Meeting Summary

FISH WORK GROUP

Monday October 26, 2020

WebEx

Monday, October 26, 2020: 9:30 AM

Participants

Core members: Kyle DeJuilio (YTFP), Steve Gough (USFWS), George Kautsky (HVTFP), Ken Lindke (CDFW, coordinator)

Other participants: Chad Abel (USBR/TRRP), Taylor Daley (USFWS), Mike Dixon (USBR/TRRP), James Lee (USBR/TRRP), Bryan Lester (HVTFP), Oshun O'Rourke (YTFP), Eric Peterson (USBR/TRRP), Bill Pinnix (USFWS)

Action Items Derived During the Meeting

Action Item 1: Kyle and Bryan will work with the Trinity River hatchery technical team to develop a target for minimizing competition and predation on juvenile natural-origin salmonids by juvenile hatchery-origin salmonids.

Action Items Outstanding from Previous Meetings

Action Item 3 (29 July): Kyle will coordinate with the physical work group to incorporate the concepts of proposed target 2.2 from his juvenile food production presentation into targets being developed by the physical work group.

Summary of Meeting by Agenda Item

Outstanding action items from previous meeting(s)

Action Item 1 (20 April 2020): Seth will investigate the differences in mainstem Trinity River temperatures between Douglas City and the North Fork Trinity River to inform the next step in reconciling juvenile and adult temperature targets in July.

Ken gave an update on Seth's behalf. The average temperature increase between Douglas City and the North Fork in July in six recent years (not continuous, ranging from critically dry to wet) ranged from 3.8° to 6.1° F, which is consistently greater than the difference between the new juvenile rearing and adult holding temperature targets (1.7° F). This indicates that there is essentially no conflict between these targets (see notes from previous meetings and the target write-up for further details). Seth's recommendation was to keep the juvenile temperature target as is, ending on 31 July. Kyle added that future improvement of the rearing temperature target

should include adding dimensionality to the target, specifically shifting from a single point of compliance to a longitudinal length or two-dimensional area of the river meeting the temperature criteria.

> Action Item 2 (20 April 2020): Ken will finish draft write-up of the proposed juvenile salmonid habitat target and distribute to work group members for review.

This action item was completed, the write-up was reviewed by work group members, comments were incorporated, and the target is complete.

> Action Item 3 (20 April 2020): George and Shane will finish draft write-up of the proposed spring Chinook Salmon harvest target and Ken will distribute to work group members for review.

This action item was completed, the write-up was reviewed by work group members, comments were incorporated, and the target is complete.

> Action Item 4 (20 April 2020): Justin will finish draft write-up of the proposed brown trout target and Ken will distribute to work group members for review.

This action item was completed, the write-up was reviewed by work group members, comments were incorporated, and the target is complete.

> Action Item 3 (29 July): Kyle will coordinate with the physical work group to incorporate the concepts of proposed target 2.2 from his juvenile food production presentation into targets being developed by the physical work group.

Kyle reached out to John Baer to have him consider scouring flows relevant to macroinvertebrate food web development when John is working on a channel scouring target for narrow leaf willows. Kyle also reached out to Todd Buxton who is developing a sediment mobility target for the Physical work group. The target will relate to the frequency, magnitude and timing of sediment mobilizing flow events, which is also important for food web development. As of this meeting, the two targets being developed by John and Todd were not complete.

Means objectives and targets: review of progress to date and targets to complete before January deadline

Ken informed the group that there are three targets currently being worked on and four targets yet to be started. There is a 1 January 2020 deadline for completing the targets refinements exercise and sending completed targets to the IDT for review. Progress and status of the three targets currently being worked on are provided below. The four yet to be started are adult

holding habitat, minimizing competition and predation on juvenile natural-origin salmonids by hatchery-origin salmonids, and harvest targets for Coho and steelhead.

Ken recommended waiting on the adult holding target until the pool stratification study is complete (likely in 2022). He also recommended waiting on the harvest targets. Harvest of SONCC Coho in ocean fisheries is currently being litigated at the Pacific Fishery Management Council, and a new control rule is likely to result from that work. Because harvest targets for TRRP include harvest across all freshwater and ocean sectors, and harvest management of Coho in the ocean is currently in flux, the group agreed to wait on further development of the target. Steelhead harvest is complicated by the predominance of catch-and-release in that sector, and current methods preclude estimation of the total steelhead population in the Trinity River. Estimates of fall steelhead generated annually by CDFW upstream of Willow Creek weir capture some unknown portion of the total run, which includes summer and winter runs. For these reasons, the group agreed to wait on further development of the target.

Kyle informed the group that the Trinity River hatchery technical team (not related to TRRP) is currently tasked with minimizing competition and predation on natural-origin juveniles by hatchery-origin juveniles. He suggested TRRP advise the technical team on development of their own target rather than having TRRP develop its own. Flow management has been discussed as a method for minimizing these negative impacts. Steelhead have been demonstrated to increase migration rates at higher flows, so releasing more water during release could help. Bill noted that Coho respond similarly to higher flows. Ken noted that at least one study has shown Chinook slow their migration at higher flows, but survival is increased. A technical team meeting was scheduled for the next day, and Kyle agreed to discuss coordination and a potential timeline for target development with the team. Bryan agreed to work with Kyle on this effort.

Means objectives and targets: compatibility of juvenile rearing temperature target and adult holding target

See Action Item 1 in Outstanding action items from previous meetings above.

Means objectives and targets: juvenile outmigration temperature target

Kyle offered some background on the current temperature target at Weitchpec, which is largely captured in the Fish work group meeting summary for 20 April 2020. Kyle and Taylor proposed to redefine the target based on emigration rates and temperature conditions in the lower Klamath River. We want fish to emigrate from the Trinity River when there is still enough time to safely emigrate through the lower Klamath river. If we know, or can estimate, the date on which lower Klamath River temperatures reach dangerous levels, we can use some estimate of emigration rates to back calculate the date at which we would want fish to have emigrated from the Trinity River. They are working on the target with help from Ken but are unsure if they will meet the 1 January deadline.

Means objectives and targets: formation of subgroup(s) to develop remaining targets

Subgroups already exist to develop the last two targets: juvenile outmigration temperature target, and the adult pre-spawn mortality target. The group agreed to postpone development of the remaining four targets.

Means objectives and targets: discussion on remaining targets to provide guidance to new and existing subgroups

See summaries above of targets currently under construction. No new subgroups were formed.

Updates on synthesis reports

Ken provided an update on the cohort reconstruction project. He recently received an R version of a generalized cohort model that is essentially the same as used in the Klamath Ocean Harvest Model. The R model is still in the testing phase and Ken is working with folks from the CDFW Ocean Salmon Project and NMFS Southwest Fisheries Science Center to evaluate and test the model before it is ready for use. He has also come up with a conceptual approach to separating harvest in the lower Klamath River, and will distribute a write-up when it is finished. Once these two tasks are complete, essentially all that will be needed is data formatting to input to the R model, and, of course, writing the report.

Bill gave an update on the juvenile synthesis report. With help from Taylor, Bill re-did some analysis after discovering a data error. The results and take-home message of the report did not change as a result. The Arcata USFWS has outsourced some document review and report writing. No expected date of delivery was provided.

Steve gave an updated on the adult synthesis report. The Yurok Tribe is working on final revisions to the pre-spawn mortality analysis, which should be completed any day. Once this is received, Steve will incorporate the changes and distribute the report for review. No expected date of delivery was provided.

Agenda items for next fish work group meeting

Ken stated that other than targets refinements, he was unaware of any specific tasks or topics of discussion that are outstanding for the Fish work group. He reiterated his opinion that assignments for work groups should generally be assigned from the top down, from TMC or IDT, and that soliciting work groups for ideas has led to lots of discussion and work that, while interesting and engaging, has not fed directly into management. Given declining budgets and heavy workloads that many work group members already have, he recommended focusing on "need to know" topics or assignments rather than "nice to know."

Kyle recommended engaging in a limiting factors analysis for juvenile production. Juvenile habitat has long been thought of as limiting production, but no formal analysis has been completed. This could be part of a larger effort to set the stage for the next round of information synthesis in which results from the current round of synthesis reports is integrated.

Kyle also suggested we reconsider restoration efforts in the reach immediately downstream of the hatchery. At the recommendation of the fish work group several years ago, the Program decided not to pursue restoration efforts in that area to discourage genetic integration of wild and hatchery stocks. Kyle stated that Trinity River hatchery is supposed to be operated as an integrated hatchery, which infers that we should be encouraging genetic integration. George noted that any discussion of hatchery and wild integration needs to include the hatchery technical team.

Hamilton Ponds

This agenda topic was a joint meeting with members of the physical work group and other folks with background or agency oversight of the ponds. Participants were as follows:

Chad Abel (USBR/TRRP), Josh Boyce (USFWS), Todd Buxton (USBR/TRRP), Taylor Daley (USFWS), Kyle DeJuilio (YTFP), Mike Dixon (USBR/TRRP), Amelia Fleitz (USFS), Damon Goodman (USFWS), James Lee (USBR/TRRP), Bryan Lester (HVTFP), Ken Lindke (CDFW), Scott McBain (McBain and Assoc.), Oshun O'Rourke (YTFP), Eric Peterson (USBR/TRRP), Bill Pinnix (USFWS), Roman Pittman (NMFS), Conor Shea (USFWS), Mark Smelser (CDFW), Nancy Snodgrass (CDWR), Nick Som (USFWS), Bob Sullivan (CDFW), Ty Wallin

Nancy provided some background on ownership of the parcel, past uses, and CDWR's position on future management. The property was purchased by CDWR in 1985, sediment retention ponds were constructed in the late 1980's, and dredging occurred 12 times from 1992-2007. A management plan for the property was completed in 1994. CDWR manages all activities on the property and USBR is responsible for maintenance of the ponds (e.g., dredging). CDWR is open to suggestions for future management of the ponds and potentially repurposing them, and other parts of the property as necessary, to adapt to changing environmental conditions and needs of the watershed. She recognized that a new or updated management plan for the property is needed but noted that most of the objectives in the 1994 plan still apply today. Bob noted that in the past users had numerous hang-ups about management of the property including access and use by horse owners and golfers, impacts to historic orchards, and archaeology. Nancy replied that CDWR had not heard from these users in many years and property maintenance for many of those uses, e.g., trail maintenance, has largely fallen by the wayside. Bob advised that use and other concerns by the public would need to be incorporated into any future management plan.

Todd gave a presentation on the history and status of fine sediment abatement from Grass Valley Creek (GVC) by Hamilton Ponds. Based on the 2007-2018 average rate of filling, it was projected to take 41 years until both ponds filled to capacity. Following the Carr fire and the subsequent huge input of sediment in the winter of 2018/19, that estimate was revised to 7-10 years. Fine sediment abatement has been so effective that there is now a deficit of fine sediment, particularly upstream of Douglas City and increasingly worse the further upstream you go. Todd recommended allowing fines from GVC to enter the mainstem Trinity River at the earliest convenience to mediate the loss of fine sediments in this reach. Nick asked if the suggestion to re-route GVC through Lowden Meadow is intended to expedite sediment delivery to the mainstem. Todd responded affirmatively and added that it is also to provide Coho habitat.

Damon gave a presentation on lamprey and beaver use of the ponds. Surveys for juvenile and larval lamprey were conducted in 2018 to describe the distribution and abundance of lamprey in the upper pond, with the intention of informing management decisions on dredging. Surveys revealed lamprey densities up to 21-81 individuals/m^2 in several locations and an estimate of approximately 60,000 individuals inhabiting the upper pond. Attempts at encouraging lamprey to relocate away from dredging areas were unsuccessful, which caused USFWS to recommend not dredging the pond in 2018. During the time spent surveying the ponds, Damon and others were reminded of the remarkable beneficial change that has occurred at the ponds as have they have filled with sediment and noted the use of the area by many fish and wildlife species. Scott asked about Coho use of the ponds. Damon responded that the lower pond was really deep in the middle and did not provide great salmonid habitat. However, it seems the ponds are evolving toward conditions good for fish of many species.

The discussion that followed focused primarily on three options: 1) do nothing and allow the ponds to evolve on their own as sediment from GVC continues to fill them, 2) restore the channel between the lower pond and the mainstem river, and 3) route GVC from the lower pond through Lowden Meadows, creating a meandering wetland that eventually empties into the mainstem. Kyle noted that rip rap between the lower pond and the mainstem would limit the ability of the channel to evolve on its own. Damon noted that rip rap at the pond outlets were actively used by beaver. There seemed to be little interest in continuing dredging, but Brandt noted that permits were still in place to do so if desired. Todd expressed concern that the Bureau of Land Management is responsible for providing flushing flows from Buckhorn Dam but has not done so recently. He also reminded the group that gaging of GVC just upstream of the ponds was discontinued in the last couple years.

Discussion turned to questioning. Is the lower pond a lower elevation than Lowden Meadows? If so, the pond would have to agrade a lot to connect to the meadow. Did the historic channel flow upstream nearly a mile through Lowden Meadows before entering the mainstem? This would be an unusual flow path. Nancy shared a map from 1890 that showed GVC entering the mainstem at

its current location, however someone noted that substantial mining and alteration of the channel had occurred before then. Are there other areas where elevations would dictate how the system could evolve on its own or preclude some design alternatives?

Nick was struck by how ecologically successful the ponds have been since we've left them alone and allowed them to evolve on their own, noting the cool dynamism we've witnessed in recent years. He advocated for letting the area evolve on its own, particularly considering all the other stuff the Program is working on. Mike agreed. Todd rebutted by saying this would be a lost opportunity to create a lot of good habitat by constructing a meandering wetland through Lowden Meadows, noting that such valuable habitat is lacking in the Trinity River. Mike proposed that there could be a middle ground where we allow the ponds to evolve on their own but route the creek through Lowden Meadows. Eric suggested we don't need to figure this out immediately. We have some years before the ponds fill, then we can deal with how, where, or if to route the creek to the mainstem. Nancy inquired about the whereabouts of a conceptual design that DJ developed several years ago, which included an aerial map of the concept. Few were aware of it and nobody knew the whereabouts.

Conor pointed out the numerous important unknowns and suggested we do some data gathering before moving forward. We should get elevations at all relevant locations and identify potential hydrologic controls. Eric noted that new LIDAR will be available for the entire area very soon. Kyle suggested that the Design work group might be best for data gathering and reporting on existing conditions. Mike agreed. Nick asked that the team include some folks with expertise in biology and ecology. Todd said we really don't need a full existing conditions report. We just need relevant information conveyed to relevant parties. Several people agreed and that seemed to be the path forward for now. Nancy stated that she would like to be included in any follow-up discussions on the matter.

4:00 PM Adjourn