

OUTCOMES MEMORANDUM

TO: CAMT Members
FROM: Bruce DiGennaro
DATE: August 25, 2020
RE: August 18, 2020 CAMT Meeting #94

Attendees: Ben Geske, Brad Cavallo, Carl Wilcox, Cathy Marcinkevage, Dana Lee, Darcy Austin, Deanna Sereno, Denise Reed, Erik Loboschefskey, Erin Cole, Frances Brewster, Graham Long, Jennifer Pierre, John Ferguson, Josh Israel, Kate Spear, Kaylee Allen, Lenny Grimaldo, Louise Conrad, Lynda Smith, Mario Manzo, Matthew Holland, Pat Coulston, Rachel Johnson, Rene Henery, Rosemary Hartman, Sally Rudd, Sam Luoma, Scott Peterson, Shawn Acuna, Sheila Greene, Stephanie Fong, Steve Culberson, You Chen Chao, Yuan Liu

Action Items:

- Bruce – share paper abstract and coordinate a dry run presentation with Ted Sommer
- Denise/Compass – discuss Adaptive Management framework proposal

Discussion Highlights:

1. Agenda and Updates

- Salmon Entrainment – effort is on pause while considering ITP requirements
- Frank's Tract – Public Draft Report is out for comment until 9/2. Hoping to have report finalized by the end of September
 - What are the next steps?
 - We are looking for a champion. This is as far as the Department is going to take it. The project came out of the smelt resiliency strategy, looking for broader interest in moving forward with local support.
 - Seems like there's been a lot of great outreach
 - ◆ Will bring it back to CAMT to see if there are opportunities for support
- Delta Smelt Supplementation Strategy and CASS Facilitation – Supplementation Strategy was released. CASS team is guiding interagency supplementation implementation. Bruce will be facilitating.

2. 9/2 Policy Group Agenda (10am-12pm, MS Teams)

- Takeaways from July Policy Group meeting
 - Too many items on the agenda, not enough time to engage in discussion
 - Send updates in advance rather than taking time with them during the meeting
- Potential Agenda Items
 - Updates
 - Yolo Bypass Synthesis Paper (Ted Sommer, Louise Conrad)
 - Delta Smelt SDM and AM Framework
- Questions/Comments
 - Is the Yolo Bypass synthesis paper about the value of flooded ag land as juvenile habitat?
 - Yes.
 - It has been accepted for publication. Speaks to the question of whether we can

collaborate with farmers to leverage their land for salmon habitat. Valuable for Policy Group to hear. Comfortable moving forward without a formal meeting to review (or consider reviewing by email)

- Seems topical (e.g., 2021 NMFS symposium on managing flood plains). Not sure how applicable findings are to efforts emerging on Bypass.
 - Actively using paper in discussion with DWR in terms of floodplain criteria (including adult passage). Recommendations are driving policy- though it's important to acknowledge that the Big Notch project doesn't include this. First step towards a critical component of salmon restoration.
- Would feel a lot more comfortable if we could see the presentation prior to the Policy Group meeting.
 - We've talked about previewing presentations and providing more context (intro/framing) for Policy Group members
- Consider clarifying CAMT's role in this moving this forward (i.e., is this an endorsement?)
 - Does not need CAMT endorsement. Would be helpful to solicit input on related management needs from CAMT members to frame 2021 symposium.
- There has been interest in upstream projects, it would be nice to honor that with a discussion regarding the Yolo Bypass.
 - To be fair and consistent, would like to have CAMT review. Also, if it's just an update then maybe just include by email (as per feedback received)
- Is there a planned set of topics to bring to the Policy Group for the next year?
 - Don't have a current long-term plan beyond talking about priorities. Originally we were thinking the September meeting would be salmon focused but that fell apart (CSSP delayed, Salmon Entrainment on hold)
 - Is this something the Policy Liaison group could tackle?
 - ◆ A lot of topics arise in an ad-hoc fashion. Like the idea of a list of topics the Policy Group is interested in, but want to remain flexible.
- Sounds like we need more time for this and will push it from Sept agenda

3. Suisun Marsh Salinity Control Gates

- Three large radial gates blocking slough
- Unique tidal pump structure that pumps fresh water into marsh, closes during flood tide to prevent saltier water from moving in
- Delta smelt prefer low salinity rearing habitat, can operate gates to enhance marsh habitat (during summer, especially in low outflow years)
- Summer Gate operation will:
 - Lower salinity in Suisun Marsh (better for smelt)
 - Result in more complex habitat, and better food resources
 - Improve smelt feeding, growth, survival, life history diversity
- 2019 BiOp and 2020 ITP include summer operation
 - In a wet year, if analysis shows benefits → 60 days of operation, Beldens at 4ppt
 - In an above normal year → 60 days of operation, Beldens at 4ppt
 - In a below normal year → 60 days of operation, Beldens at 4ppt
 - In a dry year, if previous year was wet or above normal → 60 days of operation, Beldens at 4ppt

Facilitator Notes, Not Reviewed or Approved by Meeting Participants

- In a dry year, if previous year was below normal → 30 days of operation, Beldens at 6ppt
- In a dry year, if previous year was dry or critical → Try and do a partial action
- No action in 2020
- Collaborative (DCG, IEP, Suisun Monitoring Team) adaptive management approach
- Evaluation limited by lack of control group, use of existing surveys/modeling, rarity of smelt (using cage studies to mitigate)
- Draft Goals
 - Salinity below 4ppt at Belden's
 - Allow Delta Smelt access to Suisun Marsh
 - Improve Delta Smelt habitat
 - Improved Delta smelt health, condition and population metrics
- Outstanding issues
 - Invasive weeds
 - Additional fish monitoring (especially eastern edge of Montezuma Slough)
 - Support for long-term zooplankton monitoring (currently partnering with DWR but their resources are strained)
- Questions/Comments
 - Long time series can act as a control group for experiment evaluation. Are there any plans to do a synthesis of flow impacts to develop a baseline for how Suisun Bay acts without an action? Also, can you do cage studies in non-action years?
 - Yes, we're looking at the historic record. A paper will be published soon on summer conditions following dry/wet years. Seems that operation of gates makes summers following dry years look more like summers following wet years. Undertook cages studies last year (also a no-action year) but not this year (staff strained due to covid).
 - What is the relationship between modeled and predicted salinity?
 - Compared 2018 salinity modeling with USGS transects near the mouth of Montezuma slough. Paper forthcoming exploring differences.
 - Acoustic doppler on western edge will be better for calibration.
 - PWAs support this action (added it to resiliency strategy). Don't recall 2018 being a success, some predicted outcomes weren't observed (e.g., temperature - possibly due to fires). Assume salinity control is working in terms of lowering salinity but not clear on other conclusions
 - We successfully freshened the marsh in 2018 and seem to have provided/improved habitat. Other predictions weren't proven out (e.g., temperature – though there were pockets of temp refugia).
 - My understanding of hypothesis was that if you lead smelt into marsh they will have better success, concerned that current monitoring won't answer that question. We developed an adaptive management plan for this action would urge DWR to review and be more deliberate/focused in the monitoring that's needed for adaptive management.
 - ◆ Cage studies should help address this issue of smelt success – almost impossible to catch them.
 - ◆ DWR is committed to DCG process underway, should help produce targeted monitoring plan that's needed to evaluate our hypotheses

- How do folks feel about sharing this with the Policy Group?
 - Frame up to Policy Group isn't ready (requires broader coordination, would help to have a longer term game plan for topics to take to Policy Group)
 - Needs more discussion given outstanding questions about monitoring

4. Delta Smelt SDM and Adaptive Management Framework

○ SDM Progress Update

- Website is being prepared by FlowWest
- Analyzing parallel efforts underway, should help:
 - create a foundation for discussing hypothesized caused and effect relationships that impact smelt conditions
 - define delta smelt objectives
 - identify candidate management actions
 - explore analytical methods
- Basic conceptual model creates pathways between life stages and various factors/actions
- Candidate management actions have been grouped (e.g., Summer-Fall Actions, Temperature Actions, Contaminant Actions) contextualized (e.g., Resiliency Strategy, BiOp/ITP), characterized (e.g., timeline to benefits, potential scale of benefits, cost magnitude), prioritized and binned (in terms of stage of development).
- TWG has identified roughly 40 actions addressing the full range of high priority impact pathways identified
 - Most actions are at a 'pre-feasibility' stage of development and need further elaboration and TWG discussion to either:
 - Find reasons to reject them
 - Prepare them for appropriate levels of analysis
- Trying to balance moving forward on actions that are urgent because of regulatory environment and others that are no less critical. In a new development, seems that summer fall actions are going to be examined independently so there is an opportunity to take a step back and develop adaptive management framework and explore feasibility of all actions systematically
- Questions/Comments
 - How will independent summer fall action evaluation align with this effort?
 - There will need to be coordination between efforts. Goal is to avoid redundancy.
 - Trying to build bridges with DCG members. In first stages of coordination, still trying to figure out how DCG is going to function. Too early for others to make calculations based on what the DCG might do.
 - Currently discussing what SDM Phase 3 looks like – good time to be having these discussions.
 - Absent regulatory drivers, what SDM path would you advocate pursuing?
 - Preference is for Option 2 (i.e., stepping back and looking at all actions systematically rather than rushing to address the summer fall actions).
 - ◆ Important for Policy Group to hear Graham's perspective
 - Is choosing between Options 1 and 2 an action item for the Policy Group? Has the decision already been made?
 - Have been deferring to Steering Committee (concurred that Option 2 makes sense).

Wasn't thinking of proposing this as a choice for Policy Group, more of a status report.

- Many actions are at prefeasibility stage, whereas summer fall actions are further along
- Haven't had time to talk about this with DCG, still on the fence and not sure CAMT should take the lead.
- Critical that these efforts be tightly integrated
- Does DCG represent everyone on CAMT? Don't want to see a situation where a more timely/less thorough analysis is injected into SDM process
 - Fair amount of CAMT members on DCG
 - BiOp and ITP established DCG with slightly different specifications in terms of representation
 - ◆ Are reps policy/management/technical focused?
 - ◇ Mostly technical (with additional technical support)
- CSAMP Adaptive Management Framework for Delta Smelt
 - Hoping to determine whether there's enough support at CAMT to continue developing Adaptive Management Framework proposal. Have already engaged Brycen, CAMT Co-Chairs, others.
 - CSAMP has significant ongoing efforts related to Delta Smelt (SDM and DSSP) but:
 - Haven't formalized connections between them
 - Seems like there's hesitancy about adopting DSSP because of uncertainty around agencies' commitments
 - CSAMP's role isn't clear
 - Goal: connect components through common vision through AM framework
 - Development of AM framework shouldn't be a lengthy effort as many of the components already exist (i.e., CSAMP members are already undertaking related science and management activities)
 - Envisioning a 10 page strategic framework including the following content:
 - Goal (CSAMP Management Goal for Delta Smelt)
 - CSAMP guiding principles (DSSP principles + other possible governance and management related principles)
 - Clarification of CSAMP's role, contributions and responsibilities (planning, forum for communication and feedback, ongoing contributions)
 - AM Process that integrates CSAMP's activities with other actors
 - There are multiple and concurrent AM processes that address the same goals but are operating at different scales and answering different questions (e.g., CSAMP works at a strategic scale, whereas ITP works at more management action scale)
 - AM Wheel
 - Defining the problem (from SDM scoping project workshop)
 - Establish goals and objectives (Management Goal for Delta Smelt updated by SDM Steering Committee 2/21/20)
 - Model linkages between actions and objectives (links SDM and DSSP, e.g. through filling knowledge gaps by prioritizing scientific studies)
 - Recommending/selecting management actions (CSAMP to evaluate actions through SDM and make recommendations, agencies ultimately responsible for deciding whether to pursue and implement)
 - Design and Implement Action and Monitoring Plan (implementing entities are responsible for designing and implementing management actions and monitoring plans – CSAMP could review and provide feedback on early scoping and draft plans)

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- Monitoring (DSSP includes review of existing monitoring and recommendations for new monitoring – would be integrated into AM framework)
- Analyze, Synthesize and Evaluate Monitoring Data & Communicate Current Understanding (CSAMP role would be providing feedback on draft analyses and sponsoring synthesis activities)
- Adapt
- Preliminary Process Steps for Developing CSAMP AM Framework for Delta Smelt:
 - Receive direction from CAMT to commence
 - CAMT Member Survey – level of support for each of the 9 recommendations in the DS Science Plan
 - Compass calls with CAMT members
 - Thoughts, questions, hopes, concerns based on sketch presented in this presentation and survey
 - CAMT Workshop #1
 - Discuss key issues/questions from interviews
 - CAMT Workshop #2
 - Review draft CSAMP AM Framework for Delta Smelt
 - Seek CAMT approval
 - Seek Policy Group approval
- Questions/Comments
 - Will be important to outline IEP's role (especially in terms of monitoring)
 - Do you envision that there will be a person in charge of moving us through these steps?
 - That might be a key question that we talk to people about during interviews
 - Appreciate the way this is framing the interaction between SDM and DSSP and codifying the role of CSAMP in regards to implementing them both. Concerned that the Policy Group may perceive this as a new proposal (as opposed to the fruition of something we've long planned on tying together)
 - Seems like it could greatly help with coordination and actually enable undertaking adaptive management.
 - Would like to see if there's a way to make this complimentary with ITP sooner rather than later
 - What are the proposed next steps?
 - Assuming there's support, it would be included as part of Phase 3 scope, likely a two-month effort starting in October.
 - Would encourage Compass to reach out to Denise Reed for input.
 - Consider keeping AM Wheel elements at a higher level for Policy Group presentation