

Quarterly Meeting Notes

TRINITY MANAGEMENT COUNCIL

March 20th–21st, 2024
9 a.m. – 4:30 p.m. PST
Trinity River Restoration Program Office, 1313 S. Main Street
Weaverville, CA 96093
MS Teams Video Conference

Trinity Management Council (TMC) Members in Attendance (03/20 and 03/21/2024)

Name	Representative Seat
Don Bader	U.S. Bureau of Reclamation (USBR), Chair ¹
Mike Dixon	USBR, Trinity River Restoration Program (TRRP) Executive Director
Liam Gogan	Trinity County (TC) Core
Tim Hayden	Yurok Tribe (YTTFD) Core ²
Justin Ly	National Marine Fisheries Service (NMFS) Core
Mike Orcutt	Hoopla Valley Tribe (HVTFD) Core
Radley Ott	California Natural Resources Agency Department of Water Resources (CNRA-DWR) Core
Bobbie Miller	U.S. Forest Service (USFS) Core
Bill Pinnix	U.S. Fish and Wildlife Service (USFWS) Core

Others in Attendance (in-person):

Kiana Abel, TRRP-USBR; Eric Peterson, TRRP-USBR; James Lee, TRRP-USBR; Vicky Ryan, USFWS; Patrick Flynn, TC, Ken Lindke, CDFW; Kyle de Julio, YTTFD; Seth Naman, NMFS; Jason Hall, Cramer Fish Science; Ty Wallin, USFWS.

Others in Attendance (Microsoft Teams):

Don Hansen, Affiliation Unknown; Emelia H. Barnum, USBR; Ellie Andrews, Member of the Public; Brian S. Bommarito, BLM; Roman Pittman, NMFS; Morgan Knechtle, CDFW; Oliver Rogers, TRRP-USBR; Steve Gough, USFWS; Cassandra Holmes, HVTFD; Elliot Sarnacki, TRRP-USBR; Todd Buxton, TRRP-USBR; Heidi Carpenter Harris, TC.

Notes: Aspen Howard (Chloeta)

¹ Emelia Barnum served as a representative for USBR, and Justin Ly served as Chair in the absence of Don Bader on the second meeting day.

² Kyle De Julio served as the alternate for Tim Hayden when unavailable.

Wednesday, March 20th, 2024
(Scheduled from 9 a.m. – 4 p.m. PST)

Introductions (Don Bader, Chair)

Welcome and Introductions

Attendees on one or both days are listed above. Any omission of attendees outside of the TMC is accidental and regretful.

Approval of Agenda

Orcutt's Request for an Executive Session

Mike Orcutt requested an executive session to occur during this meeting due to contentiousness surrounding various topics discussed among TMC members and entities, as he believes the bylaws allow an executive session under the circumstances. His hope is to have a frank discussion regarding issues that have transpired based off discussions, such as the winter flow variability and how to coordinate future actions.

Don Bader explains that it was his decision as chair to not include the executive session in the March draft agenda. Bader interpreted Orcutt's request as a closed session to discuss winter variable flows based on previous discussion in the December meeting, which he did not believe was appropriate grounds for a closed discussion to protect transparency and public trust. Furthermore, Bader acknowledges that there are new bylaws that were incorporated in 2019, to describe procedures for closed sessions, but the Chair has the discretion to decide when to utilize these sessions. Bader did not feel that winter flow variability was an appropriate topic to discuss in this type of setting.

Orcutt clarifies that he was not solely referencing the past discussions on winter flow variability, but was simply using that as an example when referencing various other topics he felt needed to be discussed at an executive session. His main reason for bringing up his original request was to discuss the contentiousness and division among members, and how the Program responds to it.

Dixon represents that he responded to Orcutt regarding this topic, and states the bylaws were narrowed at the request of Trinity County (TC) to very specific circumstances for an executive session to occur. He expects transparency in government, and he believes local public trust would be compromised by a closed session.

De Juilio, acting as an alternate for YTFD, states that he sees both sides of this and that the topic framed may not fit the constraints of the bylaws, but it could be used as a tool that hasn't been utilized. He goes on by saying that because the Limiting Factors Analysis (LFA) discussion may contain sensitive information regarding funding, which could be an appropriate situation where an executive session is necessary. He views it as a tool when used appropriately.

Orcutt suggests a need to review protocols and operating procedures. His understanding is that the TMC can be appropriately framed to fit the ROD guidelines and likens this to how other similar boards operate. Orcutt views this as a constructive tool and sees value in the opportunity to build trust within the council.

Bader's decision was based on the focus of the discussion being on winter flows in December, and the frustration behind the outcome of the motion. Orcutt also referenced the January and February meetings, pointing out that at the end of the meeting, there was an article he tried to bring up that was not acknowledged in his opinion.

De Juilio brings up that due to the sensitive nature of certain topics, a closed session may be necessary to determine whether the topic is appropriate for an executive discussion. Dixon states that the bylaw is not clear on this matter. Gogan shares Trinity County's procedures, and how reports are made to the public after private meetings to ensure transparency. Trinity County closed sessions are not necessarily discouraged but are utilized where appropriate to safeguard confidential information such as employee actions, contracts, and legal matters.

Ott agrees that the need for transparency is vital, although certain scenarios could warrant an executive session, such as the LFA. The TMC discussed that there is a possibility that vendors will cater proposals based off of funding arrangements if made available to the public. The TMC discussed further about designating a portion of the agenda concerning the LFA to be moved to a closed discussion, limited in scope to contracting.

Orcutt states he does not want to restrict efficiency or effectiveness, and in his view, it's starting to become an authoritarian approach where the Department of Interior is dictating policy. He goes on by saying that the other agencies in the TMC may have different policies regarding the same parameters that may conflict with certain actions and decisions.

Motion: Radley Ott, CNRA-DWR representative, moves to add a closed session at the 10 o'clock hour to talk about LFA contracting and funding.

Second: Kyle de Juilio, YTFD alternate, seconds this motion.

Outcome: The motion passes with 7 in favor, 1 abstention.

Don Bader (USBR): Yes

Bobbie Miller (USFS): Yes

Bill Pinnix (USFWS): Yes

Mike Orcutt (HVTFD): Abstain

Raddley Ott (CNRA-DWR): Yes

Liam Gogan (TC): Yes

Justin Ly (NMFS): Yes

Kyle de Juilio (YTFD): Yes

Motion: Radley Ott, CNRA-DWR representative, moves to accept the March agenda.

Second: Bill Pinnix, USFWS representative, seconds this motion.

Outcome: The motion passes with 8 in favor and no opposition.

Don Bader (USBR): Yes

Bobbie Miller (USFS): Yes

Bill Pinnix (USFWS): Yes

Mike Orcutt (HVTFD): Yes

Raddley Ott (CNRA-DWR): Yes

Liam Gogan (TC): Yes

Justin Ly (NMFS): Yes

Kyle de Juilio (YTFD): Yes

Approval of December and January Meeting Minutes

Motion: Justin Ly, NMFS representative, motions to approve the December and January meeting minutes.

Second: Radley Ott, USFWS representative, seconds this motion.

Outcome: The motion passes with 7 in favor and 1 opposition.

Don Bader (USBR): Yes

Bobbie Miller (USFS): Yes

Bill Pinnix (USFWS): Yes

Mike Orcutt (HVTFD): No

Raddley Ott (CNRA-DWR): Yes

Liam Gogan (TC): Yes

Justin Ly (NMFS): Yes

Kyle de Juilio (YTFD): Yes

Comments on Non-Agenda Items (Don Bader, Chair)

Public Comments

Bader opens the discussion. No public comments were given, and the discussion was closed.

Reports and comments of TRRP entities

No reports or comments were given from TRRP entities.

TMC Discussion and Comments

Mike Orcutt discusses the Pacific Fishery Management Council workgroup and the potential of a future agenda topic related to analyzing the potential effects from harvest and dam removal at the Klamath River. He expresses his interest in this being a future agenda topic to analyze the

impacts and effects, and ocean impact mitigation work. He states that Brett Kormos may be a good presenter for this topic, and HVTFD can assist in the potential presentation as well.

Program Updates (Mike Dixon)

Public Comments

Dixon opened the discussion. No public comments were given, and the discussion was closed.

Director's Report

Dixon presents the TMC Director's Report Memorandum, available on the TRRP website at <https://www.trrp.net/calendar/event/?id=11803>.

Major TRRP activities between December 2023 and March 2024 include:

Work continues to prepare for implementation of a restoration project at Upper Conner Creek this summer. A study plan was completed for the Limiting Factors Analysis. The rotary screw traps are monitoring our outmigrants. A contract to remove the River Acres house was awarded and demolition is imminent. Contracts with new SAB members are finally in place.

Organizational Updates (Mike Dixon)

- The Public Affairs Specialist (GS 7/9/11) was advertised in February and a selection was made. We are happy to announce that Kiana Abel, the TRRP Secretary, has accepted a promotion into this position starting March 24. Kiana has already been carrying out many of these duties during and since her developmental detail in this position.
- The Science Coordinator position opened in January. Virtual interviews were held and in person interviews will be conducted shortly.
- Elliot "Slippery Otter" Sarnacki has completed training and is now a DOI licensed uncrewed aerial system pilot. The program office is purchasing a mid-tier UAS that will be used for photogrammetry and aerial photography sometime this spring; these resources will be available to program partners for restoration-related purposes.

Budget Updates/Adjustments (Mike Dixon)

The initial FY24 budget that was approved in June and July of 2023 included a speculative amount of funding that would be available for channel rehabilitation activities, using that activity as a balancer because the planned project for 2024 will be constructed over two-plus years and is thus scalable. We're getting closer to clarity on how much channel rehabilitation work will be funded now that the River Acres demolition [contract] is complete.³ The remaining budget unknowns for this year (which will drive the scale of channel rehabilitation work this year) are:

³ Dixon clarified that the demolition will commence within the next 90 days.

- The cost of the adult Chinook limiting factors analysis (which will be driven by the TMC's decision on that topic in the March meeting).
- The amount of Bipartisan Infrastructure Law funding that is ultimately awarded for channel rehabilitation in FY24 vs FY25.
- The possibility of Inflation Reduction Act funding for channel rehabilitation work.

 A copy of the working budget is attached to this report.⁴

Implementation Update (James Lee)

Sky Ranch Channel Rehabilitation Site: The design is at 60% and the VE study was completed; and a right-of-entry with the private landowner was established. The timeline for the land transfer between USFS and BLM was extended and is now expected to be completed this summer, after which TRRP can initiate NEPA. Depending on the availability of funding and the land transfer, the project may be constructed in 2026 or 2027. This project is the priority after Upper Conner Creek, although the land exchange must be completed before TRRP can move forward with planning.

Evans Bar Channel Rehabilitation Site: No change since last quarter. The design remains at the existing conditions report stage. Designers and TRRP staff met with residents located in the ESL in October to discuss their concerns with a project.

Sawmill Gravel Processing Site: A 60% design was prepared by the Yurok Tribe and State design group and submitted to the TRRP design team for review in November. The EA for the project will be completed by May 2024, so this project will be ready for implementation if Sky Ranch and Evans Bar NEPA is delayed.

Upper Conner Creek Channel Rehabilitation Site: This project is scheduled for implementation in Summer 2024. Current TRRP funding allows for a two-year implementation schedule; however, other funding sources are being sought and the Yurok Tribe Construction Corporation is agreeable to a one-year implementation schedule if sufficient funding is acquired. Regardless of funding secured in FY 2024, substantial revegetation work would be conducted in FY 2025. A landowner did not grant permission to implement a portion of a feature (R-4) on their property in the downstream portion of the project, so this feature was modified to build the portion on BLM land. This project involves moving a heavily used river access from its current location on private property 150 m upstream to BLM land, and build a parking area and access road. The construction sequence was designed to minimize disruption to boaters who use this area for launching and retrieving boats. A meeting was held with river guides in early February to solicit their input on the river access improvement. BIL funds are available for constructing a vault toilet at the river access site and BLM has agreed to maintain the facility.

⁴ The working budget was printed out and dispersed to TMC representatives at a later time.

EA Development

- Upper Conner Creek and Sawmill Environmental Assessment (EA)
The cultural resources report for the EA remains to be completed and is necessary for BLM to complete their review. An open house is scheduled for March 19 with the intention of simultaneously opening the public comment period. The public comment period will be open for one month, and a FONSI should be ready by late April.
- Gravel and Wood Augmentation EA
Public comments were addressed and the EA will be completed after tribal consultation and State Historic Preservation Office (SHPO) review is complete. This EA is expected to be ready well before any WY 2025 gravel and wood augmentation projects are planned.
- Watershed Programmatic EA
A draft of the first three chapters is complete. The fisheries, terrestrial wildlife, and botany reports are in review. The public comment period could potentially be as early as late April or early May depending on partner agency review of the draft documents.

Public Outreach Update (Kiana Abel)

Abel gave the public outreach update, presenting the River Riffle September and October newsletters with links attached.

Publications and Education Materials:

- [River Riffle](#) Monthly-ish newsletters, following themes getting articles from team. Sent emails developed. Highly suggest reading them. Lot of effort. Push to social media.
 - [January](#)
 - Program & Implementation Branch Update
 - Article: [Algae, Food-Webs, and Flows](#)
 - Trinity River Watershed Plant Spotlight: [Water Fern](#)
 - [Upcoming Events](#)
 - [February](#)
 - **Trinity River:** Current Conditions
 - **Implementation Branch:** Proposed Restoration Activities
 - **Featured Article:** [Sediment, the Building Blocks of the Trinity River](#)

- **Trinity River Watershed Animal Spotlight:** [Freshwater Mussels in the Trinity River](#)
- Upcoming Events
 - [March](#)
- The Trinity River Survey finished up on February 1. We had 147 responses, 80 repeat respondents. Results are being analyzed!
- The 2023 Annual Report
- The TRRP Facebook page is up 60 followers from the beginning of March topping out at, 925 followers.
 - Top post in the last 60 days was a post about the Indian Creek Restoration Project which showed a comparison from pre to post restoration at the site. TRRP was the primary funder for this watershed restoration project which was carried out by the Yurok Tribe.

Public Events and Environmental Education:

- SCIENCE ON TAP, at Trinity County Brewing Company
 - January: Max Ramos (restoration engineer with the Yurok Tribal Fisheries Department) presented “Modeling the Reestablishment of Coho Salmon in Klamath River Tributaries after Dam Removal” (over 70ppl attended)
 - February: Aaron Martin, fisheries biologist from the Yurok Tribal Fisheries Program presented “Oregon Gulch – Freeing the River and Embracing Change” (over 85ppl attended)
- OTHER EVENTS
 - Annual Birding Days Event in February as cancelled due to inclement weather
 - March 19 – TRRP Open House

Educational Outreach

- February: Fish of the Trinity River education in each Junction City Elementary Classroom. We talked about each species, lifecycle and did a chinook dissection. At the end of our lesson we had kids create fish art which we showcased at the March 19 Open House event.
- Several classroom visits to Lewiston in February and March where kids got to play games and learn about Trinity River Salmonids.

Landowners and Stakeholder Notifications:

- Scoping Period (December 4 – 17) for two proposed restoration projects the Sawmill Gravel Processing Site and the Upper Conner Creek Restoration Project.

- Public Comment Period (TBD) for two proposed restoration projects the Sawmill Gravel Processing Site and the Upper Conner Creek Restoration Project.

Upcoming

Science on Tap

- March: Seth Naman, NOAA Fisheries “The importance of Natural Flows to Trinity River Salmon and Steelhead Populations”
- April: Ken DeCamp: (Photographer/Author) “Klamath Mountain Wildflowers”
- Science on the River will occupy the summer months in 2024
 - June: Kyle De Juilio (Senior Fisheries Biologist Yurok Tribe) “Indian Creek Watershed Restoration”
 - July: Corral Gulch Meadow/Salt Creek or “Clear Creek Restoration Project”
 - August: Todd Buxton (Hydrologist/Geomorphologist, TRRP): “Diurnal Pool Stratification”
- Science on the River will occupy the summer months in 2024. Kyle De Juilio will conduct a tour out of Indian Creek potentially.
 - June & July: Unconfirmed
 - August: Todd Buxton: Diurnal Pool Stratification in August
- [2024 Science Symposium – April 30-May 2](#) - Pushing river restoration boundaries toward a better future in our changing world
 - Three and 1/2 day event featuring presentations on Fish Populations, Habitat Flow and Temperature and Physical Channel Forms with a field trip at the end.
 - All our SAB members will be attending and presenting or moderating.
- General Outreach Programing: January - May
 - Invasive Plant Pull (April 6)
 - Plant and Seed Exchange (April 20)
 - Day at the Wetland (May 9)
 - Adopt-a-Plot Events in Lewiston (Upcoming)

Science Update (Mike Dixon)

- **SAB recruitment.** Contracts have been awarded for Dr. John Hayes for the Aquatic Ecology position, Dr. Kurt Fausch for the Riparian and Watershed

position, and Dr. Daniele Tonina for the Hydrology position. They, as well as John Buffington and possibly Andy Paul, will be traveling to attend our science symposium later this spring.

- **Limiting Factors Analysis (LFA).** A detailed study plan was submitted by our contractor Cramer Fish Sciences. They proposed three levels of effort, each building on the other, from more of a literature review to the development of a model with a graphical user interface. Which of these tiers to pursue is a topic of the March TMC meeting.
- **FY25 Science priorities.** The FY25 request for proposals has lagged somewhat in the absence of a Science Coordinator, but fortunately Ty Wallin from USFWS was willing to pick up some of the slack there. An RFP was sent out to TRRP entities to solicit proposals that answer research questions that will address key uncertainties from the Science Plan, specifically related to nutrient flux, wetted area, and temperature. Proposals will be reviewed by the SAB in preparation for the June meeting of the TMC.
- **Review of monitoring and DSS.** The Science Plan approved last year calls for a review of our monitoring activities. The Flow Workgroup has also requested a review of the DSS components. The IDT has recognized these can be done together and should be in the context of Objectives and Targets. Most workgroups that have previously established Objectives have met to ensure Objectives and Targets remain pertinent and to start aligning our monitoring and DSS efforts to them.
- **Large Wood Management Plan.** This effort has successfully rebooted, now led by HVT and Applied River Sciences (previously McBain Associates). An annotated outline has gone out for review and has received feedback from the Riparian and Aquatic Ecology Workgroup.
- **2024 Science Symposium.** A team of program scientists have been working with Kiana Abel and the TCRCD's Duncan McIntosh to develop an agenda for the multiday science symposium that we will be holding at the Trinity Alps Performing Arts Center. We will have speakers from within and outside of the program, and each day will conclude with a panel discussion. An agenda is forthcoming. TMC members are encouraged to attend

In Review or Final Edits

- Adult Salmonid Spawning

Final Publications and Reports

- Buxton, T. H. 2024. Trinity River water allocation, temperatures, and model results for implemented flows and proposed hydrographs for water year 2023. Report TRRP-2024-1 for the Trinity River Restoration Program (TRRP). U.S.

Bureau of Reclamation, TRRP, Weaverville, California. Available:
<https://www.trrp.net/library/document?id=2629>.

Synthesis Reports – See Appendix II.

Incomplete:

- Adult Salmonid Spawning – in final edits
- Cohort Reconstruction – a road-block on modeling is actively being remedied
- Large Wood Management – rebooted, annotated outline out for review
- Flow Synthesis – regaining momentum
- Channel Complexity

Public Comments

Dixon opened the discussion. No public comments were given, and the discussion was closed.

TMC Discussion

During the presentation of the Executive Director's report, Gogan inquired about the new Public Affairs Specialist position and how it fits into the budget. Dixon states that it was previously a GS 11 position classified as a Project Coordination Specialist, and as a GS 7/9/11 developmental position there may be cost savings.

Regarding the Science Coordinator position, Dixon relayed that eight candidates were reviewed by the subject matter expert panel. Out of the two that were invited for a second interview, one candidate declined due to personal reasons, and they are moving forward with the remaining candidate. Orcutt expressed disappointment in non-federal TMC member participation during the interviews and wishes for more stability and structure regarding other agency involvement. Bader informs him of the HR protocol the importance of a consistent formal interview process.

Pinnix inquired about the operational timeline for the utilization of the mid-tier UAS for photogrammetry and aerial photography. Dixon is hopeful this can be fully operational by late spring 2024.

Orcutt requested that the proposed fiscal year 2025 budget be sent out when available. Both Dixon and Bader acknowledged that this budget had just gotten approved, and plans will be made to disperse this to the TMC representatives.

Orcutt also inquired if there is an ability to document land access procedures and landowner cooperation. Lee explained that there is no written document explaining landowner agreements, but outreach to individual landowners is in process. Dixon added by saying willing landowners are compensated according to a valuation of the rights that are being leased during the duration of the access. He conveyed that according to the ROD; the council has been directed to improve infrastructure which included buying out infrastructure that constrains the ability to release maximum fishery flows. Dixon explained further that the ROD is vague in terms of land purchase for the purpose of restoration.

Regarding the rehabilitation and processing sites, De Juilio emphasized the need to be prepared for implementing at least one project at any given cycle in case additional funding becomes available. He suggested a presentation to identify key targets to accomplish this. Lee said the Design Team is currently assigning resources to various channel rehabilitation projects. There were also discussions regarding the Phase 2 Review which states that the TRRP needs to explore different avenues to incentivize more landowner participation.

Orcutt inquired about the Watershed Programmatic EA, asking if it will include the issue about artificial propagation, raised at the hatchery technical team meeting. Lee affirmed it is one of the activities that is being analyzed, along with remote stream incubators. Orcutt indicated that HVTFD supports this effort, but suggested the possibility of a future discussion and how it complies with the Endangered Species Act.

Ly asked about channel rehabilitation, and what a number estimate would be in terms of completion. Lee responded with roughly 40. Dixon adds that as of the Phase II review, the completion of Upper Conner Creek will be 42. Kyle De Juilio states that he believes that the sites where TRRP chose not to do restoration work should be excluded from the number of sites that the TRRP has restored, but instead where work has been done.

Lee explained that there are several sites where the likelihood of implementation is slim due to difficulties with access and land ownership. He believes it to be productive to make effort to work with landowners before deciding to mark these off the list.

The Science Symposium was discussed in further detail by Abel, and the possibility of offering a virtual streaming option. She thanks the regional public affairs team for this, and Kyle de Juilio adds that all SAB members are new on the team.

During the Science Update, Dixon expounded upon the topographic differencing comparing the 2016 topography to the 2022 topography, by Eric Peterson, and shared that a heat map version of the topographic distancing is available on the TRRP website. Peterson described this as a useful tool to enable topographic base map or aerial images for different years for comparison of how deep or shallow the river has gotten within the given timeframes.

Ly inquired about the FY25 science priorities, asking if the RFP was sent out to TRRP entities only. Dixon responded, saying it's up to TRRP entities to solicit collaboration with external partners and is internal.

Orcutt asked if the TMC or other workgroups have input into the proposal responses that are received. Dixon said the TRRP will receive proposals back from the principal investigator and review with comments. He explains this will then be submitted to a science advisory board for further review and ranking, which will be presented in an upcoming TMC meeting in June.

Central Valley Project (CVP) Operations Update (Don Bader, Chair)

Bader reports that Trinity is doing well as it's at 77% and reaching up to 1.9 million acre feet in the upcoming week. He explains he's seen similar in 2020, previous to the drought. There are no diversions scheduled other than temperature control operations and minor releases to

Whiskeytown if it does not fill naturally. Bader states this is the third year with no diversions except to manage temperatures.

Bader stated that Tom Patton mentioned Trinity will soon be over 2 million acre feet, with the possibility to fill Trinity River with inflows continuing into the late spring, which is promoted by recent snowfalls. Bader referenced the water year type will be discussed in detail at a presentation on annual hydrographs, and that the potential for a designated wet year is highly anticipated.

For Shasta, Bader reports it's at 200,000 acre feet, which is above the allowed flood curve. Because of anticipated storms and it is already 500,000 acre feet from the top, Bader is hopeful that Shasta will gradually be filled and avoid having to be dumped and refilled.

Bader indicated a difference on the Sacramento side in that last year, there was 300% of snowpack in the San Joaquin basin, which was beneficial to Delta outflow. For 2024, Shasta is going to get pulled down this summer due to San Joaquin's reliance on Shasta. This will have minor effects.

Things are looking promising at Trinity. The annual ROD volume wet designation is expected to come.

Public Questions and Comments

Bader opened the discussion. No public comments were given, and the discussion was closed.

Questions and Comments of TRRP Entities

Bader opened the discussion. No public comments were given, and the discussion was closed.

TMC Discussion and Comments

Gogan inquired if there will be any exports of water from Trinity Lake. Bader said the March forecast will document diversions through Carr. Dixon noted that this is not a binding policy, but a projected schedule that Bader will send out once it is received in approximately one week. If there is a bump in April, Bader said this usually represents efforts to fill Whiskeytown. Since Clear Creek is running high in 2024, Whiskeytown may not need to be filled.

Ly asked if there is a policy or agreement with the Park Service to fill Whiskeytown. Bader replied by saying it's held down 10 feet in the wintertime, and it's usually raised up in April. He states Whiskeytown management is discretionary by BOR, and there is no hard policy.

Gogan said during the drought years, Whiskeytown was close to 100% full, and questioned whether it could be at 80% to 85%. He wanted to know the reasoning behind the summer fill. Bader explained that in 2022, there were similar needs in the Sacramento River, along with Trinity, which is why there was a fill in Whiskeytown.

Orcutt suggested that it might be helpful for a written description from CVP for how the whole process works along with Trinity River temperature diversions. Gogan agrees with Orcutt and requests to see policy regarding these parameters. Dixon mentioned that some policy will come out of the reconsultation.

Kyle de Juilio points out that the anticipated forecast will show 10,000 to 15,000 acre feet of diversions scheduled from July to October. This is not for exports per say, but to keep the releases to the river cool. Bader adds this can normally be 100,000 acre feet.

Break

Central Valley Project Reconsultation (Kristen Hiatt)

The presentation by Kristen Hiatt, on behalf of USBR, covered the reconsultation for the long-term operations (LTO) of the Central Valley Project (CVP) and State Water Project (SWP), focusing on the environmental compliance processes under the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA). Key topics included updates on Trinity River, coordination efforts, and upcoming milestones. The NEPA and ESA processes were elaborated through diagrams showing completed and future milestones, including the development of a second draft Environmental Impact Statement (EIS) anticipated soon, which follows the completion of various assessments and reports on biological impacts. These assessments indicated potential adverse effects on several aquatic and terrestrial species, leading to discussions on sufficiency review responses by the US Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS), focusing on proposed actions, environmental baselines, and modeling questions.

The second draft Coop Agency EIS included considerations of comments received, use of various modeling tools for analyzing hydrological and climate change impacts, and the project's effects on runoff patterns in the Sacramento River. The upcoming NEPA milestones were outlined, emphasizing widespread participation through public meetings and a final decision-making process that considers public comments and further analysis. The meeting also covered essential fish habitat analysis under the Magnuson-Stevens Act, examining the proposed action's impact on different species and environmental variables.

Additionally, updates were provided on the Trinity River Division, detailing the progress on modeling alternatives, drafting EIS alternatives, and identifying knowledge-based paper topics. Future meetings and coordination efforts were announced, including opportunities for input from cooperating agencies and the public on the second draft EIS, along with a schedule for the next stages of the project, aiming for a Record of Decision for the Central Valley by late 2024.

Hiatt provided a link to follow updates for those who are interested:

www.usbr.gov/mp/bdo/lto/index.html

Public Questions and Comments

No public comments were given, and the discussion was closed.

Questions and Comments of TRRP Entities

No comments were given, and the discussion was closed.

TMC Discussion and Comments

After the presentation, Ly referenced the previous conversations about filling Whiskeytown, and asked Hiatt if there is any mention of this in the EIS for the CVP. Hiatt responded and said she is not able to answer this specifically but will follow up with this question. She continued by saying

anything that was included in the 2000 ROD for the Trinity River division is incorporated into the assumption of the current CVP alternatives. Bader said it might be on the CVP side because they have to rely on the water supply to fill, and also mentioned this question can be followed up on. Kyle De Juilio also added that the TMC doesn't have discretion over that action because it's not down the river, but the Trinity River temperature task group has considered it in the past in their discussions about annual planning, as far as timing. Ly said he is not concerned if TMC has discretion or not, but wanted to ensure the action of filling Whiskeytown has NEPA and ESA coverage since it is a discretionary action.

Bader goes on by saying the ROD at end of 2024 is on the Sacramento side, while the Trinity side is lagging a year behind. This results in CVP ROD being signed and completed, merge the Trinity into that, and look at further impacts for Sacramento. Bader said they're not going to be completed concurrently but will eventually be merged together to ensure a thorough reconsultation of Trinity.

Lunch

Trinity River Watershed Restoration Programmatic Environmental Assessment (Lauren Alvares)

This update by Lauren Alvares, National Resources Specialist for the TRRP, on the Watershed Programmatic Environmental Assessment (PEA) provided a comprehensive update on the restoration efforts within the Trinity River watershed. Key highlights of the presentation include:

- **Cooperating Agencies:** Potential involvement from the US Army Corps of Engineers (USACE) and Natural Resources Conservation Service (NRCS) is noted.
- **Project Area and Barriers:** The project area is defined using the HUC 12 delineation, excluding areas overlapping with the Six Rivers NF Aquatic Restoration PEA and the HVT Reservation. Fish passage barriers are identified, with yellow dots indicating partial barriers and red dots indicating total barriers.
- **Objectives:** The main goal is to expedite watershed restoration with a federal nexus, involving multiple implementers.
- **Project Activity Categories:** Activities include restoration and enhancement of off-channel and side-channel habitat, floodplain restoration, removal or retrofitting of fish passage barriers (such as small dams, flood gates, and culverts), water conservation efforts, salmon carcass placement & remote site incubation, bioengineered bank stabilization, aquatic, wetland, riparian, and upslope habitat enhancement, and road decommissioning, maintenance, and rehabilitation.
- **Endangered Species Act:** Updates on consultations under the Endangered Species Act, including a 2020 NMFS Biological Opinion (BO) and a 2022 FWS Statewide BO, with mention of the Northwestern Pond Turtle as a proposed threatened species.
- **Specific Restoration Activities:** Detailed activities for each project category are outlined, such as vegetation planting, construction of log jams, streambank excavation, floodplain

grading, retrofitting for fish passage, water conservation systems, bioengineered stabilization techniques, invasive species removal, and road maintenance and decommissioning practices.

Public Questions and Comments

Dixon opened the discussion. No public comments were given, and the discussion was closed.

Questions and Comments of TRRP Entities

Dixon opened the discussion. No public comments were given, and the discussion was closed.

TMC Discussion and Comments

Orcutt asked about the scope of the activities and if this watershed restoration only includes the watershed funded programs, the mainstem, or all of the above. He expressed that in his perspective, it sounds pretty broad. Alvares responded and said that individual tributary work projects will still have to be looked at through NEPA. This is to ensure everything is analyzed programmatically at a higher scale. Alvares offered that there was a recent admin draft review of chapters 1 through 3 if Orcutt is interested in reviewing it. She states the team has been working with implementers to make sure this is desirable project to make sure there is ESA and NEPA coverage.

Orcutt also questions the activity of utilizing TRRP fish and tributaries and how that relates to a Hatchery and Genetic Management Plan (HGMP) or recovery plan, concluding that it may have some implications on productivity. This all speaks to how natural populations are assessed and evaluated. He explains he is supportive of the effort because HVTFD is doing similar work on the lower Trinity and Hoopa Valley Reservation, but there are separate consultations for this.

Todd Buxton, TRRP-USBR, questions Orcutt's statement and asks if he is concerned that the hatchery fish will impact carrying capacity for the natural stocks of the tributary channels due to limited resources. Orcutt responds by saying his statement is more directed towards the consultation on the TRH Hatchery, the production of a recovery plan, and what the major effects of these actions are in terms of reducing production on natural productivity at the TR Hatchery. He says it seems like it would complicate the evaluation, and possibly a step back in progress.

James Lee adds that there was a visitation on Grass Valley Creek, and there was a discussion about using otolith banding. Orcutt suggests there are many methodologies that can be used, but there has to be required monitoring as opposed to discretionary actions. Lee believes the EA potentially covers this. He reiterates that he is open to looking at productivity and responses because recovery is there in the future. He clarifies again by saying continued monitoring and evaluation needs to be in place while these efforts are ongoing.

Kyle de Juilio explains that permitting is complicated and the actions are covered under different laws with different permits. He thinks it's important to understand that it's a programmatic EA, which means there are no specific projects that are permitted through this document, but rather the document is an overarching analysis to facilitate future projects. He explains this is to ensure actions are analyzed on a broad scale throughout the watershed. The specifics of an individual project aren't necessarily addressed through this. Future efforts may be required, including planning in using the excess production of hatchery, which is a consideration through the EA.

Ly states he thinks Orcutt is supportive of the hatchery activities and the programmatic EA, but that he may want to have further discussions with the TMC regarding the hatchery. Orcutt says it ties into recovery plans, naturally produced subpopulations, and hatchery production. The bottom line for him is that there is something to evaluate here.

Bobbie Miller says she was wondering in terms of a specific action, if there is a streamline NEPA product that's produced with public involvement. Alvares states there won't necessarily be public involvement because they are using the condition-based management (CBM) approach, which includes a type of checklist with parameters to make sure all actions are covered under the EA.

Orcutt asks if this includes steelhead because there is a reduction in production at the hatchery. Alvares says that she thinks the language says "salmonid," so steelhead could be included if necessary. Dixon states the Watershed Research and Training Center was pushing for the TRRP to think about this in terms of spring Chinook and was not limited to Coho specifically.

Dixon states the FONSI will likely not be signed until there is a new BiOp. The timeline of late summer is optimistic because it would be hard to say that there will be no significant impacts from species if there is no Biological Opinion. Alvares says there could be the potential of two FONSI's; one with current actions covered under the BiOp, and another to cover the rest.

Overview of How a Bulletin 120 Water Supply Forecast is Developed (Andy Reising)

The presentation by Andy Reising, a Water Resources Engineer with the California Department of Water Resources, provided a comprehensive overview of the methodology and processes involved in developing Bulletin 120 water supply forecasts for the Trinity River watershed. He outlined the collaborative efforts initiated in 1929 under the California Cooperative Snow Surveys Program, emphasizing the importance of gathering and correlating data for an accurate annual forecast of the seasonal water supply, which includes snow surveys in collaboration with various agencies.

Key Highlights from the Presentation:

- **Bulletin 120 Reports:** These reports are a series of monthly publications titled "Water Conditions in California," released at the start of February, March, April, and May each year. They include forecasts for median unimpaired April through July runoff volume and an 80 percent confidence range for 24 river basins in the state. Forecasts such as these play a crucial role in water supply operations, flood control, environmental planning, and more.
- **Legacy Forecasting Procedure:** The presentation discusses the use of multiple linear regression equations that relate April-July unimpaired runoff to snow, precipitation, and runoff. This statistical method forms the backbone of the forecasting procedure.
- **Snow Course Measurements:** The accuracy of water supply forecasts relies heavily on snow surveyors measuring snow water content at up to 260 snow courses statewide from January to June. Adjustments are made for any intervening precipitation to ensure statistical consistency and reliability of these measurements.

- **Impact of Climate Change:** Reising addressed the challenges posed by climate change, including the transition from snow to more rain, rising snowlines, and increased winter flood frequency. These changes necessitate a shift towards more sophisticated forecasting models.
- **Roadmap for a Climate-Resilient Framework:** The presentation outlined a forward-looking strategy to transition from index-based statistical tools to spatially explicit, physically based, and climate-informed modeling tools. This included upgrading the Statewide Monitoring Network, developing new forecasting methods, and creating integrated forecast platforms.
- **Aerial Remote Sensing of Snow Program (ARSS):** Highlighting the role of airborne data acquisition, the presentation covered the ASO's efforts in mapping critical snow properties to forecast runoff volume and timing across several watersheds.
- **Online Resources and Tools:** Links to various reports, forecasts, and the SnowTrax website are provided, offering access to real-time data and forecasts essential for water resource management.

Moreover, this presentation explained the role that snow surveys and water supply forecasting have in managing California's water resources. Reising highlighted the ongoing efforts to improve forecasting accuracy in the face of climate change and the shift towards integrating advanced technologies and modeling tools for a more resilient future in water supply forecasting.⁵

Public Questions and Comments

Jerilyn Smith posted in the Microsoft Teams chat that there is a lot of confusion over Trinity being listed North Coast while also being listed with the Northern Sierra snow water equivalents. Both Red Rock Mountain and Highland Lakes are included in the Trinity. Ott responded and said what was seen in the presentation were the gauges with historical and current data for the appropriate locations. Dixon said the confusion may be from summary pages that show the snowpack for the Northern Sierra. The actual forecast is specific to the Trinity Basin.

Ellie Andrews was wondering on the slide that showed the error rates how they improved from February to April, and if they statistically improved over the years with better tools and data or worsened with climate change. She states she can't necessarily see if there's significant change in the level of error. Dixon suspects in the central and southern sierras, where the aerial snow observatory is being used, that it's probably substantially better. However, the resolution has probably not gotten higher in this part of the state.

Questions and Comments of TRRP Entities

Lindke wanted to mention that the errors are really important to understand for the context of the TMC and flow management for the Trinity. He states he looked at the B120 going back 20 years for the winter flow project, and he sees them as remarkably impressive at predicting the April 1st

⁵ During the final portion of the presentation, Reising disconnected from the call due to technical issues.

50% forecast. For the TRRP's purposes, he states it is mainly significant where the April 1st forecast falls within to determine what volume to release.

TMC Discussion and Comments

Pinnix asked what the March B120 Forecast was for this year but was unable to get an answer due to Reising disconnecting from the call. Ken Lindke said it will be in the next presentation.

Ott says that in the future, the program will try flying the watershed to get elevation data that correlates to physical sites to make appropriate refinements. This could entail using geospatial data from satellite imagery, or fixed-wing flying for adjustments.

Break

Water Year 2024 Spring Restoration Release Options (James Lee)

James Lee's presentation for the TMC meeting detailed the consideration of hydrograph options based on the upcoming April 2024 CDWR B120 forecast. These options include two hydrographs (Record of Decision and alternate) for each of three potential water year classes. The presentation reflected the effort among members of the Flow Work Group, who proposed hydrographs for each potential water class, ultimately finding a favored option for the current wet conditions.

Key points from the presentation include:

- **Precipitation and Snowpack Data:** The presentation highlighted the substantial precipitation and snowpack levels within the Trinity River Basin, with all readings over 100% of the April 1 average, indicating a wet water year.
- **Water Year Predictions:** The Department of Water Resources' March B120 forecast predicted a 50% probability of 1,580,000 acre feet of inflow above Lewiston, with the cutoff for a wet year being 1,350,000 acre feet. This firmly places the current year in the wet category, corroborated by additional models and forecasts.
- **Flow Work Group (FWG) Summary:** The FWG did not reach consensus on a flow recommendation, with four agencies opposing full ROD releases in spring. Despite this, technical recommendations based on the best available science were made, emphasizing that full ROD releases in wet or extremely wet years could be detrimental to fish growth and other ecosystem components.
- **Hydrograph Objectives and Considerations:** The presentation detailed objectives for both wet and extremely wet water year conditions, focusing on geomorphic and biological responses such as mobilization of matrix particles, channel bed scour, and riparian regeneration. It also discussed considerations like adult holding targets, EIS ramp rates, and the potential delay of spring releases to support egg survival studies.
- **Riparian and Ecosystem Impacts:** The presentation outlined the significant ecological objectives of the proposed hydrographs, aiming to increase hydrologic variability, support salmonid temperatures, and manage riparian vegetation and sediment transport. It

compared the benefits of alternative hydrographs over ROD for meeting these objectives, indicating slight improvements in frog and salmonid production.

- **Model Outputs and Recommendations:** The document included detailed model outputs assessing the environmental and ecological impacts of the proposed hydrograph alternatives, demonstrating their effectiveness in achieving the project's ecological objectives.

In accordance with the workgroup manual for situations in which a workgroup is unable to reach consensus, attached is a memo characterizing why there is not a hydrograph recommendation for WY24: <https://www.trrp.net/DataPort/meetingitem.php?id=1314>

Public Questions and Comments

Jerilyn Smith asked, when talking about migration and cues given by flows, when flows drop in some areas and fish will be inside channels and backwaters and blocked by gravel. She continues by asking what's in place to help stop stranding in those areas.

James Lee responded by saying there are ramping rates in the EIS that were developed to protect fish from stranding. Some stranding is unavoidable, which is an ecological benefit that some salmon have to some predators that eat those fish, but he does not wish to see excessive stranding. Stranding happens when the river is dropped rapidly and ramping rates are developed to minimize stranding to give fish cues to move out of off-channel wetted areas when flows are dropping. He goes on by saying stranding is evaluated in the channel rehabilitation sites by TRRP staff and partners. Before the ROD, there was a lot more potential for stranding, but because the river has been reconnected with its floodplain, it has become nearly a nonissue.

An unknown virtual attendee asked, per the study report of  scour, is the FWG taking this into consideration?

James Lee responded affirmatively, indicating that there are not a lot of redds in the river during late April and May or for spring release. The redd scour report was in context to the winter flows and flow synchronization periods, from December 15th to Feb 15th. Ken Lindke adds that the redd scour report found the risk of redd scours is extraordinarily low regardless of time of year. As salmon and steelhead deposit redds in areas that as the flows come up, Lindke states that velocity in those areas go down and that regardless of how many redds there are, the risk is very low. Lee added that the floods that deposit spawning gavel, the salmon are resistant to being scoured if the salmon can spawn there.

Questions and Comments of TRRP Entities

Bader opened the discussion. No comments were given, and the discussion was closed.

TMC Discussion and Decision:

The TMC considered a motion to recommend a hydrograph from the Flow Work Group's provided options from each of the most likely water year types to DOI for approval.

Before making this motion, Mike Orcutt stated he will defer his comments on procedural items and concerns in an interest of time. He acknowledges that USFWS and BOR will make a recommendation if there's no action resulting from the motion. Bader continues by saying that

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the potential TMC recommendation may go to the Sacramento Office and USFWS regional director will co-sign the hydrograph proposal.

Motion: Mike Orcutt, HVTFD representative, moved to approve the hydrograph for a normal year based on the 2012 hydrograph, for a wet year based on the HVT modified wet hydrograph, and for an extremely wet year based on the ~~HVT modified~~ 2017 hydrograph.

Second: Liam Gogan seconded this motion

Amendment: Mike Orcutt changed the motion “To approve the hydrograph for a normal year based on the 2012 hydrograph, for a wet year based on the HVT modified wet hydrograph, and for an extremely wet year based on the 2017 hydrograph.”

Outcome: The motion fails with four (4) affirmative votes and four (4) abstentions.

Don Bader (USBR): Yes

Bobbie Miller (USFS): Abstain

Bill Pinnix (USFWS): Yes

Mike Orcutt (HVTFD): Yes

Radley Ott (CNRA-DWR): Abstain

Liam Gogan (TC): Yes

Justin Ly (NMFS): Abstain

Tim Hayden (YTFD): Abstain

The bylaws were discussed to ensure proper protocol was followed regarding motion pass or failure. Bader stated he will report to his director that the TMC did not agree on a recommendation for the regional directors.

Bear Island Sediment Redistribution/Side Channel Maintenance (Todd Buxton)

The presentation by Todd Buxton outlines a plan for managing sediment improving spawning conditions in the Sven Olbertson side channel near Lewiston Dam. This project seeks to relocate spawning gravels and enhance flow through side channel complexes, thereby improving conditions for spawning and rearing. Historical gravel additions near the Hatchery Reach have led to sediment accumulation, obstructing access to the side channel and affecting spawning areas. Efforts to construct lobate bars in 2007 and 2008 were followed by high flow events (2011) that mobilized these additions, resulting in the current sediment plug. The sediment plug and resulting low flow conditions have led to the degradation of spawning areas, with fine sediments, biomatter, and vegetation clogging gravel beds, reducing habitat quality for salmonids.

Implementation Plan: The plan involves removing approximately 3,000 cubic yards of sediment from the sediment plug to enable fluvial transport, thereby freeing up spawning habitats and improving side channel flow.

Scheduled to start soon, with completion aimed before the fly-fishing only reach season opens on April 1st, the project emphasizes minimal impact and rapid execution.

Best Management practices included in this presentation are as follows:

- Biologist will conduct juvenile and redd surveys prior to work
- Redds will be avoided, secondary access sites will be used if necessary, and juveniles may be herded from the site with nets (not handled)
- Install steel plates at wetted crossing to avoid potential crushing of any juvenile salmonids present
- Redistributed gravel will only be introduced to high velocity habitat unsuitable for juvenile SONCC coho
- Heavy equipment will relocate sediment in a manner that provides a working surface above the wetted channel to build a pile in the downstream direction, avoiding direct entry into the wetted channel
- When adjusting the elevation of the channel bed after gravel redistribution, excavators will operate

Public Questions and Comments

Jerilyn Smith asks why the public wasn't told, and Kiana Abel says that there are tentative Facebook posts to be published later in the week regarding this item.

Smith also asks, what part of spreading gravel is creating lobes? She explains by saying everything that's now plugged off happened from the 2023 winter flows. All the gravel bars that are just below Weir hole and the bridge. Buxton explains what a gravel lobe is by saying it's a pile that's shaped like a teardrop that has high relief. He continues by saying it's a plug of sediment in the channel that has high exposure to flow and is easily mobilized by the discharge. He affirms it to be true to say that there are quite a few gravel bars downstream of Weir hole.

Kiana reads another comment from Microsoft Teams: At the hatchery, they did not create lobes with spread gravel. The unnamed commenter says that they have footage of spreading and questions the truthfulness of the discussion. Buxton comments by saying the lobes were created in 2007 and 2008, and that the gravel was spread in 2021.

Questions and Comments of TRRP Entities

Bader opened the discussion. No comments were given, and the discussion was closed.

TMC Discussion and Comments

Orcutt says the description of how this evolved was not very clear to him. He questioned if the physical workgroup made a recommendation on this and if the TMC has input on this. He asks this because of past controversy on gravel reintroduction. Buxton responded by saying this was proposed and accepted in the physical workgroup. This came with a charge for Todd Buxton, Kyle De Juilio, and Dave Gaeuman to develop this implementation plan. Orcutt inquired about

the reasoning behind this presentation and if this is a recommendation needing to be discussed by the TMC. Buxton stated he believes this is an informational presentation.

Gogan asked if there was a specified amount of gravel that was put into the hatchery, and if the distribution was tracked. Buxton relayed that there was 5,000 cubic yards of gravel. In 2007/2008, they put the gravel in as lobes in the middle of channel. Buxton goes on by saying that in 2021 approximately, the gravel was put on the channel margins. Some of these did mobilize in the last flow event, and he says that it's quite evident in the aerial photography. To monitor the augmentations, it would have a high cost and level of effort according to Buxton. Instead, he explains that exposed bar measurements are used along with the aerial photographs. In addition, Buxton explains that they measured the exposed bar area at a baseflow of 450 CFS in the recent summer. The report detailing this will show the amount of material that was deposited relative to what was there previous to when the survey was made.

Hayden asked if the original project was solely a gravel augmentation project, or if it was a habitat project? Buxton responds by saying he thought it was a habitat, but other TMC members thought it was a combination project.

Ly inquires about the status of the refinements documents. Bader says he is still waiting for USFWS's decision from their regional director. Bader will prepare a memorandum for the regional directors with the acceptance of the refinements documents.

Adjourn

Thursday, March 21st, 2024
(Scheduled from 9 a.m. – 12 p.m. PST)

Welcome, Comments on Non-Agenda Items (Justin Ly)

Attendees on one or both days have been listed previously. Any omission of attendees outside of the TMC is accidental and regretful.

Public Comments

Ly opened the discussion. No comments were given, and the discussion was closed.

Reports and Comments of TRRP entities

Ly opened the discussion. No comments were given, and the discussion was closed.

TMC Discussion and comments, as appropriate

Justin Ly fills in for Don Bader as Chair in his absence. Emelia Barnum, Department of Natural Resources Manager, fills the voting seat for BOR.

Ly reminds attendees that the agenda was changed yesterday to have an executive session during the 10 o'clock hour.

Adult Synthesis Report Findings (Steve Gough)

The presentation "Assessment of Adult Salmonid Spawning in the Trinity River" by Steve Gough offered a comprehensive overview of the findings from the Adult Synthesis Report in the

Trinity River. The report represents a culmination of detailed analyses on salmonid spawning, featuring contributions from a team of principal investigators from various organizations, including USFWS, CDFW, YTFP, and HVTFD.

Key Findings and Insights:

- The report highlighted a consistent failure to meet escapement targets for both Fall-run and Spring-run salmonids since the implementation of the ROD. These findings point to significant obstacles in achieving the goals of salmonid population recovery and sustainability.
- It was noted that the composition of hatchery versus naturally produced fish returning to spawn has remained relatively unchanged over the years, despite fluctuations in annual returns.
- Through detailed spawning ground surveys, the study presented evidence of spatial distribution shifts and changes in redd abundance. These observations are critical for understanding the effects of habitat restoration efforts and other environmental variables on salmonid spawning behavior.

The report's synthesis and new analyses shed light on the causal effects of pre-spawn mortality, showing greater mortality rates in pre-ROD periods and looked at redd superimposition and dewatering affecting salmonid spawning success.

The presentation concluded with a set of recommendations aimed at improving salmonid population outcomes:

1. Natural-origin escapement targets for adult salmonids should be re-evaluated
2. Clarification of the intent of hatchery escapement targets
3. Determine effect of ocean conditions on adult returns
4. Evaluate holding habitat
5. Increase the quality and availability of spawning habitat area
6. Achieve adult temperature objectives for adult salmonids and further evaluation of temperature targets
7. Internal and external review to identify efficiencies in the adult salmon monitoring and redd and carcass survey design

Public Questions and Comments

Ly opened the discussion. No comments were given, and the discussion was closed.

Questions and Comments of TRRP Entities

Seth Naman points out at the beginning of the presentation; it was mentioned that the decline in hatchery coho was due to the change in production at the hatchery. He explains that during that time in 2014, there was a West Coast Pacific “Blob,” which was an anomalous area of warm water of the Gulf of Alaska that moved down the coast; and another blob in 2019. Naman points

out that California had a historically bad drought during this time as well, which resulted in both bad ocean and freshwater conditions for salmonids. In looking at the smolt-to-adult return rates at the Trinity River Hatchery, he concludes that the numbers declined by an order of magnitude. In 2014, Naman relayed that 1-6% smolt-to-adult return rates were common. He sees it important that when talking about the change in production at the hatchery, to frame it with what the fish were experiencing in the wild.

TMC Discussion and Comments

Orcutt had a question concerning how much of the redd surveys were observed relative to the integration of spring and fall release of Chinook, and if there is a trend. Gough replied by saying the extent of integration is on a year-by-year basis. He explains he can see a bimodal distribution for fall and spring runs, with a dip in between. The trough between modes is sometimes sharp or blurred, explains Gough, detailing that when the run sizes are more lopsided, the two humps overlap. The timing of the dip between runs is consistent, around Oct 20th. To measure this overlap is unclear. De Juilio added that the spawning data for spring and fall is determined by date, meaning there is no genetic analysis. There is an assumption that all the fish that spawn before a certain date are spring Chinook when, in reality, this is not fact and that those distributions overlap. Orcutt said this may be information that can be analyzed in the FARs release analysis. He is hopeful that the Service is invited to that.

Orcutt asks about the pre-spawn mortality trends in spring or fall. Gough said that pre-spawn mortality is generally pretty low, being under 10% and often under 5%. He explains that the healthiest rivers have some baseline pre-spawn mortality at the beginning of a season. The survey wouldn't capture any pre-spawn mortality that occurs before the season starts, which is where problems of ich or columnaris may occur.

Moreover, Orcutt asks if the data was straight from the population estimates for the different species, or if any analyses were done. Lindke, who provided this portion of the report, shared that he only took point estimates in each year for each species. However, in the annual reports, they did provide competence intervals for these estimates.

Orcutt asks if adult coho and steelhead are seen in the redd spawn surveys. Gough affirms that they have seen 100 to 300 coho carcasses up until approximately 7 years ago. In the last few years, he indicates that it's quite low, potentially seeing under 10 coho carcasses. He indicates a decrease in coho observations. Orcutt brings up the management changes occurring in the hatchery has an effect on the number of natural spawners.

Kyle De Juilio adds to the observed declined in spawning right below the dam. During the undesirable ocean and river conditions, there were also unfavorable Trinity storage conditions similar in 2021. This details various factors that accumulated and prevented fish from surviving and thriving. De Juilio points to the data in the report that ended in 2018 and suggests there will be 6 more years where analysis will need to take place.

Ly goes back to the topic of redd dewatering, where summer baseflows of 450 and winter baseflows of 300 were highlighted. He asked Gough if he knew of any watersheds where the summer baseflows are higher than winter. Gough did not and discussions from the TMC resulted

in pointing out that most of the Central Valley rivers are this way, and how it doesn't make sense from a hydrologic perspective.

Ly asked about the status of the Chinook cohort reconstruction analysis. Orcutt adds that it was used for Klamath-Trinity consolidation back to when the Klamath technical team was operational. Lindke says that he is actively working on the Cohort Reconstruction with Denver Technical Services Center to get the TRRP's version of the model concurrent. He states there is no exact timeline, but there is good progress being made. He expects to be able to separate the Trinity and Klamath stocks with the resulting model.

Orcutt states further regarding the ROC process, in which a fish workgroup product was modified. He requests that be shared and relooked at because the harvest is a big part of that. Lindke states that quantifying how much a given brood year is intercepted and harvested in the ocean will be an outcome of the Cohort Reconstruction. The existing model and data are only going to be relevant up until the present time. Lindke represent he doesn't know what this will look like in the future as productivity of the system will change moving forward. Despite this, Orcutt sees value in this for further opportunities of analysis.

De Juilio adds that the fish workgroup would like guidance from the TMC on how to pursue this. There were recommendations taken from this report during their last meeting, where the production targets were reviewed. De Juilio wanted to convey the workgroup's discussions about how there is much more information known about spring and fall chinook now than when original estimates were made. He affirms that spring Chinook goals are regularly made as opposed to fall Chinook goals. De Juilio thinks it's fair to question if the 62,000 fall Chinook and 6,000 spring Chinook apportions are correct. Additionally, he points out that there are differing goals between the fish workgroup and the recovery plan for NMFS, suggesting a possible need for reconciliation. He concludes his thoughts by adding that for steelhead, the goal is measured by only a portion of population. Comparing this to a 40,000 goal for winter, summer, and fall is not an appropriate method. He recommends some guidance to adjust sampling procedures for Steelhead.

Lindke presented the slide from the PowerPoint regarding escapement targets to build off of De Juilio's statements.

Adult Chinook Salmon Limiting Factors Analysis (Jason Hall)

Jason Hall from Cramer Fish Sciences presented a comprehensive overview of the Adult Chinook Salmon Limiting Factors Analysis (LFA) study plan at Phase I, aimed at addressing the challenges that could be faced while enhancing the adult Chinook returns. Hall outlined the background, rationale, and objectives of the study, emphasizing the need to understand and address the factors limiting adult Chinook salmon returns despite long-term restoration efforts on the Trinity River, also providing a recommendation with different option scenarios and considerations to go along with each potential option.

Key points of the study plan included:

- A revised conceptual life cycle diagram to better represent the spatial and life history complexities of Chinook salmon, including estuary outmigration and adult migration through the Klamath/Trinity systems.
- Identification of potential drivers and causes influencing life stage transitions, which the LFA aims to evaluate.
- A detailed approach to the LFA study plan, emphasizing the need for a comprehensive understanding of the system, population dynamics, and the factors influencing salmon life stages. The plan outlined considerations for complexity, adaptability, and scalability in modeling and analysis.

Three options for advancing the LFA study were presented, with increasing levels of effort and complexity:

1. A high-level focus on key life stages to identify focal areas.
 - i. Concentration on critical life stages with known or suspected limiting factors.
 - ii. Lower data requirements, making it a suitable option for initiating the study with limited resources or data availability.
 - iii. Preliminary identification of areas for potential intervention or further study.
2. A full life cycle model (LCM) and graphical user interface (GUI) to support LFA, balancing complexity and effort while meeting project objectives.
 - i. Comprehensive modeling of the Chinook salmon life cycle, including environmental, predation, and anthropogenic factors.
 - ii. The GUI allows users to explore the model, conduct "what if" analyses, and understand the impacts of different management actions or environmental conditions.
 - iii. Balances detail and complexity with manageability, making it suitable for detailed analysis without being as resource intensive as Option 3.
3. An expanded LCM and GUI incorporating scenarios to inform management decisions.
 - i. In-depth scenario planning and simulation capabilities, allowing users to explore a wide range of management strategies and environmental changes.
 - ii. Requires more extensive data and a greater understanding of salmon ecology and environmental interactions, making it the most resource-intensive option.
 - iii. Supports advanced hypothesis testing and provides detailed insights into the potential impacts of different management actions or environmental scenarios.

Hall recommended starting with Option 2, which provides a balanced approach that leverages detailed life cycle modeling for immediate insight and decision support, with the flexibility to expand into more detailed scenario planning as required. The presentation concluded with a call for developing public-facing or open-source GUIs and tools to enhance the program's accessibility and usability. Sample GUIs can be provided upon request.

Public Questions and Comments

Ly opened the discussion. No public comments were given, and the discussion was closed.

Questions and Comments of TRRP Entities

Erich stated there are two separate RFQs that are being done. Cramer Fish Science received the award on the RFQ for Phase I. The actual implementation of the study plan was envisioned as a separate RFQ because there is no guarantee that the group who designed it would be the optimal group to enact it. Several of the IDT representatives felt strongly to have a second RFQ for the second phase, which is also the most cost beneficial to the TRRP.

TMC Discussion and Decision:

The TMC considered a motion to determine three levels of efforts to fund using FY24 science funding to complete the Adult Chinook Salmon limiting factors analysis.

Ly inquired about cost estimates regarding options, to which Hall replied that although Cramer Fish Science did not create cost estimates, they did develop time and staffing requirements to support development of cost estimates.

Orcutt requested the memo referred to during the presentation. This document can be found on the TRRP website at: <https://www.trrp.net/calendar/event/?id=11803>

Orcutt also discusses lifecycle modeling and asks if this is something that has been utilized and perfected within Cramer Fish Science. The presenter responds by saying life cycle models do not necessarily restore salmon populations; it acts as a tool when trying to manage numerous populations. He goes on by saying life cycle models continue conversations in what-if scenarios, by incorporating in changes to a life stage and seeing how it influences the overall success of the population.

De Juilio discussed the life cycle model having much less life history diversity. He asks how to avoid bias for what is contributing to a population when trying to identify what the limiting factors are. The discussion went on to analyze that one of the key aspects of the model is to demonstrate potential life stages or diversity, and then ask the question if there is actual data to support this.

TMC Closed Executive Session

TMC Decision

Motion: Ott made a motion to direct the Program Office to pursue Option 3 during phase II of the Limiting Factors Analysis procurement solicitation of Phase 2 for a Limiting Factors Analysis.

Second: Gogan seconds this motion.

Amendment: None.

Outcome: The motion passes unanimously with 8 affirmative votes.

Emelia Barnum (USBR): Yes

Bobbie Miller (USFS): Yes

Bill Pinnix (USFWS): Yes

Mike Orcutt (HVTFD): Yes

Raddley Ott (CNRA-DWR): Yes

Liam Gogan (TC): Yes

Justin Ly (NMFS): Yes

Tim Hayden (YTFD): Yes

Break

Oregon Gulch Restoration Project Summary (Kyle De Juilio)

The presentation by Kyle De Juilio from Yurok Tribal Fisheries highlighted the completion and impact of the Oregon Gulch Restoration Project. Focused on reviving the significantly mined area within the Trinity River ecosystem, his presentation detailed the historical degradation from mining and the innovative restoration strategies employed, including Stage 0 Restoration and process-based restoration to enhance floodplain habitats and aquatic life. Kyle De Juilio used a slideshow mainly comprised of photographs to showcase the project's history and completion. Characterized by its collaborative approach and significant ecological improvements, the project showcases a dynamic, rehabilitated river ecosystem with increased biodiversity and habitat complexity, setting a precedent for river restoration in the region.

During the presentation, Juilio discussed that the areas, notably around Conner Creek and Oregon Gulch, were extensively mined through hydraulic methods due to navigation challenges, significantly affecting the landscape. The La Grange Mine, highlighted as the largest mine of its time, processed 110 million cubic yards of sediment, altering the Trinity River's course and ecosystem. Mining left vast amounts of sediment and tailings in the riparian zone, creating a "mining wasteland" with significant backwater accumulation and sediment deposition. Over a century, he discussed that this area began to show signs of natural ecological recovery, with trees and other life forms starting to emerge.

Restoration Approach

- A novel restoration approach was adopted to address the extensive environmental damage, aiming to increase floodplain habitat by 50% and leveraging support from

willing landowners. The goal was to return a section of the river valley to its natural state, providing substantial habitat improvements.

- The project utilized a "Stage 0 Restoration" strategy, emphasizing a stream evolution model that integrates habitat and ecosystem benefits through a process-based restoration of the valley bottom and depositional environments.

Implementation and Outcomes

- Preconstruction and design conditions were led by the Yurok Tribe Design Group, aiming to enhance fish habitat, floodplain access, and food delivery mechanisms within the water flow.
- A significant aspect of the project was allowing the river to rediscover its natural course, which is expected to dynamically change and improve vegetation growth conditions and overall ecosystem health.
- The South Fork McKenzie River was referenced as a living example of similar successful restoration, showcasing rapid ecological recovery, including a significant increase in fish density post-restoration.
- The project highlighted rapid recolonization by biological communities, the positive impact of dynamic channels on ecosystem health, and the ability to recover from disturbances like wildfires.
- Funded by the state of California and federal sources outside the Trinity River Restoration Program (TRRP) budget, the project marked a significant achievement in ecological restoration, culminating in a ribbon-cutting ceremony on December 19th, signifying the project's completion and continuous success since its implementation.

Public Questions and Comments

Ly opened up the discussion for public comment. No comments were given.

Questions and Comments of TRRP Entities

Justin Alvarez offered himself as a contact for those seeking more information regarding the project.

TMC Discussion and Comments

Ly asked for clarification of the suspended sediment and if it has settled at all, to which De Julio replied in the affirmative that the river is clearing up. Grass Valley Creek was providing turbidity throughout winter, and De Julio states the water is so spread out that it is not that powerful. It won't scour the fine sediment away because the stream power is 500 feet.

Orcutt asked what the total cost of the project was. Dixon stated it was around \$13.6 million for construction and revegetation. Adding in design would move it up to \$14 million.

Ott wanted to know how many yards of material were moved. De Julio said it was around 550,000 to 600,000 yards.

Bobbie Miller was curious about the compliance, and whether ESA, standalone, or programmatic coverage was used. Dixon stated that the existing programmatic BiOp was used.

Orcutt asked about the endeavor to complete the 47 sites and how many are left to complete. Dixon states Upper and Lower Rush Creek is not done. Tom Lang Gulch, Poker Bar, China Gulch, and Soldier Creek are not anticipated to be included in the channel rehabilitation work. McIntyre Gulch has not been constructed, Middle and Lower Steiner Flat have not been done, as well as Evans Bar. Upper Conner Creek is in the process, while Oregon Gulch is done. There is a design ready for Sky Ranch.

Orcutt requested the price of what it's going to cost for the program construction. Dixon stated he can provide numbers for a specific number of years offline, where Pinnix asked that this information be disseminated to the TMC.

Hayden and De Julio emphasized the dichotomy of the floodplain strategy being both process-based restoration and adaptive management. Through adaptive management, it raises questions whether going back for revision is a part of the process and when the TRRP's work is complete. Orcutt states it's related to the goal of restoring the River to pre-dam levels, which would ultimately include adaptive management in certain areas.

Orcutt asked what the results were for the previous motion regarding the hydrograph recommendations, to which Dixon replied that there were 4 affirmative votes and 4 abstentions. Orcutt noted that the 4 abstention votes are from the same entities who wrote the Water Year 2024 Flow Recommendation Memorandum. He then asks what the next steps are for the Regional Director and/or Interior's response regarding the motion results. Dixon states the TRRP will develop a flow schedule based on the most likely water year type with the hydrograph presented to the TMC for that water year. He states that is what will be recommended to BOR and FWS Regional Directors in the absence of an affirmative recommendation from the TMC.

Topics for Next TMC Meeting

- FY25 Budget
- Retrospective for hypothetical FY24 winter flows (what might have been)
- Fish WG review of synthesis report recommendations (Kyle de Julio)
 - Including escapement targets
- Answer re: Whiskeytown filling (Is there any actual policy and what env compliance)
- PFMC Klamath R. fall Chinook ad hoc (Brett Kormos)
- Update from Design Team on future project schedule and lessons learned
- Any update on TCD appraisal study and refinements (Program Document)
- Klamath Dam removal update (Belchik)
- Trinity River survey
- Lower Klamath FARs review (PZ)
- Trinity River Hatchery updates (Derek)
- RSI from Grass Valley Creek (Laskodi) remote site incubator

Adjourn

Oregon Gulch and Upper Conner Creek Site Visits (Design Team)

- Meeting attendees caravanned from the TRRP Office to Yurok field house to discuss Oregon Gulch Channel Rehabilitation Project
- Shifted to Upper Conner Creek Channel Rehabilitation Project site