

Meeting Summary
FISH WORK GROUP
Monday June 25, 2018
TRRP Office, Weaverville, CA

Wednesday, February 14, 2018: 9:00 AM

Participants

Core members: Amelia Fleitz (USFS), Kyle DeJulio (YTFFP), George Kautsky (HVTFFP), Seth Naman (NMFS, via phone), Steve Gough (USFWS, via phone), Ken Lindke (coordinator, CDFW)

Other participants: Aaron Martin (YTFFP), Jenny Norris (TRRP), Bill Pinnix (USFWS, via phone), Shane Quinn (YTFFP)

Action Items Derived During the Meeting

Action Item 1: Seth Naman will look up timeframes over which adult abundance objectives are defined for salmon rebuilding plans, such as SONCC coho, to inform recommendations of time-based objectives for adult salmonids (e.g., to accompany the 62,000 adult fall Chinook Salmon objective).

Action Item 2: Ken Lindke will contact Andy Hill to see if CDFW has raw data from carcass mark-recapture surveys in reaches 1-2 prior to 2005, and obtain those data if possible.

Action Items Outstanding from Previous Meetings

Action Item 1: Bill P. reported that he is still waiting for data before he can complete the comparison of S-R models based on the two adult data sets.

Summary of Meeting by Agenda Item

Welcome and introductions

The only event of note was the welcoming of a new core workgroup member from U.S. Forest Service, Amelia Fleitz.

Agenda review and additions

No additions were proposed

Purpose of meeting and intended outcomes

Ken described the purpose of the meeting to be three-fold: 1) get all members up to speed on the history of the metrics refinements exercise, which ostensibly began with the Integrated Assessment Plan (IAP) in 2009; 2) discuss and hopefully come to some agreement on the process by which the workgroup would evaluate each objective and criteria for metrics; and 3) attempt to reach consensus on objectives/metrics for adult fish populations and harvest. The group generally agreed that adult abundance objectives (e.g., 62,000 adult fall Chinook Salmon) would not be reconsidered at this time, so the intended outcomes of this meeting were simply to identify metrics that could be used for informing success or failure toward meeting those objectives.

George expressed concern about whether the group intended to reevaluate objectives and make recommendations to TMC regarding changing or eliminating any. He argued that it was not the role of workgroups to change programmatic objectives, largely because they are codified in the Program's foundational legal documents (e.g., the Record of Decision) and that provisional program objectives should be rigorously tested by AEAM process prior to amendment. Jenny reminded the group that reevaluation of metrics and objectives is a fundamental component of adaptive management. The group also discussed the fact that a large number of objectives under consideration originated in the IAP, and that an explicit directive in the IAP was to further refine objectives presented therein. Further discussion on this topic was deferred to the "Process moving forward" agenda item.

Update on action items from 15 May meeting

Action Item 1: Bill updated the group that Nick Som (USFWS) agreed that using estimates of females in reaches 1 and 2, combined with redd counts in reaches 3-7 was a valid approach. Bill reported that he still needs data before he can complete the comparison of stock-recruit models based on the two adult data sets. Steve shared a table and a figure with the group showing that in reaches 1-2 redd counts were only similar to carcass mark-recapture estimates of adult Chinook Salmon females in very low abundance years. In all other years, redd counts were considerably lower than the mark-recapture estimates. This confirmed a suspicion voiced at the previous fish work group meeting that redds are undercounted in this part of the river, largely due to superimposition.

There was some discussion regarding whether to include jacks in adult data used for the juvenile synthesis report (e.g., adult-to-juvenile metrics, stock-recruit analyses). George advocated for omitting jacks and to use the best available surrogate of adult females when conducting stock-recruit analyses. In addition, fisheries managers generally only use adults, so including jacks may cause confusion and lead to erroneous comparisons to other data sets/analyses. Bill pointed out that different adult data is probably more appropriate for different analyses. Total adults may be best for stock-recruit analyses, whereas number of successful redds may be better for measures of productivity. Kyle added that data collected upstream of Pear Tree is best suited to evaluate

juvenile habitat and productivity, whereas data collected upstream of Willow Creek is better suited to inform basin-wide objectives. The decisions we made in the previous work group meeting regarding what data to use at each location are consistent with this point.

Bill informed the group that he only had data on carcass mark-recapture in reaches 1-2 back to 2005, which would limit his analysis. Ken and Kyle were under the impression that CDFW collected the same data as far back as 2000. Ken agreed to work with Andy Hill (CDFW) to confirm this and obtain the raw data if possible.

Action Item 2: Ken updated the group that he had provided Bill with adult abundance estimates of fall Chinook upstream of Willow Creek Weir and spring Chinook upstream of Junction City Weir.

History of objectives/metrics refinement

Seth began the discussion with an overview of the IAP. The IAP included a laundry list of objectives for the Program, many of which were not explicitly presented in the ROD or EIS/Draft EIR. While the IAP was very detailed in the sense that it often included several nuanced objectives for similar items, many of the objectives were not easily quantifiable or were redundant. In addition, there were too many objectives for the Program to effectively track. One of the explicit directives in the IAP was to further refine the objectives to a tractable set.

Following the completion of the IAP, an objectives workshop was convened to address this task. At this meeting a distinction was made between fundamental objectives and means objectives, where means objectives are quantifiable and trackable and inform fundamental objectives. Fundamental objectives are more abstract, such as restoring a healthy ecosystem. At the conclusion of the workshop workgroups were tasked with extracting from the IAP each objective relative to the workgroup and refining them to be quantifiable and trackable. Work groups were also tasked with identifying or developing metrics to inform progress toward meeting those objectives. This effort began in the fish work group in early 2014 and considerable progress was made. However, the task was not completed and received little attention in the past couple years. At the directive of TMC, work groups revisited those efforts and presented the current status of objectives/metrics refinement to TMC during their March 2018 meeting.

Process moving forward

Ken explained to the group that he hoped the group could agree on how to proceed through the objectives/metrics refinements process so that we can evaluate each objective and metric in a consistent way. This included what requirements we may impose on metrics in order for them to be approved by the group.

Jenny suggested that the group first tackle the low hanging fruit so that we could get some easy “wins” early, make progress, and hopefully build some momentum. She also suggested that when the group finds itself making little to no progress on a particular objective, we should table it until later and continue to move forward. Seth suggested that in such cases we should ask ourselves why it is so difficult to agree. Is it possible that we are trying to measure something that we shouldn’t be? He also suggested that we should consider seeking a facilitator or outside expert(s) when we are unable to reach consensus. Ken tried to address George’s concern expressed early in the meeting (see above) by explaining his perceived role of work groups. That is, to provide technical recommendations to TMC, based on the best available science, which may include recommendations to change or eliminate objectives. It is then up to TMC whether to implement changes based on technical recommendations, so work groups really have no authority to make changes to programmatic goals or objectives.

Fish populations and harvest

Objective: Increase escapement of naturally produced fall-run Chinook salmon to 62,000 adults
Some discussion was had regarding the number of naturally-produced Trinity-origin fall Chinook that would have to return to the mouth of the Klamath River in order to achieve the TRRP escapement objective and provide full harvest opportunities. The maximum allowable potential spawner reduction rate (SRR) on Klamath River fall Chinook, as defined by the Pacific Fishery Management Council, is 68%. If 62,000 naturally-produced adults escape to the Trinity River following a 68% SRR, 225,000 naturally AND hatchery-produced maturing fish would need to be in the ocean, pre-exploited population. A number of assumptions must be made to calculate the pre-exploitation abundance, so this should not be considered an absolute value. The group discussed whether this was a realistic objective, with arguments presented on both sides. However, nobody proposed changing this objective at this time. George pointed out that under conditions of high stock abundance (e.g. fully restored state), the PFMC and TRRP objectives are not mutually exclusive.

The following metrics were defined by the group to inform this objective:

Escapement: Annual abundance of natural-origin fall Chinook Salmon upstream of Willow Creek weir (including natural spawning areas and Trinity River hatchery), plus abundance of natural-origin adults downstream of Willow Creek weir in the Trinity River and its tributaries, minus all recreational harvest of natural-origin adults upstream of the Willow Creek weir.

Harvest: combined harvest of natural-origin fall Chinook Salmon per cohort across all ocean and freshwater sectors. Note that this is a product of a cohort reconstruction.

The group noted that there is currently no quantifiable objective for harvest, but agreed on how harvest should be quantified. Some discussion was also had on the time frame over which the 62,000 escapement objective should be defined. Questions included, what constitutes “achieving the objective,” what if escapement exceeded 62,000 for one year, would it have to be an average over several years, how many years, should it be an arithmetic or geometric average, should the time frame span be defined in terms of generations (e.g., three or four generations), etc. Seth agreed to look at existing rebuilding plans for other species to further inform this discussion.

Objective: Increase escapement of naturally produced spring-run Chinook salmon to 6,000 adults

The group largely deferred to the discussion it had during the 25 May meeting. The following metric was defined for adult escapement:

Escapement: annual abundance of natural-origin spring Chinook Salmon upstream of Junction City weir (including natural spawning areas and Trinity River hatchery), plus dive counts of all adults in tributaries downstream of the weir, minus all recreational harvest upstream of Junction City weir.

The group noted that harvest could not be defined for spring Chinook in the same way as for fall Chinook because ocean fisheries do not separately estimate harvest for this stock. Harvest objective and metric remain undefined for spring Chinook.

Objective: Increase escapement of naturally produced coho salmon to 1,400 adults

The group agreed on the following metrics to inform this objective:

Escapement: annual abundance of natural-origin adult Coho Salmon upstream of Willow Creek weir (including natural spawning areas and Trinity River hatchery), minus all recreational harvest of adults in the Trinity River upstream of Willow Creek weir. This estimate assumes no spawning of Coho Salmon downstream of Willow Creek weir. Coho spawning downstream of the weir is thought to contribute a negligible amount to total escapement if/when it occurs, though there are no known data available to inform escapement estimates in this sector of the Trinity River.

Harvest: total freshwater harvest, plus ocean harvest derived from estimated ocean exploitation rate on Rogue-Klamath coho.

Objective: Increase escapement of naturally produced steelhead to 40,000 adults

The group agreed on the following metric to inform this objective:

Escapement: annual abundance of natural-origin adults upstream of Willow Creek weir (including natural spawning areas and Trinity River hatchery), minus all recreational

harvest of adults in the Trinity River upstream of Willow Creek weir. This estimate does not account for spawning that may occur downstream of the weir, and there are no known data to inform escapement estimates in this sector of the Trinity River.

The group noted that harvest opportunity for steelhead is fundamentally different than for salmon because there is a large and intentional catch-and-release fishery, but no allowable recreational retention of naturally-produced fish. Unlike Coho, that also have no allowable retention, there is a directed fishery for steelhead for both catch-and-release and harvest of hatchery fish. Kyle suggested that fishing regulations could be used as a surrogate for harvest opportunity, noting that maximum allowable harvest is not realized in some years and that regulations might better track opportunity than estimated harvest. This was initially brought up for salmon, and reiterated during the steelhead discussion. George pointed out that there is essentially unlimited fishing opportunity in the steelhead fishery (anglers can catch-and-release without limit), but there is no harvest opportunity. If we were to use “fishing opportunity” as a metric for steelhead harvest, essentially unlimited opportunity may erroneously infer that the species is successfully recovered. The group agreed that fishing regulations do not seem to be a good way to inform Program objectives, but did not completely eliminate the concept from further discussion.

3:00 PM Adjourn