

OUTCOMES MEMORANDUM

TO: Core Working Group
RE: April 14, 2021 Core Working Group Meeting #1

Meeting Attendees:

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|------------------------------|--------------------------------------|
| Morgan Kilgour, CDFW | Julie Rentner, River Partners |
| Colin Purdy, CDFW | Helen Swagerty, River Partners |
| Andrea Buckley, CVFPB | |
| Ruth Darling, CVFPB | <u>Consultant Team</u> |
| Jesus Esparza, DWR | Chris Campbell, CBEC |
| David Martasian, DWR | Greg Kamman, CBEC |
| David Pesavento, DWR | Bruce DiGennaro, Essex Partnership |
| Maya Kepner, Dos Rios Norte | Terra Alpaugh, Kearns & West |
| Maria Rea, NMFS | Steve Zeug, Kramer Fish Sciences |
| Rene Henery, Trout Unlimited | Annie Brodsky, Kramer Fish Sciences |
| Jacob Katz, Trout Unlimited | Mark Henderson, USGS - Humbolt State |

Action Items:

1. CWG to send additional edits to the objectives via email.
2. The Project Team will provide a list of issues or topics they want more information on from the landowners.
3. CalTrout will share a correlation between escapement and water year with the Project Team.

Discussion Highlights:

1. Project Objectives & Structured Decision-Making (SDM)
 - a. The SDM Lead provided an overview of the SDM process: establishing objectives, developing alternatives intended to meet those objectives, and modeling the benefits and adverse consequences of those alternatives with respect to those objectives. A consequence table is used to score each alternative across multiple objectives; scores can be based on quantitative modeling outputs or a qualitative assessment from a subject matter expert.
 - i. A consequence table does not necessarily reveal a “best choice,” but it provides transparency around tradeoffs between alternatives.
 - ii. The steps in the SDM process can be abbreviated as **PrOACT**:
 1. Problem – solve the right problem
 2. Objectives – describe the desired objectives
 3. Alternatives – develop means for achieving objectives

Lower Sutter Bypass Anadromous Fish Habitat Management Planning Project

4. Consequences – predict outcomes of alternatives
 5. Tradeoffs – incorporate values and uncertainty into final decision
- b. Other key takeaways on the SDM process and objective setting included:
- i. All decisions are inherently statements about values; identifying key values enables decision makers to evaluate whether there are alternative solutions that still meet their values.
 - ii. Objectives can be classified as either *fundamental* (i.e., why is something important?) or *means* (i.e., how fundamental objectives can be achieved?).
 1. Fundamental objectives should be *measurable* (able to be quantified on an unambiguous scale), *controllable* (able to be influenced by the management action under consideration), and *essential* (something for which there is no acceptable substitute).
 2. CalTrout noted that for some fundamental objectives, there may be a hypothesis that the objective can be impacted (i.e., “controllable”), but managers may not yet be sure how or with exactly what management actions.
- c. The Project Team provided a list of draft fundamental and means objectives for CWG feedback; input on those objectives included:
- i. Dos Rios noted that objectives should highlight the differences in individual properties, their function, and what landowners need to continue to farm alongside a floodplain project.
 - ii. CalTrout stressed that means objectives should have a consistent level of resolution/specificity. For instance, means objective #2 is actually a means for providing food for salmon; the framing and connection with the fundamental objective should be clear and consistent across means objectives.
 1. CDFW does not feel that all the objectives need to be similar in scale.
 - iii. CDFW voiced concerns with the fundamental objective: rather than just salmon, CDFW is interested in overarching improvement of ecosystem function in the Sutter Bypass. Improving viability of Chinook might be a means objective for doing that.
 - iv. CDFW suggested that changing the wording in means objective #2 from “strategically manage” to minimize or maximize. The goal is more food and juvenile habitat.
 1. The Project Team clarified that “strategically manage” was used because additional frequency and duration of inundation is not always desirable (e.g., in very low flow years).
 2. CDFW countered that overall greater frequency and duration of inundation is desirable even though managers know it will not happen every year, which is why adaptive management is needed.
 3. CalTrout suggested that another way to state objective 2 is “provide physical conditions similar to wet years in dry and normal years”;

Lower Sutter Bypass Anadromous Fish Habitat Management Planning Project

- increasing frequency and duration could be sub-objectives.
- v. CDFW suggested adding a means objective of minimizing land use consequences, given that will be key to weighing alternatives as part of any consequence table.
 - 1. The facilitator clarified that the group will identify other things that need to be considered as part of the final decision; the means objectives are just intended to specify how to achieve the fundamental objective.
 - 2. CalTrout suggested that in order to achieve viability of salmon runs, floodplain projects need to coexist alongside pre-existing land uses. Projects must be agreeable to landowners and meet strict flood objectives. Therefore, a multi-benefit approach will be at the core of any project's success and should be part of the fundamental objective, rather than addressed later.
 - 3. Kramer Fish Science reminded the group that viability includes a range of components (e.g., hatchery influence, spatial structure) that will not be impacted by this project. The means objectives should look at the components of viability that can be impacted by the project. Given the limits of the project's influence, the objectives should avoid words like "avoid" or maximize."
 - vi. CDFW suggested adding viability of Butte Creek spring-run as part of the fundamental objective in addition to Sacramento and Feather River Chinook Salmon populations.
2. Fish Use of the Lower Sutter Bypass; *Objective: Discuss what we know about current access and use of the bypass by juvenile and adult salmon.*
- a. CalTrout said that the fish are arriving mostly in the winter; this is a very complex system and each hydrologic event allows different populations and different runs in from different rivers. A single haul can collect fish from all four runs.
 - b. Kramer Fish Sciences explained their intent to understand when certain runs will arrive in the Lower Sutter Bypass: they will use long-term monitoring from Red Bluff on the Sacramento as well as Butte Creek data to establish when the fish are moving and pair it with hydrologic data to assess whether there is access to the bypass. That analysis can be followed by applying Carson Jeffres' experimental work to estimate growth rates on the floodplain. How long fish may stay on the floodplain remains an open question.
 - i. Dos Rios noted that Carson has done genetic analysis of salmon found on these properties, which could provide more information.
 - c. The Butte Slough Outfall gates, a structure designed to drain water outside the Butte Sink near the Colusa Weir, are outside the planning area for this process, but CDFW noted that data suggests that infrastructure strongly influences how much water is

Lower Sutter Bypass Anadromous Fish Habitat Management Planning Project

flowing onto the Bypass. If the Sacramento River stage height is below Butte Sink, 500 cfs can flow out of the gates; juveniles move out and an attraction flow can form for adults, encouraging them to move into Butte Creek. This dynamic in turn decreases attraction to the bottom end of Sutter Bypass for Butte Creek spring run because flows are decreasing there. The outfall gates are old with limited operability; DWR is interested in replacing them but does not currently have an approach.

- d. CalTrout pointed to a correlation between escapement and water year. Cbec noted that while water year type is important and can increase productivity, it is not perfectly aligned with escapement numbers. CalTrout will share the correlation they are referring to. **[ACTION ITEM]**

3. Planning for Workshop #3: Ag Production

- a. River Partners asked the project team what they need to know from landowners to build their model.
 - i. The agroecology team will be building the economic model, so they will be the primary participants in this workshop. They will be prepared to share a brief summary of their approach if desired.
 - ii. Dos Rios suggested providing a list of issues or topics the project team wants more information on from the landowners. **[ACTION ITEM]**
 - iii. River Partners described their interest in understanding how flooding impacts individual properties and what recovery looks like.
- b. River Partners suggested including 10-15 min for Kramer Fish Sciences to describe the fish habitat availability model; this could be an opportunity to get input from those who are not part of the CWG.
 - i. CalTrout suggested that the CWG should discuss the model and ensure they are aligned before asking for additional feedback.
 - ii. Cbec noted that it is important to establish the objectives before diving into the modeling; the questions need to be established before the project team can coalesce on ways to answer them.
 - iii. The CWG agreed to review the objectives at the workshop.
- c. John Brennan invited participants to visit to see planting on the Bypass. It is a great year for farming on this property because they have riparian water rights on the Feather River, so there is not curtailment.