

Reinitiation of Consultation Sacramento River Technical Workgroup Charter

DRAFT February 26, 2018

This document describes the purpose, objectives, process, staffing, roles and responsibilities, and timeline of the interagency technical workgroups for the Reinitiation of Consultation (ROC) on the Coordinated Long-Term Operation (LTO) of the Central Valley Project (CVP) and State Water Project (SWP).

This document is draft, and may change throughout the process.

Purpose

The geographically based interagency technical workgroups are charged with identifying and developing ideas to meet the biological and operational functions of the CVP and SWP.

The scope of the Sacramento River technical workgroup includes Sacramento River actions as well as Shasta Dam actions and operations. It integrates effects of Trinity and Whiskeytown Reservoirs on the Sacramento River system. It also includes downstream and system-wide effects of Sacramento River operations, although these will also be covered in an Integration workgroup.

Objectives of the Reinitiation of Consultation

On August 2, 2016, Reclamation requested reinitiation of Endangered Species Act (ESA) Section 7 consultations with the United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) on the LTO of the CVP and SWP. Several factors prompted Reclamation to request reinitiation of consultation under the ESA, including the continued decline in the status of the listed species, the recent multiple years of drought, and the evolution of best available science. This consultation is expected to update the system-wide operating criteria for the LTO consistent with Section 7 requirements, to investigate the potential of including new and relevant conservation measures for listed species, and to review the existing Reasonable and Prudent Alternative (RPA) actions included in the 2008 USFWS Biological Opinion (BO) and 2009 NMFS BO to evaluate their continued substance and efficacy in meeting the requirements of Section 7 of the ESA.

The overall goal of the ROC is to achieve a durable and sustainable BO issued jointly by the USFWS and NMFS (or two closely coordinated BOs) that accounts for the updated status of the species, operation of new facilities constructed or expected to be constructed, including the California WaterFix project (CWF), and modifications to the operation of the CVP and SWP. In a

parallel process, the Department of Water Resources (DWR) will comply with the California Endangered Species Act (CESA) for the SWP.

Approach

The approach for the ROC on LTO process includes:

- “Fresh Look Concept”: The five agencies (Reclamation, USFWS, NMFS, DWR, and the California Department of Fish and Wildlife) aim to analyze revisions in the operation of the CVP and SWP, including appurtenant facilities, hatcheries, and inclusion of possible restoration, to account for new scientific knowledge and recent information.
- Biological objectives: The five agencies aim to focus the Proposed Action on meeting biological objectives, instead of focusing solely on operational objectives, through consideration of operations in conjunction with habitat restoration and construction.
- Best available science: The five agencies will use the best available scientific knowledge to set appropriate biological objectives to attain water use and species conservation goals.
- Science-based adaptive management: The Proposed Action is anticipated to include adaptive management provisions for adjustments over time based on new science.
- Transparency: Reclamation will establish a broad stakeholder engagement process, and will include a wide range of stakeholders, in coordination with the five agencies.
- Peer review: Peer review and/or independent review of new tools used and specific analyses is an important objective of this consultation.

Objectives of the Technical Workgroup process

The objectives of the technical workgroup process include:

- Brainstorm new ways to meet the biological and operational functions of the Sacramento River.
- Clearly link methods to science-based requirements to avoid a jeopardy determination.
- Identify tradeoffs between species needs and operational and biological objectives, and build consensus among different agencies to balance these needs to the extent possible.
- Develop ideas into potential options for inclusion in the ROC on LTO alternatives.
- Build trust and collaboration between agencies.
- Coordinate with the 5-agency management level team (Core Team) to schedule stakeholder meetings regarding ideas.
- Document ideas and any developments, constraints, or tradeoffs and resolutions in a report.

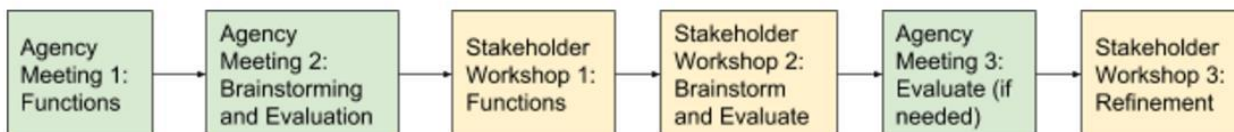
Background

The ROC on LTO is intended to be a “fresh look”, with new ideas and ways to meet biological objectives incorporated into the National Environmental Policy Act (NEPA) alternatives and ESA proposed action. Interdisciplinary, interagency technical workgroups have been organized by geographic area, which are expected to identify ideas that may go into alternatives, and develop these ideas to the extent possible.

A Core Team with representatives from Reclamation, DWR, USFWS, NMFS, and the Department of Fish and Wildlife (DFW) meets every two weeks. The Core Team encourages technical workgroups to coordinate with stakeholders to further evaluate and assess the ideas generated. However, all stakeholder outreach should occur after briefing or with the consent and collaboration of the Core Team.

Process and Schedule

- 1) Identify Functions
- 2) Brainstorm Solutions and Evaluate
- 3) Stakeholder Workshop – Identify Functions
- 4) Stakeholder Workshop – Brainstorm and Evaluate
- 5) Further Evaluation
- 6) Stakeholder Workshop – Solution Refinement
- 7) Documentation



Each technical workgroup process will start with an introduction by Reclamation’s Project Manager on the overall ROC process and how the technical workgroup input fits into the overall process. This presentation will include a discussion of the overall ROC on LTO objectives as well as this charter.

Step 1 - Identify functions

Technical workgroup meetings will include a presentation from Reclamation and/or DWR on the operations of the Sacramento River region of the CVP, including the variation in operations in different hydrologic conditions. This will be followed by a presentation from biologists on biological resources of importance in that region (e.g., fish species) which could use existing conceptual models from recent Interagency Ecological Program (IEP) efforts including the IEP Management, Analysis, and Synthesis Team (MAST) effort for Delta Smelt and the Salmon and Sturgeon Assessment, Indicators, Life Stages (SAIL) effort. These presentations will provide all technical workgroup members background information needed to inform their brainstorming

process. There are many constraints that could be considered (see Constraints section below), all of which can be changed with varying levels of effort. However, these will not be discussed in detail at this stage in order to encourage creative, open brainstorming. These presentations are expected to take 1-4 hours, depending on the region, and may be combined with a site visit.

For Step 1, the technical workgroup will identify the key functions of that region, such as: producing winter-run Chinook salmon and providing water. The technical workgroup should examine components of the baseline for the region and identify critical functions, which may have sub-components, also known as lower order functions, processes or factors. Physical processes / limiting factors could be the factors that could affect juvenile production, including temperature, predation, habitat, water quality, food, cover, etc, based on scientific research or published papers.

Identification of these functions and their subcomponents will be done using the FAST (Functional Analysis System Technique) process (Figure 1), in which the team will consider why each function is important, and then how each function operates, to develop a chart of higher and lower order functions of the system. This process is expected to be completed on Day 1.

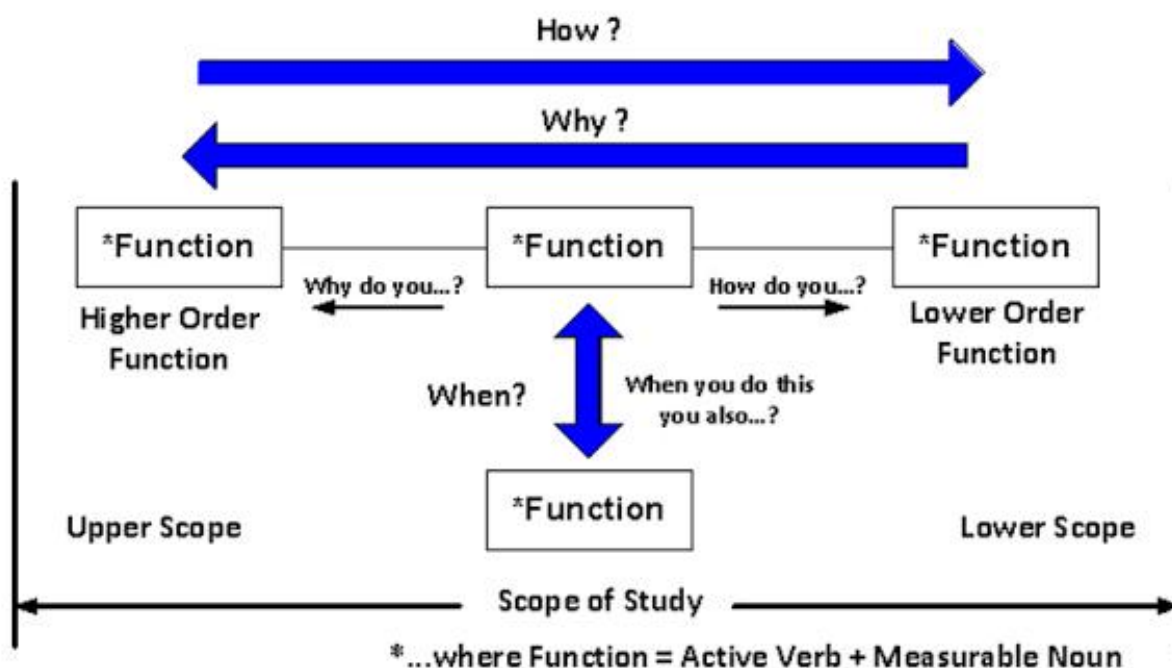


Figure 1: Functional Analysis System Technique Diagram (Source: <http://www.valueanalysis.ca/fast.php>)

After some functions are identified, functional analysis involves:

- Identifying more functions by asking “how” and “why.”
- Identifying how the function is achieved. Answers would be placed to the right of the function in terms of an active verb and measurable noun.
- Identifying why the function undertaken. Answers would be placed to the left of the function in terms of an active verb and measurable noun.

- When functions cannot be connected in terms of “how” and “why”, functions may be missing or redundant and the chart needs expansion.
- Some functions may happen at the same time. Identify when this function is done, what else is done or caused by the function?
- Higher order functions (towards the left), which could be: “produce Chinook salmon”, or “supply water” describe what is being accomplished by this region’s water supply system and rivers.
- Lower order functions (towards the right), which could be: “inundate floodplains” or “open slide gate for diversion” describe how the higher order functions are being accomplished.
- Functions that occur together with or as a result of each other can be plotted vertically, as shown in Figure 1 above.

Reclamation anticipates that identified functions will help to achieve biological objectives, based on similar parameters stated in the NMFS Viable Salmon Population (VSP) report (McElhany *et al.*, 2000). Biological objectives are intended to be trend lines in the right direction for the species over time – i.e. increasing 3-year average cohort replacement rates over years of similar hydrology, as an example. Thus recovery is not a requirement, but we do want to make sure the fish species are not moving towards extinction. As stated in McElhany *et al.* (2000), “four parameters form the key to evaluating population status. They are: abundance, population growth rate, population spatial structure, and diversity. NMFS focuses on these parameters for several reasons. First, they are reasonable predictors of extinction risk (viability). Second, they reflect general processes that are important to all populations of all species. For example, many factors influence abundance, (e.g., habitat quality, interactions with other species, harvest programs, etc.).”

The United States Fish and Wildlife Service uses a 3 “R”s approach, which has also been incorporated into Table 1. Resilience is population size and parameters such as reproductive output, fecundity, and survival. Redundancy is how many populations. Representation is genetic diversity and different ecological types inhabited.

Table 1: ROC on LTO Biological Objectives

Species	Viability Parameter	Description
Chinook Salmon, Steelhead	Abundance / Resilience	Avoid rapid decreases in cohort replacement rate, and increase in 3-year running average cohort replacement rate, controlled for hydrology
Chinook Salmon, Steelhead	Productivity / Resilience	Increase number of juveniles exiting the Delta per adult spawner, controlled for hydrology
Chinook Salmon, Steelhead	Spatial Structure / Redundancy	Increased number of river systems in which the species is observed;
Chinook Salmon, Steelhead	Diversity / Redundancy & Representation	Increase number of rearing / spawning / holding locations, controlled for hydrology

Reclamation anticipates a series of actions that are implemented in a tiered approach:

Protect: Predict adverse conditions and implement standard contingency plans to address potential extinction risks to fish populations.

Restore: Promote production of sufficient numbers of juveniles per adult to enable the rebuilding of fish populations.

Maintain: Operate water projects to support adult returns.

Step 2 - Brainstorm solutions

The next step will be to brainstorm solutions and ideas to meet the functions identified in Step 1. These ideas could include items such as: temperature control devices, adjusting releases to the spring from the summer, *etc.* The technical workgroup should encourage creative brainstorming, and all ideas will be considered during this phase, with no discussion of feasibility or constraints. Suggested alternatives need not be within the authorization of Reclamation and the DWR. A list of all ideas generated should be provided in the technical workgroup's documentation at the end of this process. Brainstorming is expected to take a half to a full day.

Step 3 - Evaluate

In this step, the technical workgroup will evaluate the ideas from Step 2, and consider all of the feasibility, species tradeoff, lifestage tradeoff, and physical constraints that are intentionally ignored in Step 2.

After evaluation, ideas should be refined to be accurate (contribute to meeting one or more functions), predictable, and flexible (allow for operational planning). Some ideas may have more development than other ideas. The technical workgroup will list advantages and disadvantages for each idea, including operational, water supply, biological, financial, and any other advantages and disadvantages. It is intended that each biological objective, or perhaps lowest level function from the FAST diagram, will have several strong ideas associated with it, to allow for operational flexibility given the wide range of extant hydrological conditions and other constraints. Workgroups are encouraged to collaborate and to build relationships among the workgroup members that will allow discussions of compromise and consideration of tradeoffs for different life-stages, species and beneficial uses of water. The more consensus the workgroups can build among members of the workgroup and stakeholders, the more likely the objective and set of ideas will become part of an alternative or a proposed action in the ROC on LTO. This step is expected to take a full day.

Step 4 - Stakeholder Workshop

The environmental Non-Governmental Organizations, fishing organizations, water users, and power customers are interested parties in this process. After the technical workgroup has gone through the FAST process and brainstormed ideas, the Point Person will coordinate with the Core Team, and the Core Team will organize a stakeholder workshop (likely a 1 day workshop) to build on the five agency ideas with thoughts from the wider group of interested participants. The technical workgroup should be prepared to bring their ideas, explain why their functions and

ideas are valuable to consider, and to come with an open mind to consider additional ideas if presented by stakeholders.

Step 5 - Evaluate

After the stakeholder workshop, the technical workgroup should collaborate to consider the stakeholder ideas, and any adjustments or additional thoughts to the technical workgroup ideas. The technical workgroup will identify advantages and disadvantages for all the ideas. This is expected to take half a day, and include assignment of action items to follow-up with stakeholders on any mitigation, if any, they may have in mind for the disadvantages of their ideas.

Step 6 - Stakeholder Follow-up

The technical workgroup should work with the Core Team to schedule a 2nd stakeholder workshop, for stakeholders to present refinements of their ideas to address disadvantages. It is possible that stakeholders may have ways to address or mitigate the disadvantages, and these should be considered.

Step 7 - Documentation - call

Finally, the technical workgroup will collaborate to consider the stakeholder ideas and document the entire technical workgroup process and findings. The documentation should include:

1. Functions (FAST diagram)
2. Lower level functions, linked to higher level functions with supporting scientific research/data
3. Biological Objectives (perhaps the same as high level functions)
4. Complete list of initial brainstormed items, including stakeholder input
5. Advantages and disadvantages of ideas
6. Mitigation ideas for disadvantages
7. Appendix: Documentation of stakeholder follow-up (brief notes)

An example is below:

Objective: Increase productivity

Function: Increase juvenile growth

Ideas to meet the function:

- Increase floodplain inundation frequency and duration by releasing pulses of 2,000 cubic feet per second every 2 weeks for 2 days
 - Advantages:
 - Disadvantages:
 - Refinements to reduce disadvantages:

- Floodplain habitat restoration of 200 acres of habitat near Joe's Slough that inundates at 500 cfs
 - Advantages:
 - Disadvantages:
 - Refinements to reduce disadvantages:

Timeline

Step	Date	Task Description
1	April, 2018	Presentation on overall operations for region Identify functions
2	April, 2018	Brainstorming
3	April, 2018	Evaluate
4	May, 2018	Stakeholder Workshop
5	June, 2018	Evaluate
6	July, 2018	Stakeholder Workshop
7	August, 2018	Report drafted and sent to workgroup for review
	August, 2018	Workgroup returns report revisions and comments

Roles and Responsibilities

The Point Person is responsible for setting up the meeting, determining the time, place, and agenda. The Point Person is also responsible for facilitating or finding someone else to facilitate. They promote constructive behavior within the group in collaboration with the facilitator. They guide the team through the process and take the lead in preparing the report.

The Note taker is responsible for taking notes at all technical workgroup meetings. These notes will be very useful for developing the report later on.

Technical workgroup members are responsible for bringing an open, collaborative spirit to this process, participating in the meetings, providing constructive input, being respectful of each other, and writing sections of the report as assigned by the Point Person.

The Core Team is responsible for stakeholder outreach. The Core Team will organize and plan the stakeholder workshops, and coordinate with the Point Person and technical workgroups on content.

Staffing

The Sacramento River Technical Workgroup participants will include:

- Katrina Harrison – Reclamation
- Ben Nelson - Reclamation
- Randi Field – Reclamation
- Paul Zedonis - Reclamation
- Mike Ford – DWR
- Mike Berry - DWR
- XXX – USFWS
- XXX – NMFS
- Garwin Yip – NMFS
- XXXX – DFW
- Brooke Roberts – DFW
- Ammon Danielson – WAPA
- Jerry Wilhite – WAPA
- Shane Capron - WAPA

Constraints

Existing constraints may include:

- Existing water supply contracts
- Existing water rights
- Release capacities
- Channel capacity

However, please do not weigh these constraints too heavily. The ROC does include operations, habitat restoration, and construction. The goal of a non-jeopardy BO will mean the existing RPA actions may be removed, incorporated into the proposed action, or some removed and some incorporated into the proposed action. Physical infrastructure can be changed. Water Rights orders can be amended through a petition process through the State Water Resources Control Board. Water contracts may have to be revised when long-term contracts are signed or after the ROC on LTO. Consider the feasibility, and the difficulty of changing the existing laws/regulations/infrastructure/etc., and identify these as disadvantages of the ideas, but do not preclude considering an idea just because it would be challenging.

References

McElhany, P., M.H. Ruckelshaus, M.J. Ford, T.C. Wainwright, and E.P. Bjorkstedt. 2000. Viable salmonid populations and the recovery of evolutionarily significant units. U.S. Dept. Commer., NOAA Tech. Memo. NMFS-NWFSC-42, 156 p.

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