the 2017 Evaluation Report related to genetics and sorted them into three categories: no progress, some progress, or completed. He also noted the completion of HSWRI and South Carolina Department of Natural Resources' Salton-Kennedy project, which developed working methods for parent-based tagging using microsatellites.

Discussion included whether the OREHP should continue marking fish with coded-wire tags (CWT), continue taking fin clips of sublegal fish, and routinely conduct parentage analysis of release cohorts to support broodstock management.

Workshop Recommendations:

- Continue the tagging of white seabass with CWTs.
- SAC Genetics Subcommittee will further discuss the future of genetic sampling to prioritize research needs related to broodstock management, as well as the resources required to maintain genetic tagging efforts.

SAC Genetic Subcommittee members are Michael Franklin, Matt Powell, and Greg Wiens. Kai Lorenzen stepped down from the Subcommittee. Gabby Yang and Theresa Talley are interested in participating with the Subcommittee to support public communication of the genetics study findings.

Post-Release Survival and Tag Recovery

Ken Leber provided a summary of the key recommendations from the 2017 Evaluation Report related to post-release survival and tag recovery, categorizing progress as no progress, some progress, or completed. He also reviewed the SAC Post-Release Survival Subcommittee's prioritization of these recommendations. In addition, he reported that the Subcommittee is developing an acoustic tagging study to assess fish survival and dispersal patterns and is currently awaiting a cost estimate from a potential researcher.

Ken Leber also noted the Subcommittee's motion to recommend an annual line-item allocation of \$300,000 to the OREHP budget to support short-term post-release assessments. This funding would provide the necessary resources for rapid evaluations - conducted soon after release through the first-year post-release - of studies aimed at improving post-release survival and enabling adaptive management of OREHP's contributions to the white seabass fishery.

Workshop Recommendation:

- SAC Post-Release Survival Subcommittee will continue to further develop the acoustic tagging study to re-establish a fishery-independent monitoring program to help determine short-term mortality of juvenile white seabass.

SAC Post-Release Survival Subcommittee members are Ken Leber, Nicole Williamson, and Lee Blankenship. Kirsten Ramey will join the Subcommittee.

Fish Health and Welfare

Greg Wiens provided a summary of the key discussion topics from the Fish Health and Welfare Subcommittee, including infectious diseases, environmental impacts on fish welfare, and developmental malformations. He highlighted long-term programmatic improvements that have reduced virus (VNNV) and parasite (Cryptocaryon) losses, and exposure to gas supersaturation. The Subcommittee evaluated developmental malformations in white seabass and the screening programs performed by HSWRI and CDFW. The Subcommittee made recommendations to both CDFW and HSWRI. Valerie Taylor stated that CDFW agreed with subcommittee recommendations and CDFW have redirected malformation screening efforts and acknowledge there is no programmatic requirement for fish release. Mark Drawbridge commented that HSWRI agreed with recommendations to continue the rapid screening program (observed during the tour) and to continue research on reducing malformations through nutrition and modification of environmental parameters. Greg Wiens also highlighted upcoming Subcommittee discussion needs, emphasizing the importance of setting priorities and securing funding.

Additional points included the need for continuing standardized deformity screening, research on nutrition and its influence on deformities, growth, and health, strengthening disease monitoring, and updating fish health policies and procedures.

Workshop Recommendation:

- SAC Fish and Welfare Subcommittee will discuss additional research needs on the effects of nutrition, live feed quality, and environmental conditions on deformities, the development of a CDFW-HSWRI agreed upon standardized deformity screening process, updating fish health policies and procedures, and the value of and evaluating potential vaccination program vaccines.

SAC Fish and Welfare Subcommittee members are Greg Wiens, Jackson Gross, and Ken Cain.

Secondary Species

Ruairi MacNamara provided a summary of the key recommendations from the 2017 Evaluation Report related to secondary species, categorizing progress as no progress, some progress, or completed. He also noted accomplishments to date including HSWRI's externally funded research program on stock enhancement of California halibut.

Discussion touched on the history of secondary species within the OREHP, the practical constraints of current funding levels, and key factors to consider when evaluating secondary species options. John Ballotti emphasized that since the OREAP had previously voted to designate California halibut as the OREHP's secondary species, that broad-based recommendation should carry significant weight moving forward.

Workshop Recommendation:

- SAC Secondary Subcommittee members will discuss if the Program should

consider another species given the current funding limitations and what transition steps should be taken if another species is considered.

SAC Secondary Species Subcommittee members are Michael Franklin, Jackson Gross, and Ron Zwieg. Gabby Yang will join the Subcommittee.

Education and Communication

Gabby Yang presented a summary of the key recommendations from the 2017 Evaluation Report related to education and communication, noting progress levels as no progress, some progress, or completed. She also provided an overview of the Seabass in the Classroom (SITC) Program and highlighted accomplishments such as increased participation among Title I schools and the transition to mobile systems to support program continuity.

Discussion identified a wide range of potential areas for future exploration and goal setting in education and communication, including possible benefits for workforce development. A key action item is to better understand inconsistencies in past messaging.

Workshop Recommendation:

- Create an OREHP Education and Communication Subcommittee. The following members agreed to be on the Subcommittee: Theresa Talley, Tony Vaught, Gabby Yang, Nicole Williamson, and Michael Quill.

Fisheries and Ocean Management

Kirsten Ramey presented an update on CDFW's efforts to update the white seabass stock assessment and fishery management plan, and how these efforts are intended to accomplish key OREHP Evaluation Report and Stakeholder Visioning Report recommendations.

Discussion included the need to consider how the program can be integrated with broader fisheries and ocean management efforts for the State of California.

Workshop Recommendation:

- Create an OREHP Fisheries and Ocean Management Subcommittee. The following members agreed to be on the Subcommittee: Kirsten Ramey, Theresa Talley, Gabby Yang, Michael Franklin, Kai Lorenzen, Luiz Barbieri, and Ron Zwieg.

OREHP Governance

Valerie Taylor presented an overview of past and current efforts to improve OREHP governance and outlined potential next steps. These include developing quantitative criteria, benchmarks, and timelines, as well as creating several OREHP plans addressing Program Governance, Research Management, Adaptive Management, Data

and Information Sharing, and Fiscal matters.

Workshop Recommendation:

- Create an OREHP Governance Subcommittee. The following members agreed to be on the Subcommittee: John Balotti, Theresa Talley, Tonie Bangos, and Kirsten Ramey.

Workshop Conclusion

As the discussion concluded, a key recommendation was to reconvene another SAC-OREHP workshop in approximately one year.

No public comments were presented.

The workshop adjourned at 12:30 pm.