

# Ocean Resources Enhancement and Hatchery Program Scientific Advisory Committee Meeting Minutes

Date: Monday, November 6, 2023  
Time: 10:00 a.m. – 12:30 p.m. (PST)  
Location: Microsoft TEAMS Video Conference

## Attendees:

***Ocean Resources Enhancement and Hatchery Program (OREHP) Scientific Advisory Committee (SAC) members:*** Lee Blankenship; Ken Cain, Ph.D.; Tanya Darden, Ph.D.; Mike Franklin, Ph.D.; Jackson Gross, Ph.D.; Ken Leber, Ph.D.; Kai Lorenzen, Ph.D.; Matt Powell, Ph.D.; Nicole Williamson; Greg Wiens, Ph.D.; and Ron Zweig.

***California Department of Fish and Wildlife (CDFW):*** Bryan Barney, Kathryn Johnson, Kirsten Ramey, Jeff Rodzen, and Valerie Taylor.

***Ocean Resources Enhancement Advisory Panel Members:*** John Ballotti and Wayne Kotow

***Hubbs-SeaWorld Research Institute (HSWRI):*** Ruairi MacNamara and Mike Shane

***Members of the Public:*** Mike Raabe

## 1. Introductions and announcements

*Valerie Taylor and Ron Zweig*

- Travel ban has been lifted, so travel for SAC members to attend in-person meetings can be paid for by the OREHP.
- Paperwork still needs to be completed, but please be thinking about possible dates for a day or day and a half meeting in southern California next year.

## 2. Discuss and vote on June 22, 2023, meeting minutes

*Ron Zweig, SAC, and Valerie Taylor*

- May meeting minutes were approved at the August meeting.
- Tanya Darden motions to approve the June meeting minutes and Greg Wiens seconds. Motion passes unanimously with 9 yays.

### **3. Discuss Genetics Request for Proposal (RFP) and potential CDFW Genetics Lab involvement and vote on moving the RFP forward for OREAP consideration**

*Matt Powell, Ph. D., SAC, and Valerie Taylor*

- Valerie Taylor contacted CDFW Genetics Research Laboratory (GRL) (Bryan Barney and Jeff Rodzen) to discuss RFP.
- SAC Genetics Subcommittee met with Bryan Barney, Jeff Rodzen, Mark Drawbridge (HSWRI), Ruairi MacNamara (HSWRI), and Tanya Darden [South Carolina Department of Natural Resources (SCDNR)] to discuss near and long-term work that CDFW can do to support the genetics work that HSWRI and SCDNR are conducting.
- Bryan Barney presented proposal to the SAC for the CDFW GRL to take on the work as described in the RFP.
  - Bryan Barney - CDFW GRL is currently conducting pilot study on Chinook salmon to determine hatchery origin; sequencing broodstock and returns as they come back in. Also, building reference genomes for several other species of fish.
  - Bryan Barney - This would be a one-time project but anticipate it would become on-going with CDFW GRL set up to be the right lab for this project (tenure, expertise, and longevity).
  - Greg Wiens – How are you generating false assignments?
    - Bryan Barney – If we know kinship, we could compare; we would have to rely on correctness of the microsatellite DNA.
    - Jeff Rodzen – Run simulations - false discovery and false positive rates.
  - Kai Lorenzen – In the peer review of the SCDNR study, one of the main issues brought up was the statistical framework and false positive assignments. Should someone else be added to the team to do the statistical analysis?
    - Bryan Barney – Yes, we could add a consultant for statistical analysis.

- Tanya Darden - Highly support the long-term stability of moving this work over to the state (CDFW); however, developing the Single-Nucleotide Polymorphism (SNPs) panel seems like a lot of time and money. Also, note that collections (of white seabass) from last year are showing a high level of contamination.
- Ron Zweig – Great to have this proposal, could expedite quickly. In looking at the proposal and cost per unit – can you estimate how many years you foresee for these costs?
- Bryan Barney - Yes, those costs would be yearly for as long as a parentage-based sampling program would continue, \$15 per sample.
- Tanya Darden – Samples of known parentage - I know that we have some isolations and HSWRI has some from completely genotyped samples. Also, the timeline works really well - Saltonstall-Kennedy (S-K) proposal for 2 years, and this would be the time that CDFW would be able to transition to taking over the samples.
- CDFW would be able to proceed with SNPs or microsatellite testing without additional equipment costs. The genetics sequencing portion would have to be contracted out to UC Davis (CDFW does not have the equipment for DNA sequencing).
- Discussion about timeline of results if the CDFW GRL is used versus if the RFP goes out to bid.
  - CDFW estimates that about 2,000 samples could be run by the end of August 2025
  - RFP process could take a year or more to find a contractor that could perform the work.
- Discussion about updating the scope of work to make sure work being conducted under the S-K grant isn't being duplicated.
- Nicole Williamson - Call for motion to approve the RFP as submitted. Michael Franklin seconds. Discussion.

- Tanya Darden – Concerned about how this is worded – near duplication of the efforts put forth by HSWRI and SCDNR.
- Discussion about updating the RFP before taking a vote
- Tanya Darden calls for a motion to approve CDFW to do the genetics work moving forward for the stock enhancement assessment. Nicole seconds this motion and removes first motion. Discussion.
  - Kai Lorenzen – Motion should specify that the genetics work will be carried out according to the scope of work outlined by the subcommittee. Lee Blankenship agrees.
  - Greg Weins – I don't see it as a duplication. Some uncertainty about false positive assignments, valid discussion about methods. You do need to somehow independently come up with a different way to validate what we're trying to measure. What we're trying to measure is the contribution of the hatchery to the wild. If there is some uncertainty about that, we need to confirm what we think we know. CDFW is taking an independent approach. While there might be what you see as duplication, a little bit of overlap might be prudent.
  - John Ballotti – Statement of work is not a static document. You learn things along the way, that's why there's change orders. Not concerned about the document being perfect at the start.
  - Nicole Williamson – What Greg said - that's what my understanding of the review as well, dot all the I's and cross all the T's.
  - Vote called. Motion passes (8 yays, 2 nos because motion is too vague).
- Lee Blankenship – Calls motion to have CDFW GRL develop a new proposal for the genetics work that follows the RFP as presented by the Genetics RFP Subcommittee. Kai Lorenzen seconds. Discussion.
  - Vote called. Motion passes (10 yays).
  - Discussion regarding the next SAC meeting to vote on CDFW GRL's updated proposal.

#### **4. Receive update from the Fish Health and Welfare Subcommittee**

*Greg Wiens, Ph.D.*

- Ken Cain (co-chair), Jackson Gross, and Greg Wiens (chair) make up the subcommittee with Mark Drawbridge, Alex Primus, and Mark Okihiro as subject matter experts.
- Prioritizing knowledge and research gaps; will make sure to work with the post-release subcommittee.
- Next meeting will be held on Dec. 11

#### **5. Receive update from the Post Release Survival Subcommittee**

*Ken Leber, Ph.D.*

- Ken Leber (chair), Nicole Williamson (co-chair), Lee Blankenship, and Tanya Darden make up the subcommittee with Mark Drawbridge and Mike Shane as subject matter experts.
- Goals:
  - Review the progress or status on recovery
  - Improve post-release survival
    - Reviewed the list of 16 recommendations from the 2017 OREHP Evaluation related to post-release survival.

#### **6. Discuss and potentially add members to the Secondary Species Subcommittee**

*Ron Zweig, SAC, and Valerie Taylor*

- Request for third SAC member to join subcommittee is filled by Michael Franklin. The other two members are Ron Zweig and Jackson Gross. Subject matter experts are Ruari MacNamara and Mark Drawbridge.

#### **7. Discuss development of benchmarks, timelines, and measures of success for the OREHP**

*Ron Zweig, SAC, and Valerie Taylor*

- SAC members discussed the possibility of using the subcommittees to develop benchmarks and timelines.
- The stakeholder focus group created by the California Sea Grant Stakeholder Engagement Visioning Process developed some broad criteria that will be shared with the SAC when the project is completed.

## **8. Public comment on agenda items and closing of meeting**

*Valerie Taylor and Ron Zweig*

- No public comments
- Valerie will arrange a short meeting at the beginning of December for the SAC to vote on the new genetics scope of work.

Questions about the meeting or agenda can be directed to the OREHP Coordinator, Valerie Taylor, at [Valerie.Taylor@wildlife.ca.gov](mailto:Valerie.Taylor@wildlife.ca.gov) or [OREHP@wildlife.ca.gov](mailto:OREHP@wildlife.ca.gov).

Meeting notices, agendas, and minutes can be found at <https://wildlife.ca.gov/Conservation/Marine/OREHP/Scientific-Advisory-Committee>.