

## OUTCOMES MEMORANDUM

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**TO:** CAMT Members  
**FROM:** Bruce DiGennaro  
**DATE:** April 24, 2020  
**RE:** April 21, 2020 CAMT Meeting #90

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**Attendees:** Alex Peltzer, Ben Geske, Brett Harvey, Brycen Swart, Carl Wilcox, Chuck Hanson, Corey Phillis, Dan Ohlson, Dana Lee, Darcy Austin, Deanna Sereno, Denise Reed, Erik Loboschfsky, Erin Cole, Eva Bush, Frances Brewster, Henry DeBey, Jason Peltier, John Ferguson, Josh Israel, Kate Spear, Larry Brown, Louise Conrad, Lynda Smith, Matt Holland, Rachel Johnson, Rene Henery, Richard Connon, Sam Luoma, Scott Hamilton, Shawn Acuna, Stephanie Fong, Steve Culberson, Ted Sommer

### Action Items:

- Bruce – circulate link to ITP background info/analysis and consider adding update to May Policy Group agenda
- Frances, Stephanie, Sam, Shawn – work with Richard Connon to fine tune Contaminants presentation for May Policy Group meeting
- Bruce/All – revise Retrospective PPT presentation
- Bruce – set up conversation to discuss what to share with Policy Group on DSSP Action Plan

### Discussion Highlights:

#### 1. Agenda and Updates

- Incidental Take Permit (ITP) Update
  - 10 year take permit that includes adaptive management program
  - Facilitates integration with Voluntary Agreement process
  - Includes Delta Smelt, Long Fin Smelt, salmon
  - Geographic extent = Delta (does not include Oroville, or head of Old River), covers Georgiana Slough and facilities in Suisun Marsh
  - Incorporates monitoring and decision-making processes in BiOps, includes daily loss triggers
  - Includes additional surveys (long fin smelt larvae)
  - Includes Delta smelt summer fall habitat considerations and additional habitat restoration
  - Includes juvenile rearing habitat for Chinook, adult fish passage and completion of Yolo Bypass, minimization of barrier at Georgiana Slough
  - Questions/Comments
    - Given the unknowns around this year's budget, what is the status of monitoring elements?
      - Coronavirus is a bigger issue than the budget. Several monitoring activities have been called off due to coronavirus restrictions (e.g., smelt larval survey, 20mm is returning in limited fashion, environmental monitoring program)
      - Moving ahead with planning activities for efforts with long lead times
    - What is the status of hiring (especially for analytical positions)? Concerned that there will be a need for extensive analytics.
      - Hiring is not currently underway, aware that adaptive management component will require analytics but have yet to sort this out.
      - New positions at Technical Specialist level will help with analytics
    - Should we consider updating the Policy Group on ITP or is this too technical?

Facilitator Notes, Not Reviewed or Approved by Meeting Participants

- Yes, they should hear this
  - Consider tailoring presentation to focus on differences from previous ITP
- Delta Smelt LCM Workshop
  - Workshop #2 will be held remotely on 5/15, 9am-12pm
  - Submit questions/comments by 4/24
- Salmon Actions Update
  - Intend to share Salmon Action Update memo and recommendations at May CAMT meeting.
    - No recommendations on actions until after CSSP
    - Support modeling of actions
- Accessibility of technical team notes
  - May CAMT agenda discussion item regarding whether/how to make committee/subcommittee notes publicly available. Notes are currently being taken but are not widely circulated or reviewed.
    - Concern regarding the need to review notes if they're going to be shared broadly and the associated time/effort
    - Concern regarding impacts on the ability to speak freely in meetings given ongoing litigation
      - CVPIA has been able to share notes widely, does not appear to be impeding discussions
- Restoration Needs Management Brief
  - Salmon Science Needs Paper – a CV salmon LCM subgroup work product
  - Hoping to address key data gap regarding how salmon respond to habitat (restoration)
  - Estimating scale (\$ and time) of monitoring needed and developing management brief
  - Questions/Comments
    - Appreciate this effort, have heard from numerous researchers that this is a major gap
    - Is this a direct follow on to SAIL?
      - Not a direct follow, but pulls elements forward. Less about monitoring and more about targeted monitoring (related to models being used for decision making)
    - How is the last three year's of work integrated?
      - Intend to integrate study findings (distribution of salmon growth rates) into SIT model
    - Consider bringing through Salmon Subcommittee as a first step to share what has been learned (and inject into Coordinated Salmonid Science Plan)
    - September Policy Group meeting will be salmon focused (e.g., CSSP and SacRiver Partnership) might be a better fit than May Policy Group

2. Preparation for May 13 Policy Group Outflow Presentation(s)

- Draft agenda:
  - Agenda Review, Consent Items and Updates
  - Adopt Delta Smelt Science Plan – Consent Item
  - Monitoring Update
    - During monitoring update section, consider including how annual indices will be modified as a result of coronavirus disruptions to monitoring
      - Consider having each agency speak to their monitoring efforts
        - Concerned that this might be too time intensive, would prefer to have a single person (Steve? Stephanie?) run through the list
- Longfin Smelt Symposium (Kimmerer)
- CSAMP Retrospective and Funding
- Delta Smelt Science Updates
  - Delta Smelt Science and Float MAST (Brown)
  - Contaminants (Connon)

- Other Relevant Science Activity
  - Frank's Tract Restoration
  - SFEI Rearing Habitat Study
  - Delta Smelt Science Plan Implementation
- 3. Contaminants Presentation (Connon)
  - Contaminants are not a single stressor, rather they are different classes, modes of actions, toxicities, application uses and times, locations etc
    - Multiple stressors often do not have linear relationships with one another
    - Need for more multiple stressor studies to better understand interactions in environment
  - Focus on behavior (photomotor behavior paradigm for larval Delta Smelt w/ yolk sack based on light/dark)
    - Exposure to different compounds can induce various photomotor abnormalities
    - Example: exposed smelt to pyrethroid and organophosphate at different representative amounts (CSC, tributaries, ag ditches), sampled behavior at different exposure times
      - Pyrethroid – all doses showed hyperactivity during light condition
      - Organophosphate – hypoactivity during dark condition
  - Reproductive studies are not completed
    - Bifenthrin tests: Small changes in gene expression, leading to changes in protein expression, linked with reduced fertility, reduction in fecundity
    - Contaminant concentrations can lead to sex reversals and the ratio of males/females leading to population decline
    - Current multi-stressor study underway: Pyrethroids at varying salinity
  - Questions/Comments
    - Consider working w/ CAMT members (Frances, Stephanie, Sam, Shawn) to fine tune presentation for May Policy Group
    - Recommend highlighting:
      - Conceptual model diagrams (habitat compression)
      - Discuss management levers available
      - Studies regarding interactions of multiple stressors
      - Classes of contaminants
    - What is CAMT members' message to Policy Group? What are the available actions/needs?
- 4. Revisions to Larry's Presentation (Brown)
  - Revisions made to previous version that was presented at March CAMT meeting:
    - Overview slide regarding how Float-MAST fits into CSAMP engagement on Delta Smelt (e.g., DSSP, structured decision making)
    - DSSP communication plan recommendation
    - Baseline time frame + longer historic view
    - Most recent estimates for availability of various data streams
    - IEP data availability progress
    - Invest resources in detection or recovery actions?
    - Proposed changes to Float-MAST reporting
  - Questions/Comments
    - Appreciate linkages to DSSP, would hate to lose that even if DSSP is going to be discussed elsewhere
    - Flag for future conversation: given multiple factors are at play, how do we prioritize research/actions?
      - SDM work is a more holistic view, factors are being looked at individually but trying to identify full suite of activities
- 5. Revisions to CSAMP Retrospective and Status Report

- Internal evaluation, only reflects CAMT studies (can ask Policy Group if they would like a broader analysis of current knowledge)
- Original CSAMP purpose (2013) expanded in 2017
- CSAMP priorities (2013, additions in 2019/20)
- Approach
  - Forum (e.g., Policy Group meetings, CAMT and technical team meetings, Winter Run Life Cycle Model workshops)
  - Catalyst (e.g., promoted formation of Float IEP PWT, DSSP, CSSP, SDM for Delta Smelt)
  - Compile/disseminate information (e.g., Delta Smelt entrainment, Effects of Water Operations on Juvenile Salmonid Migration and Survival in the South Delta)
  - Technical Production Models
    - Independent contractors (e.g., Entrainment, Fall Outflow)
    - In-house staff (e.g., SST Salmonid Report)
    - Consultant guided (e.g., CSSP, DSSP)
    - Partnerships (e.g., SFEI Rearing Habitat Study)
  - Management Questions
    - 19 selected from original list of 104 created in 2013
    - More recent management questions from Paul Souza
  - Findings
    - IEP biases
    - Factors contributing to Smelt entrainment
    - Project operation impacts on salmon survival in South Delta
  - CSAMP Expenditures
    - Annual capital expenditures have decreased (does not include in-kind staff time)
    - Contributions by agency have been fairly balanced over time
  - Current Focus
    - Evaluate Management Actions
      - Structured Decision Making for Delta Smelt
      - Assist with BiOp and ITP actions
    - Improve Science Planning, Coordination and Communications
      - Coordinated Salmonid Science Planning
      - Delta Smelt Science Plan
      - Winter Run Life Cycle Model Workshops
  - Future Management Needs
    - How are species responding to specific management actions?
      - Water operations
      - Habitat restoration
    - Information flow
  - Questions/Comments
    - “Examples of Recent Management Questions” – are we questioning science or trying to get a better understanding through science?
      - Consider removing this slide as it might give too much weight to recent off-the-cuff questions (relative to the collaboratively produced 2013 questions)
    - Concerned that self-assessment may come across as being too myopic.
      - Consider adding caveat and/or revised diagram showing how CSAMP/CAMT fits into broader efforts
      - Consider showing how CAMT/CSAMP’s is aligned with other efforts (e.g., science action agenda).

- Is the plan to provide Status Report at the same time as Retrospective? It seems like this could lead to a lot of questions that aren't necessarily addressed in PPT.
  - Yes, will be provided as a handout in advance. Tried to provide highlights in PPT but may be trying to do too much.

#### 6. DSSP Implementation Action Plan (Swart)

- Created action plan based on nine recommended next steps in DSSP
- Top three priority actions:
  - Adopt programmatic three-year science planning process (plus annual supplements)
    - Six-month planning period (June – Nov 2020) to identify candidate activities, assess resource availability, prioritize activities, finalize
  - Develop decision support model
    - Integrated process-based tool to predict the effects of annual flow related management actions
      - Process already underway (Denise Reed convening experts)
  - Synthesis Topics
    - Utilize IEP synthesis team as forum to develop list of topics
    - Refine list of current and future synthesis efforts based on IEP Science Strategy to be smelt specific and coordinate efforts going forward
- Other actions:
  - Convene workshop on new field survey techniques
  - Establish independent science panel on non-take detection of Delta Smelt
  - Inventory isotopic signatures of potential carbon sources
  - Engage Contaminants PWT to plan and conduct specific experiments
  - Solicit proposals relevant to understanding Delta Smelt mgmt. action
- Questions/Comments
  - Who plans the actions? Concerned that we need an “action champion” to coordinate actions and ensure that actions can and do happen. Recommend including this as part of the action plan.
    - Science Manager might fulfill this role, can make that more explicit in the action plan and presentation.
    - Brittany's efforts w/ Yolo could be used as an example of an “action champion”
    - Seems like a coordinated, cohesive program is more critical than individual champions/efforts.
  - Consider coordinating reporting slide with Larry's presentation. Is there overlap between this and FLOAT-MAST reporting?
    - Proposed FLOAT-MAST reporting was designed to fit into DSSP planning process (goal is to unify/integrate activities, reduce inefficiency/redundancy)
  - Appreciate leveraging of existing science programs/efforts/processes
  - What level of detail on Action Plan should we share with Policy Group in May?
    - Consider more discussion between agencies about roles and responsibilities before sharing with Policy Group

#### 7. Frank's Tract (Wilcox)

- “Franks Tract Futures” report received negative reaction from local community, in response second phase has been focused on engaging the community on design and integrating into structured decision making process
- Project goals: recreation opportunities, species/ecological benefits, water quality/supply
- Conducted geo-spatial survey (re: recreation/uses/navigation routes)
- Iterative design process (down to three options + no change)
  - 3A - Open water berm and channel
    - Concerned about property value

## Facilitator Notes, Not Reviewed or Approved by Meeting Participants

- Don't want public access to Bethel marinas
  - Don't like peninsula of land, only one route
- 3B - Central landmass (preferred concept)
  - Divides Franks Tract roughly in half (sheltered eastern pool for recreation)
  - Two routes through tract
- 3C - Eastern landmass
  - Two routes
- Ecological performance
  - Started as smelt restoration, has become more broadly focused
  - Salinity – all options beneficial, 3B performs best
- Next steps
  - Webinar to solicit feedback
  - Final report in July
- Questions/comments
  - Will deep areas have to be continuously dredged?
    - Not much sedimentation, not anticipating much deposition
    - Only briefly reclaimed and not terribly subsided, dredged areas should not require ongoing maintenance
  - What is objective for sharing with Policy Group?
    - Primarily to inform them and get them interested in further pursuits
  - How will local economy metrics be determined?
    - External consultants will be addressing this (in progress)
  - Where will report live once final?
    - On DWR's website. As far as where does this go from here? Interested in spurring a conversation regarding two perspectives on ecological restoration (expanding edges vs restoring undesirable areas)
  - In results table, which rows address water quality?
    - It falls under "Water Quality and Supply Reliability" which is rolling up numerous metrics.