

OUTCOMES MEMORANDUM

TO: CAMT Salmon Subcommittee Members
FROM: Rafael Silberblatt
DATE: May 8, 2020
RE: April 9, 2020 CAMT Salmon Subcommittee Meeting

Attendees: Alison Collins, Brad Cavallo, Bryan Matthias, Brycen Swart, Carl Wilcox, Cathy Marcinkevage, Deanna Sereno, Frances Brewster, John Ferguson, Kate Spear, Mike Beakes, Pascale Goertler, Rene Henery

Action Items:

- Bruce - Revise SFEI Rearing Habitat Study presentation prior to May Policy Group meeting:
 - Add other funders
 - Provide context re: estimated marsh acreage (23,000 acres is additional to 12,000)
 - Add outreach initiative to next steps
- Bruce – Ask SFEI if they can deliver Rearing Habitat Study presentation to CAMT
- Pascale - Reach out to Sam Bashevkin re: opportunities to make SFEI maps interactive
- Brycen/Kate - Add predation studies, deliverables for completed projects and IEP directed studies to the Prop 1 funded study spreadsheet
- All - Review [Prop 1-funded study spreadsheet](#) and [Delta Stewardship Council-funded salmon projects](#) and be prepared to discuss projects of interest at May Subcommittee meeting
- All - Provide Pascale with edits to letter soliciting engagement opportunities with DSP-funded PIs
- All - Provide Bruce edits to Salmon Actions Memo (see attached), including where there has been an attempt to quantify benefits
 - Revised version will be vetted by Subcommittee at May meeting before being shared with CAMT
- All - Provide edits/additions to CSSP survey recipient list
- K&W - Schedule call for week of 4/13 amongst Salmon Entrainment Working Group volunteers to discuss management questions associated with salmon entrainment scope proposal
 - Subcommittee to review on 5/14 before presenting to CAMT on 5/19

Discussion Highlights:

1. Agenda Review and Updates

- South Delta Export Effects Study – Executive Summary
 - Applied for Prop 1 funding in 2017.
 - Intent is to understand how hatchery Chinook located in proximity to facilities are impacted by export levels.
 - Operators (USBR and DWR) have already been contacted and the study is proposed to occur in the fall as that is when the most operation flexibility exists.
 - Member questions/comments and responses:
 - What is this study's connection to CAMT and CSAMP?

- The idea for the study originated with CAMT. Will update the Subcommittee and CAMT as things progress. While it will be necessary to stay close to the study as it was proposed to funders, limited input will be considered up to six months before the anticipated start date (Fall 2021)
- Consider engaging water operation managers prior to implementation in order to facilitate the variability sought while complying with the BiOps and ITP.

2. Coordinated Salmonid Science Plan

- Updates to Scope & Timeline
 - Project timeline has been extended to August 31, 2020 to compensate for impacts from COVID-19 and for a longer survey piloting process and peer-review period.
 - The Information Flow exercise is being scaled back in order to focus on prioritization.
- Prioritization Survey Pilot & Refinement: Updates to Criteria
 - Feedback received from refiners on Pilot Surveys:
 - Broaden survey invitation to ~50 people and include more NGO representation.
 - Generalize specific locations to regions to simplify linkages between activities and geography.
 - Refinement of Activity Statements to generate better Q statements for survey.
 - Q Method criteria update [note: criteria have since been further revised by the refiners]:
 - Criterion 1 – Learning Benefits: The activity accelerates learning on key cause-effect mechanisms influencing salmonid survival, behavior & diversity through the Delta thereby directly contributing to clarifying evaluating action effectiveness.
 - Criterion 2 – Magnitude of Recovery Benefits: The activity will contribute to recovery of salmonids at the population level or will help to identify actions most likely to contribute to detectable levels of population recovery.
 - Criterion 3 – Multi-Species Benefits: The activity is expected to generate multi-salmonid benefits and conversely, will pose a low chance of unintended negative consequences / trade-offs to other priority salmonids.
 - Criterion 4 – Implementability: What is your impression of how easy or hard implementation of various activities would be (for any number of reasons, whether e.g., based on your perceptions of regulatory / permitting complexity, on the ground logistical challenges, lack of good models or precedent, potential litigation, need for willing cooperation of private property owners, cost, political will, lack of incentive for change, etc.)?
 - Locations: those that took the pilot survey indicated an additional Q-sort for locations should not be pursued, indicating it is more useful to apply activities list to a particular region which would create location-specific metadata. ESSA is currently confirming the final regions.
 - Member questions/comments and responses:
 - As a pilot survey taker, my understanding was that we were not refining the existing activity statements but were adding additional ones.

- There will be an opportunity to add additional activity statements. However, the number of Q-statements will be limited to roughly 45 and will therefore need to be generic enough to be applicable to groups of activities.
 - Criterion 1 is hard to comprehend (e.g. all the words ending in -ing). Refiners need to digest updated criterion and would appreciate an offline conversation on the wording of the first two criterion.
 - Refiners will have through next week to provide feedback.
- Prioritization Survey Pilot & Refinement: Updates to Activities
 - Science, monitoring, and management activities are currently in review with Subcommittee refiners.
 - Survey content refinement process:
 - To date, ESSA, K&W, and the refiners have had two calls to define review process and provide feedback on criteria
 - April 9: refiners to provide feedback on Activity Statements
 - April 14: call with reviewers to discuss revised Activity Statements & resulting Q-statement revisions
 - April 23: ESSA finalization of Q-survey prior to deployment
- Invite list for full survey
 - List contains 50 participants, including:
 - Salmonid Scoping Team Members (SST)
 - Original CSSP interviewees
 - Other technical experts
 - Representation from Federal, State, PWA, NGO, and Academic sectors
 - ESSA noted that Q method surveys are not predicated on needing to have complex understanding of implications of decisions, hence the range in proposed participants and their respective scientific and/or management functions.
 - Subcommittee members were encouraged to review the participants list and provide revisions by April 16.

3. Salmon Actions Matrix: Draft memo to CAMT

- Memo outlines the Subcommittee's assessment of 25 near-term management action including additional modeling/science required and how CSAMP can provide support.
 - Assessment findings:
 - Four projects have been completed, are nearing completion or are no longer being pursued.
 - Eleven projects are moving forward and do not appear to need additional assistance.
 - Ten projects may benefit from CSAMP engagement, but the role for CSAMP is not clear.
 - Recommended next steps:
 - Waiting to finish ongoing planning studies before selecting specific projects for CSAMP engagement.
 - Promoting modeling of benefits for all the actions.
- Member questions/comments and responses:
 - Will there be additional conversation regarding CSAMP's role in modeling?

- Yes. The intent is not to have CSAMP responsible for all modeling, but rather for CSAMP to promote additional modeling as needed.
 - We should focus on modeling that is associated with actions (e.g. SIT) to better understand benefits of a particular action, particularly for those associated with restoration.
 - We can elaborate on the second recommendation to speak to this.
 - Part of CAMT's role could be to highlight benefits of a particular action. It could be helpful to have a conversation regarding the level of agreement related to the anticipated benefits of specific actions.
- Members to:
 - Send Bruce edits by April 24. Memo to be finalized at May Subcommittee meeting.
 - Identify where there have been attempts to quantify benefits of a particular action and ultimately share with CAMT to see if there is agreement.

4. DSP & Prop 1 Funded Studies

- In the interest of bringing presentations on recent scientific studies to CAMT and the Policy Group, the Subcommittee reviewed two spreadsheets of [Prop 1-funded studies](#) and [Delta Stewardship Council-funded salmon projects](#)
- Review of Prop-1 and DSP funded studies is a CAMT 2020 Workplan item and serves as a means for the Subcommittee to assess upcoming projects and where its feedback may be useful in a project's development.
- Spreadsheets to be updated as follows:
 - Adding predation studies in the Delta that have been funded.
 - For the two completed projects, add deliverables/reports and distribute them to Subcommittee.
- At the May Subcommittee meeting, identify projects that would be most useful for CAMT to hear about.
- Members to:
 - Provide Pascale with edits to letter soliciting engagement opportunities with DSP-funded PIs.
 - Provide Brycen with edits to the Prop-1 funded spreadsheet.

4. Salmonid Entrainment Approaches

- In early 2020, the Subcommittee initiated a discussion on the need for additional evaluation and assessment of salmonid entrainment associated with CVP and SWP operations in the Delta.
- Three proposed methods for CAMT's consideration in determining next steps for assessing salmonid entrainment are:
 - A) Identify a sub-team of the Subcommittee to lead a 1-2-year effort focused on salmonid entrainment.
 - B) Issue a contract to address the same specific tasks identified in the above option, with the objective of reducing the implementation period. The contractor would need to work under the guidance of the Subcommittee or the sub-team.
 - C) Convene a work group to synthesize available information and consider whether existing salvage limits are functioning as intended, or whether they can be improved. This synthesis effort will help biologists and managers: 1) come to a common understanding of juvenile salmonid entrainment, 2) inform ongoing water project operations, and 3) identify key uncertainties that might benefit from

additional research or monitoring. The effort is timely because proposed increases to April-May exports and the absence of the Head of Old River barrier may lead to increased salvage of juvenile salmonids.

- Member questions/comments and responses:
 - There are benefits to all three options. Consider starting with A then moving into B then C. It would be good to have a sub-team assess what has been done and what is underway. The BiOP and ITP have new science actions requirements that address some aspects of salmonid entrainment.
 - An outside entity would be helpful in organizing a workshop and distilling its results as well as keeping tabs to make sure action items are completed.
 - Concerned about holding another workshop as there were not a lot of products that came out of the 2018 workshop and it's not clear how information from them is currently being used.
 - Concerned that this effort should not be solely focused on updating the SST report.
- A sub-group of the Subcommittee will meet during the week of April 13 to discuss what management questions should be answered through this effort. Those questions will be vetted during the May Subcommittee meeting before being presented to CAMT.

5. SFEI Rearing Habitat Study Presentation

- While CAMT and CSAMP have received presentations on the report as it was being developed, the study's findings have not been presented to either group. As such, the intent of this presentation is to focus on next steps rather than diving into the details of the report.
- The purpose of the study was to:
 - Provide a resource for future restoration planning
 - Support future Prop 1 submittals and evaluations
 - Improve the effectiveness of restoration investments
- Parameters considered included:
 - Water Depth
 - Water Velocity
 - Water Temperature
 - Channel Configuration
 - Presence of Wetlands
 - Presence of SAV/FAV
- Study identified specific locations throughout the Delta that fall within the following color-coded categories as it relates to suitability for rearing habitats:
 - Yellow: investment would be fruitful
 - Orange: more information needed before confirming usefulness of investment
 - Red: more study is needed
- San Joaquin rearing habitats were deemed high-risk and generally fell within the orange category.
- Next steps include:
 - Make mapping more accessible for restoration planning.
 - Better define hydrodynamic criteria.
 - Improve mapping of shoreline and substrates (including shoals).

- Consider how to reflect other stressors (e.g. predation, contaminants).
- Member questions/comments and responses
 - Consider adding a bullet regarding the need for continued outreach on the findings of the study.
 - Consider making the map that highlights the study's findings interactive.
 - Hydrodynamic criteria is sufficiently defined, the next step has more to do with how best to incorporate it.
 - We have good representation from CAMT on this topic within the Subcommittee. I suggest we work on finalizing the presentation internally with the goal of sharing with CSAMP in May.
 - This group should discuss the management implications of these findings, particularly around survival of San Joaquin origin fish in both the short and long-term. Additional conversation is needed regarding what's entailed by science activities outlined in the next steps.
- Bruce to work with Rene, John, and Alison to update presentation.
- Bruce to ask SFEI if they can present to CSAMP.