Draft Meeting Notes

TRINITY MANAGEMENT COUNCIL

December 8-9, 2021
WebExVideo Conference

Day 1, December 8, 2020 9:00am

TMC Members

Primary	Representative Seat
Don Bader	Bureau of Reclamation, Chair
Justin Ly	NOAA Fisheries, Vice Chair
Nick Hetrick	U.S. Fish and Wildlife Service
Michael Dixon	Trinity River Restoration Program, Executive Director
Mike Orcutt	Hoopa Valley Tribe
Brett Kormos	California Department of Water Resources/Fish & Wildlife
Tim Hayden	Yurok Tribe
Ramona Butz[1]	U.S. Forest Service
Liam Gogan[2]	Trinity County

Others in attendance: Seth Naman, Roman Pittman (NOAA), Elizabeth Hadley (Reclamation), Justin Alvarez (Hoopa Valley), Radley Ott (CDWR), Wade Sinnen, Ken Lindke (CDFW), Kyle DeJuilio, Chris Laskodi, Emily Cooper, David Gauemann, Jon Guczek, Max Ramos (Yurok), James Lee, Chad Abel, Eric Peterson, Oliver Rogers, Brandt Gutermuth, Jeanne McSloy (TRRP), Shaun Green (Hoopa), Conor Shea, Reuben Smit, Steve Gough (USFWS), Keith Groves (Trinity County), Chad Smith (Headwater), Hannah Karlan, Femke Freiberg, Jonathan Birdsong (NFWF), Superintendent Steve Madrone (Humboldt), Ashley Rust, Joe Membrino, Tom Stokely

[1]Butz served as USFS rep for the meeting. [2]Gogan served as Trinity County rep for the meeting.

Notes: Sabrina Kleinman (EPP)

List of Motions

Justin Ly moved to approve the December 2021 TMC Agenda.
Tim Hayden seconded the motion.
The motion passed unanimously.

Justin Ly moved to approve the September 2021 TMC meeting notes.
Nick Hetrick seconded the motion.
The motion passed unanimously.

Tim Hayden made a motion for the TMC to approve the proposed winter flow variability recommendation from the Flow Work Group forwarded by the IDT for water year 2022.
Ly seconded the motion.

Liam Gogan made a competing motion for water year 2022 to implement the elevated baseflows for normal, wet, and extremely wet water years but limit volumes to 60 kaf in normal, 80 kaf in wet, and 100 kaf in extremely wet years and to not implement flow synchronization this year due to poor reservoir conditions.
No members seconded and the motion was not considered.

Original motion failed with six votes in favor two votes opposed. Hoopa Valley and Trinity County opposed.

Action Items from the Meeting

- Bader will determine which Biological Opinion Reclamation is using for the Central Valley Project interim water plan.
- Bader will provide an update on the TMC's request for an appraisal or feasibility study on temperature management at the Lewiston Dam.
- Hetrick and Dixon will work to secure the Humboldt Bay Aquatic Center for June TMC.
- Hayden and DeJuilio will look into hosting the September TMC at Weitchpec.

Welcome and Introductions

Don Bader opened the meeting with introductions. The posted agenda had been modified due to schedule conflicts with presenters. Michael Orcutt requested the agenda be finalized a few days prior for the public, so they know when topics are discussed. Michael Dixon apologized for the changes but noted there is a disclaimer on the Program website that agendas are subject to change until the first day due to last minute needs. Such shifts are common for TMC meetings.

Liam Gogan announced he would be the primary representative for Trinity County and agreed with Orcutt's concerns about the shifting agenda. He asked if the agenda was prepared based on Robert's Rule of Order and if the shifts were legal given the Program's transparency requirements. Dixon explained the TMC is not bound by the Brown Act and it has been a long-standing pattern for the agenda to change at the last minute based on requests of the TMC or presenters. The latest version of the agenda was posted to the TRRP website before the meeting.

Approval of Agenda

Ly moved to approve the December 2021 TMC agenda.

Hayden seconded the motion.

Orcutt asked whether the discussion on the $250,000 for the channel rehabilitation review was tabled after the last quarterly meeting. Dixon explained the review would be discussed during the closed session on Day 2. Hetrick asked what agenda items had changed. Dixon noted the final version moved the introduction of the NFWF watershed grant coordinator up due to a presenter who could not attend and added an update on the winter flow variability to the start of the first day.

Motion passed unanimously.

Approval of Sept TMC Meeting Minutes

Ly moved to approve the September 2021 TMC Meeting Notes

Hetrick seconded the motion.

Motion passed unanimously

Adaptive Management of Flow -Update

Reclamation received an update from the Secretary of the Interior's office the day before. Based on their understanding of the ROD, the TMC has discretion to make changes to the hydrograph based on the best science without additional NEPA documents. This renders the winter flow EA as an unnecessary step and the TMC can proceed with winter flows as it deems necessary. Bader

wanted the TMC to know about the announcement so representatives could discuss it with staff before the discussion on the winter flow variability later in the day.

Public Forum

Tom Stokely from Save Klamath Trinity Salmon and former chair of the TAMWG asked the meeting moderator to use the WebEx chat for questions so staff could clarify questions from the public who cannot comment. He asked why the September minutes were not posted to the website prior to the meeting. With regards to winter flow variability, Stokely expressed concern about adjusting water releases when storage is low. Reclamation may not think additional analysis on winter flow is needed, but Stokely felt there were still concerns. If the TMC does not approve the winter flow proposal, would Reclamation proceed anyway? This would create a similar pattern to how TAMWG was treated. While minds may be made up, Stokely thought additional analysis was needed and if the winter flows are a permanent change rather than an experimental one, which would be a major shift for the TRRP. Stokely thought the TRRP needed to run a fish production model to determine trade-offs, especially given the critically dry conditions this year.

Dixon apologized for not posting the meeting minutes and noted he should post a clean copy of the draft minutes for public review. Ly suggested posting the draft meeting minutes to the website before the TMC meetings with a disclaimer that they are not fully reviewed and approved. He wanted the public to understand there could be misinterpreted discussions and they may want to wait until the TMC approves the minutes. Dixon noted the TRRP used to post a clean copy of the minutes for TMC approval with a note that they were not final. Lately, the minutes were not posted until they were finalized. While there have historically been delays in reviewing the minutes, recent versions have been prepared in time. He recommended posting the version for TMC approval and replacing it with the final version to reduce misinterpretations by the public. Stokely clarified that posting the TMC-reviewed version was fine and wanted the minutes posted so the public could see what happened during the last meeting.

CVP Operations Update

A major storm is predicted on Saturday and Redding is expecting between 5-6” of rain, which could help at Shasta and Trinity Dams. Both reservoirs are low with Shasta at 25% and Trinity not doing much better. CVP has held meetings to prepare for a difficult 2022 water year with some unprecedented measures if more storage does not come. The Regional Director is prioritizing how to manage supplies. Reclamation submitted its interim plan to the State and they are discussing revisions. Cumulative inflow was good in late October and early November, so the deficit is not as large. Precipitation in December and January will be important as poor precipitation will likely not be made up in late February and March.

Orcutt asked what rules DOI and California were following for its 2022 water year operations and whether they were using the old OCAP rules or emergency rules. If the agencies predict rainfall with the hope of other activities on the other side of the hill not under the Biological Opinion or other legal framework, how would the Central Valley address the need for ESA

reconsultation? Bader did not think they were going back to the old Biological Opinion but using the new one. He will ask the agency experts and get back to the group after lunch.

Report from Executive Director

The Program finished construction at Chapman Ranch Phase B, which is the second phase of the largest channel rehabilitation project completed. Dixon thanked staff members and agencies for keeping it on track, including Chad Abel, Oliver Rogers, USFS, Yurok Tribal Construction, Hoopa Valley Tribal Roads, and NMFS. This project was a major undertaking. Dixon suggested the TMC could visit the site during the June 2022 meeting.

The Program received great feedback and substantive comments for its winter flow EA proposal. They outlined changes and corrections to the analysis as well clarifications. However, given the recent news from the Secretary's office, the TRRP will not finalize the EA.

The Willow Creek weir was blown out during a storm in October. CDFW and Hoopa Valley salvaged what they could and are taking collections at the Junction City weir. While the structure is not funded by the Program, it could impact some metrics used to evaluate Program success.

Organizational Updates

The civil engineering tech position should be flown soon. Additionally, the project coordinator specialist position and the TRRP secretary position are vacant as Kevin Held and Kathy Martens have moved on from the Program office.

Patrick Flynn was hired by Trinity County as an Environmental Compliance Specialist. In the FY22 budget, funding was provided to Trinity County to support this position and improve the County's involvement with technical groups and the Program's permitting needs. Flynn will attend the technical work groups and brief the TMC representatives on big issues coming down the pipeline. They are discussing if he will be at the Planning Office, the TRRP office, or both.

Reclamation staff are at a 25% telework limit, with most staff working from home. DOI set some initial guidance on when staff will return to work and all staff will have new telework agreements by the end of February. All DOI employees are expected back in the office by the end of March. The Program will transition staff back to the office during the second quarter.

The Program's lease agreement will expire in 2022. GSA did grant an emergency 3-year extension to the existing lease. During that time, TRRP will solicit a new lease and are negotiating with GSA to do an open solicitation to ensure that the program gets a good value for its lease.

FY22 Budget Updates

The Program is operating under the recent continuing resolution, which means they cannot spend more money than allotted under last year's budget. This does not cancel or defer any contracts but future agreements may depend on Congress' decision in February. For now, the Program is moving forward with renewing expiring agreements, including a new agreement with the USFS,

which expired in September. Reclamation has moved up work on AFA negotiations so the tribes can begin work on some requested tasks.

The Program conducted its kick-off meeting with NFWF for the watershed grant administration contract. Their team will meet the TMC on Day 2 and review their approach for managing the program and how the TMC will help prioritize funding.

Implementation Update

Revegetation crews will continue work at the Chapman Ranch Phase B site through mid-January.

During the annual coordination meeting with BLM on November 17, the Program learned the land transfer with USFS was delayed for the Sky Ranch project. This will delay the NEPA process for the project and could interfere with the implementation schedule. Abel asked USFS leadership to look into the issue and provide guidance.

Oregon Gulch is currently shovel-ready as the Program works out potential funding. They are waiting on how infrastructure funds and a potential grant the Yurok Tribe applied for with the state could be used. The Program will need to wait before awarding construction contracts until they determine funding and cost estimates.

The Program conducted a meeting with neighbors of the Evans Bar project and will follow-up as the design evolves. The 30% design for Sawmill was completed by the Yurok and State Design team. The design will fix the side channel breach and provide a final closeout for gravel processing. The 30% design for Upper Connor Creek is also near completion.

Abel outlined the work involved developing the Winter Flow EA. The proposal team met 35 times between January 21 and November 4 to develop the analysis and methods for the EA. This included developing a suite of models used to analyze flow actions and significant outreach. He thanked Seth Naman, Todd Buxton, Kyle DeJuilio, Chris Laskodi, Dave Gaeuman, and Eric Peterson for their work.

Orcutt asked if the TMC was still exploring infrastructure funding to address the temperature release issues at Trinity Dam and why it was not connected with the recent infrastructure bill. The TMC previously expressed full support of an infrastructure update to address temperature management at the valve. Hadley did not know of any updates on the topic and explained Reclamation was still figuring out how to receive funds and rank potential projects. Orcutt asked to add the discussion to the agenda so the TMC could provide feedback to BOR on how to spend the infrastructure funds. Ly recalled that the TMC sent a letter to the Reclamation Regional Director on September 13 requesting an appraisal or feasibility study on the Lewiston valve infrastructure, and asked whether there was a response letter from Reclamation. Dixon advised discussing the item tomorrow when Bader was present.

Orcutt asked who determined which organizations to include for outreach on the TRRP Winter Flow Variability EA. He noted that several NGOs and the California Salmon and Steelhead Advisory Committee were included and wanted to know who was on the Program's list for NGO

outreach. Abel explained that during the September TMC meeting, the Program suggested expanding their outreach to organizations outside of Trinity County. As part of the EA outreach, they used a wider approach based on Dixon's connections in the region. Orcutt was concerned the Program was not accurately presenting all sides of the issue, and that staff needed to more accurately describe the concerns around the proposal and not just those that align with a particular outcome. Abel explained his role was to showcase the science and talk about the methods used so the audience drew their own conclusions. Dixon added they were invited to present to the California Advisory Committee after briefing the Regional Director of CalTrout. Orcutt expressed concern at how the Program may advocate for some of its proposals and presentations, which may not properly represent the divergent views of the TMC. Sometimes an unbiased view is presented without proper acknowledgement of what the TMC has accomplished over the years.

Outreach

Peterson published the biographies for the Program staff to the website. Abel noted the California Basin tweeted the new biography page after they highlighted it during a chat with the Regional office.

Abel has organized a new "Science on Tap" program with the Trinity Valley Brewing Company. The forum will provide an opportunity for scientists and resource professionals to share their work informally with the public. The sessions include a 30-40-minute presentation followed by 20 minutes of Q&A. The sessions will be held on the fourth Wednesday of each month. Lindke, Peterson, and the Yurok Tribe are scheduled to give some of the first presentations. Abel welcomed other ideas and presentations from the TMC to fill the schedule a few months in advance.

Science Update

Two synthesis reports are in peer review: "Synthesizing 87 years of scientific inquiry into Trinity River water temperatures" and "Trinity River juvenile salmonid habitat synthesis: physical habitat capacity at the restoration site and reach scale." Also in peer review is a technical report on "Assessing temperature regimes and juvenile Chinook salmon growth in Trinity River off-channel and mainstem habitats." The Trinity Systemwide Vegetation Mapping report is in final edits. The team will not be working on a FONSI for the Winter Flow EA given DOI's recent direction.

The Work Groups were given a new timeline to finalize the Program Objectives and Targets work, which Lee will discuss later.

<u>WG Briefings</u>

<u>Fish</u> (Ken Lindke) – Fish did not meet this quarter. Their last meeting was before the September TMC meeting. They discussed objectives and targets, are developing targets for two objectives. Pinnix gave a preview of his juvenile synthesis report and they discussed whether biomass or abundance were appropriate metrics for juveniles. Most of the discussion was on projects to submit for the FY22 funding. Pinnix was elected as coordinator for the next year.

Design (Chad Abel) – Rogers was elected as the new group coordinator. They discussed the Implementation schedule. With Sky Ranch delayed, the sequence of project work will need to shift. There are other projects for the Hoopa Valley Design Team, but most projects are in the early design phases. There is also uncertainty on how funding for Oregon Gulch will pan out and the team may need another project for FY23. They are hoping to move Sky Ranch along to create boat access in Junction City. Rogers also scheduled their quarterly meetings for the year, as listed in the ED report.

Watershed (Chad Abel) – Did not meet this quarter.

Flow (Seth Naman) – Flow met three times this fall to develop winter flow recommendations in accordance with the TRRP winter flow EA. In brief, they reviewed pre-Lewiston dam Trinity River hydrographs and developed recommendations for 6 flow components for elevated base flow and one for the synchronization period. The Program will use a decision matrix to determine which flows to select, based on precipitation and runoff patterns, the details of which are explained in the EA.

Physical (Conor Shea) – Physical held several meetings in September to review proposals for the FY22 science funding. They will meet next week to develop their gravel augmentation proposal for FY22.

Riparian and Aquatic Ecology (Chis Laskodi) – This work group did not meet as they are hosting the brown bag sessions each week. They finished 4 sessions and will conduct the last one next Thursday. All the sessions have been well attended with 25-40 people from various groups attending. They will start planning the in-person symposium early next year. They hope to hold it either late winter or early spring, hope it will be an in-person event. Lee noted all the presentations and PowerPoints are available on the website.

IDT (Lee) – The IDT met three times in the last quarter. The first two meetings were focused on science projects recommendations for FY22 funding and the last meeting was with the Flow Work Group to review the winter flow proposal. The IDT reviewed and ranked 8 pre-proposals and requested full proposals from five. Currently the funding for the five proposals is higher than the $250,000 currently available. Full proposals are due in January and will be reviewed by the SAB, which may result in some budget adjustments. The IDT will provide its recommendations to the TMC in March.

For the flow proposal, the IDT had quite a bit of discussion and clarification questions, but did concur with the Flow Work Group's proposal. Orcutt asked about the significance of IDT concurrence in the bylaws, noting that IDT concurrence is not the same as agency concurrence. The IDT should clarify that an IDT agency member may agree with the scientific justification, but that it does not mean the agency agrees with the recommendation. Lee explained the IDT operates on consensus and not voting. They make recommendations based on scientific support and are responsible for identifying fatal flaws in the analyses. Because IDT representatives are not the same as the TMC representatives, they try to crosswalk those discussions to clarify the

differences. Orcutt explained dissenting or minority opinions should be considered and noted to prevent such views being whitewashed as it can be construed that IDT consensus equals agency consensus, which is not proper representation.

Hetrick asked if the need to get an independent review of the proposals had been addressed, to avoid having IDT or participant agencies rank and review their own proposals. Lee explained the SAB did an independent review of the pre-proposals, which closely aligned with the IDT's review. However, the IDT could have a more in-depth discussion on how to avoid conflicts of interest for these efforts. Hetrick noted Headwater's review and recommendations from other Programs that they could copy or follow. Dixon recommended discussing the issue with Chad Smith as part of the Science Plan development. Orcutt asked if the independent review of the FY22 science proposals was still evolving, allowing for additional direction. Lee explained they were evolving, but given the timing for funding projects, there was not much room for flexibility. The IDT had set priorities based on recommendations from the work groups and they plan to make their recommendations to the TMC in March, anticipating some proposals may not get funded. TMC can always weigh in on how to fund the projects. Orcutt asked if there was still the opportunity to develop studies to evaluate winter flows and how it could inform adaptive management.

Dixon clarified the IDT is a technical work group that operates by consensus, not universal support. During the discussions on winter variability, there were a variety of opinions and support to raise the discussion to the TMC, but there was no opposition to the proposal. Orcutt clarified that while there was no scientific opposition to the proposal, there are other distinctions the TMC will be scrutinized on. Naman added the Flow Work Group only forwarded one set of recommendations, indicating consensus before consulting the IDT. Gogan asked if the recommendation of the IDT would usurp the TMC's decision. Dixon explained the IDT's role is to review the science behind work group recommendations across disciplines and then provide a recommendation to the TMC, who can then review those recommendations in light of policy concerns. IDT consensus does not override a TMC decision.

BREAK

40-Mile Habitat Capacity Report Findings

Emily Cooper and Dave Gaueman presented on the 40-mile habitat capacity report findings. The study's objectives were to compare habitat capacity in rehabilitated and non-rehabilitated areas and between rehabilitation sites. They also evaluated the physic metrics used in determining habitat capacity and looked at capacity related to flow frequency and duration. The study used updated terrain models for edge water habitats at the 40-mile scale along with the hydraulic model to determine flows and depths. The newer habitat capacity models are derived from direct observations that allow for inferences about habitat quantity, quality, and extent. While capacity models are not intended to for use on their own, they can provide information at the 40-mile scale for all flows to look at relationships between restoration and flow.

The study used the previously defined sub reaches, with data from 2016 or earlier, noting the number and size of rehabilitation sites in each. Cooper noted there were several restoration projects in Reach 7, while Reach 6 only had one site in the analysis. Since 2017, most of the restoration work has taken place in Reach 6, so the results likely have changed. The study used a flow range of 4.2 to 99.1 cms (150 to 3500 cfs) to evaluate rearing. While 150 is never seen, it is included in the analysis because the existing hydraulic model includes that historic flow.

Capacity was determined as fish per meter, and they used an integrated area under the curve to normalize across sites. Most sites had a habitat dip at the start, with decreasing capacity moving downstream. Rehabbed areas had greater capacities in four reaches. Reach 7, which had the most and earliest rehabilitated sites, had the lowest and minimal differences between rehabbed areas and non-rehabbed areas. This could be due to the use of restoration techniques that did not include in-channel techniques. Capacity was also confined at Reach 3 and 5, which are limited by physical channel confinements.

The study looked at potential capacity differences by site as a measure of rehabilitation success. Minimum capacity was determined as the lowest points on all curves. The minimum capacity occurs at higher discharge rates downstream. Where restoration was successful, minimum capacity shifted with lower flow rates. This is most notable in Reaches 2 and 4. As a measure, successful restoration should shift minimum capacity to lower flows.

Gaeuman reviewed the physical metrics analysis. Physical complexity is a restoration objective for the Trinity River, but it is difficult to define and measure. The general definition is morphology that varies over space and time. To evaluate it, they looked at topographic relief as computed from depth percentiles and wetted width as a function of discharge. These were compared to capacity measures at discharge, integrated capacity under the curve, and fraction of wetted area. Overall wetted width mirrors the capacity curves, excluding the initial dip. Width was a primary factor in determining habitat availability and greater wetted width above base flow contributes the most toward capacity.

Topographic relief is strongly related to fry capacity, as relief and cover often evolve together. Wider inundation zones make for more spaces for interactions between relief, wetted width, cover, and fry capacity. However, using smaller, shorter reaches resulted in smaller sample sizes and weaker correlations to capacity indicating scale is dependent.

Finally, they compared capacity to hydrographs to determine the impact of varying flows. Capacity remained relatively unchanged until the ROD flows begin mid-April. These illustrate how the timing of base flow management could limit fry capacity and pre-smolt abundance. The results indicate increased flows to 14.2 cms could decrease capacity, while flows between 1000 and 1500 cfs can increase them, accounting for accretionary flows.

The study recommends restoration and juvenile habitat assessments focus on features inundated at or below 3500 cfs for significant periods of time and on increasing wetted widths in downstream reaches. Physical metrics should continue to guide habitat design and assessments

and flows should be managed to increase capacity during the critical rearing period. The study also recommends the use of broad datasets to inform restoration and correct data over time. Repeated evaluations should look at the effect of restoration after 2017 on Reach 6.

Ly asked if base flow management limited overall capacity. Cooper explained all life stage abundance would be limited if fry abundance is limited. Winter base flows limit fry capacity. Currently Reaches 6 and 7 have the most potential for additional habitat, as they are limited by channel confinements due to mine tailings. Ly asked if more variability at sites would translate into more capacity. Gaeuman explained there was a strong correlation between topographic variability and capacity. Because topographic variability is calculated at low flows, it's restricted to near channel locations. As flow gets higher, water is pushed out to the riverbank, resulting in width becoming a bigger driver.

Sinnen asked if the analysis was based on Chinook salmon. Cooper affirmed it was based on habitat for juvenile Chinook. Sinnen asked why the measures of fish per meter were so high (3000 fish per meter). DeJuilio explained capacity represents the 95th percentile of fry density, which are the highest densities observed over a liner meter for all habitat. Sinnen asked if they totaled minimum capacity for the 40-mile reach and if they looked at estimates of fry to smooth the abundance to see if they were in range. DeJuilio explained capacity measures were developed to inform the 3S model on the movement and growth of fish. Capacity by itself is a relative comparison of the 95th percentile under ideal conditions.

Orcutt asked if the study was linked back to the original ROD hypothesis and objectives. DeJuilio explained the flow study was done 21 years ago, before many of these techniques could assess habitat across a range of flows. This study used the new tools to ask similar questions as the flow study. Naman asked how capacity might differ in an undammed river and if there would be a different relationship between capacity under the influence of the channel berms and forms. Cooper explained the study indicates two factors limit capacity: physical confinement in the channels and a lack of flow at certain times of year. In an undammed river, limitations from flow would not be a factor.

LUNCH

Objectives and Targets Update

Lee updated the TMC on the progress refining the Objectives and Targets for the Program. The Objectives and Targets were refined from an initial list outlined in the IAP (2009), which provided a detailed list for monitoring. In 2013, the DSS workshop recommended refining the list of objectives. There was renewed emphasis a few years ago, largely driven by the Refinements process, for the work groups to refine the list and provide a focused set of objectives and targets.

As part of development of the Science Plan, the work groups consolidated the current list of objectives and targets in February 2021. While not all the objectives and targets were completed, there were enough to start moving forward. The current objectives and target report outlines the

results from each work group, definitions of each target and how they are linked to specific Program objectives, along with narratives on each group's process and thoughts on their final lists and recommendations.

Currently, several of the objectives and targets are incomplete. The current list of objectives and targets have been reviewed by the IDT and will be moving forward in the Science Plan. The IDT will present the final list to the TMC in 2022. Work groups will complete their lists by June 2022 and must decide how to classify incomplete targets. If consensus is not reach, the targets should be classified as either unquantifiable or unresolved. Unquantifiable targets may not have the resources or information to objectively monitor or quantify within an acceptable range. Unresolved targets are important but difficult to reach a consensus on.

The intent of the final list is to leave room for improvements but not to allow for continual changes. The next update to the list would likely take place at the end Phase III or beginning of Phase IV, when most of the channel rehab work is done or designed and there is updated information. The unresolved targets could be useful in this phase to generate new hypotheses for future reports or research. As information becomes available, the work groups could make recommendations to the IDT on how to use it. The Program does anticipate changing the objectives and targets as they learn more but felt revisiting them on an annual basis would not be productive. Currently the IDT plans to distribute the objectives and targets report in March while recommending the TMC adopts the list before the end of 2022.

Orcutt asked how the Objectives and Targets related to the Science Plan and was unclear what the IDT was requesting from the TMC for this process. He suggested it would be helpful to explain the breadth of knowledge and experience each participant agency brings to the Program. He noted the TMC never adopted the IAP, even though the Program uses it for monitoring. The request from the TMC should be framed well to understand any potential implications so the members understand the input the IDT is seeking.

Lee explained he was hoping to understand what the TMC is looking for in the final report. He explained the objectives and targets will likely be an appendix to the Science Plan and a central component of how the Program evaluates progress on its goal and vision. There have been numerous discussions with the Drafting Committee about whether to have the objectives and targets as a separate section of the Science Plan for TMC to approve or not. Since these are being reviewed separately, the IDT is looking for buy-in from the TMC on the list. Detailed review of the list would take a considerable amount of time, since the document is extensive. He suggested the TMC members work with their IDT representatives to review the list. Lee was concerned there may be objectives and targets that the TMC may not endorse and was unsure of how to move forward since some are interdependent and removing them may not be feasible. Lee asked how the TMC would like to address those concerns. Orcutt suggested he and Lee discuss the list offline since there may be items they can frame better for the TMC. Lee encouraged the TMC to talk with their work group and IDT representatives about the proposed list so it could be finalized for approval by the TMC in June.

Winter Flow Proposal

Bader opened the discussion on the winter flow proposal. The flow proposal would be for a one-year time frame, as all TMC hydrograph recommendations are. Abel, DeJuilio, Lindke, and Naman presented the winter flow proposal for TMC approval. DeJuilio reviewed the background to support synchronizing flows with major winter storm events. In early 2016, the DSS looked at the relationship between fish production and differences in natural hydrology versus ROD flows. The results suggest the number of parr could increase by 46.6%, while biomass could increase by 48.1% under natural flow conditions. Since the initial flow study, numerous peer-reviewed studies highlight the importance of natural flow regimes for dam-controlled rivers, and the flow study suggested the need to study synchronizing flows with storm events.

Looking at flows over the four eras of water management on the Trinity River, high flows on the river have shifted from January until June to late April - July, resulting in flatter winter flows with little variability, and colder springs. Elevated flows from dam release paired with accretion can increase rearing habitat while accretionary flows alone can cause bottlenecks in the lower river as habitat capacity dips until water spreads out. Surveys at Pear Tree show most rearing juveniles leave the river by April, limiting the number of fish that benefit from ROD flows. Optimal growing conditions due to temperature also do not occur during high flow releases because the water is colder than the optimal growth range for salmonids.

To address these problems, the Program can change the timing and the magnitude of releases, though it cannot change the total volume or adjust the temperature of the releases under the ROD and current infrastructure. All actions would affect the river downstream from Lewiston and are based only on Trinity release levels. These changes would not only benefit Chinook, but other salmonid habitats where overlap occurs.

The proposed winter flows would have the following objectives:

- Increase salmon fry and parr growth
- Synchronize flows of the regulated mainstem with the free-flowing tributaries.
- Provide thermal cues for smoltification and downstream migration earlier in the year.
- Increase nursery habitat availability for juvenile salmon.
- Provide seasonally appropriate disturbance of macroinvertebrate prey for rearing salmonids.
- Reduce effects of temperature suppression on rearing salmonid growth.

DeJuilio reviewed FAQs the Program received during the public comment period on the EA. There was concern that releasing flows in the winter could overspend the amount of water available by spring. Advances in forecasting allow significantly reduced uncertainty. The current proposal is conservative by only moving water when based on the 90% exceedance forecast from the B120 report inflows . Additionally, summer flows would never drop below 450 cfs and would comply with Water Order 90-5. The proposal will still accomplish ROD flow objectives as the actions would allow the Program to learn through adaptive management. Since 2009, the

TRRP has learned to been more efficient with flow volumes. By reducing peak duration and recession times, and the remaining volume to meet ROD objectives at different times of the year. The action does not appear to change storage volumes, as the releases happen in the winter when storage impacts have the least impact on reservoir stratification. Currently, releases happen after stratification. There was concern about using flows to do geomorphic work during dry or critically dry years. However, the historic record shows large peak events naturally occur during even in dry years and are consistent with natural conditions. Such flows are important disturbance mechanisms for benthic food production as well as inundation and bed disturbance, which makes food and nutrient resources more available.

Abel reviewed the size and timing of the proposed flow. There are two major periods: the flow synchronization period from December 15 to February 15 and the elevated base flow period from February 15 to April 15. During the synchronization period, elevated flows would piggyback major storm events. These include events resulting in flows forecast between 4500 and 12,000 cfs above the North Fork and would not likely occur every year. If a flow synchronization event were to occur, the Program will notify Reclamation within 72-hours of the receding limb to release the water. To assist, Naman worked with CNRFC to include the Trinity River above the North Fork of the Trinity River in its river forecasts.

During the elevated base flow period, three smaller releases are possible. These would be based on DWR 90% exceedance forecasts and depend on water year type and B120 forecasts. All flows in the elevated base flow will use the decision tree outlined in the EA, which determine the size of flows based on changes in the water year determination. The decision tree will also help balance water volumes to comply with the March B120 forecast allowances. As a result, there are 6 proposed flow hydrographs, to allow water to increase with increases in the water budget. To evaluate these potential flows, the team compared hydrographs from four previous normal water years to demonstrate how the decision tree and February B120 reports would adjust releases in the flow synchronization and elevated base flow periods.

Lindke reviewed the benefits of the winter flow proposal as outlined in the EA. The flow should increase access to rearing habitat for juveniles, with a 9% average increase across the 40-mile restoration reach. Cottonwood recruitment at targeted bank positions should increase during wetter water years and the action would provide seasonally appropriate disturbance to increase food drift. Release of flows in the winter would result in more efficient geomorphic work using the same amount of water by timing it with tributary flows. The flow would not result in an increased risk of redd scour. Fish size should increase by the end of June under the proposed action. For recreation, the number of fishable days could increase from May to June as water is moved from the spring to winter. Lindke noted the analysis indicated a large decline in fishable days in April. However, since ROD flows currently occur during most of April, most of the month is already unfishable.

Naman reviewed the proposed hydrographs. Prior to construction of Lewiston Dam, approximately 50% of annual river flow volume at Lewiston occurred before April 22. Since the

ROD, only about 20% of river flow volume occurs before April 22. This is a significant departure from natural flow regimes. Shifting water to the winter could positively affect a variety of ecological concerns and reconnect the ecology with natural flow patterns.

The action proposes one flow during the flow synchronization period, and six potential flows during the elevated base flow period. These seven components could be put together in approximately 50 different configurations based on B120 assessments and water year predictions. DeJuilio has developed a flow scheduler to outline the potential timing and size of each flow based on the decision tree. The synchronized flow would be one potential peak with a maximum discharge of 6500 cfs at Lewiston between December 15 and February 15 based on flow trigger volumes in the North Fork. In the elevated base flow period, there are a variety of ways to configure the six flow events based on B120 reports. Base flow would also continually increase in a stair step fashion to match naturally occurring flow patterns.

This new process does not work with the current ROD scheduling and DSS process as there are an array of unknowns around when flows may occur and their size. Beginning March 15, the Flow Work Group will know how much water is left to use after April 15 for the spring flow planning process.

Orcutt noted the only way to reallocate water to the winter was to use the water available after April 1 and asked how the analysis addressed the other benefits in place or other hypotheses contemplated by the ROD, such as juvenile production or temperature reports that appear to support this proposal? Naman explained the ROD and the flow study did not yet understand that geomorphic benefits from a 5-day peak drop off quickly after a day or two. Thus, shortening the peak to a 1-2-day peak would result in the same sediment transport rates. As a result, there could be water available for different concerns. Another issue not well understood or modeled was the effect of temperature on fish growth. The approach used 20 years ago was based on a simplified approach for cold water fish management, known as PHABSIM and Instream Incremental Flow Methodology. Now we know salmonids grow in a range of thermal conditions and shifting the water out of the spring and into the winter could achieve a more optimal temperature range for fish growth.

Orcutt asked how much the proposal team consulted with those involved with the initial flow report and ROD to understand their rationale and hypotheses, especially on their understanding of fish habitat. DeJuilio thought the team did a thorough job of reviewing the initial objectives under the ROD and comparing those with the analysis. The Flow study authors also stated that synchronization should be investigated. Some of the initial tests have been replaced based on the literature, but the initial recommendations do not limit when the water can be used.

Orcutt questioned the premise of trying to mimic natural flow variability since the TRRP goal to restore the river to pre-dam populations is abstract. Natural variability is not the goal and the TRRP does not have the ability to do so. Lastly, Orcutt was disappointed at how tribal fishery operations were given the same treatment as other non-tribal fisheries even though they are the main constituents being served. For example, the tribal fisheries are operated all year, which

would be impacted by shifting flow times. Naman explained mimicking natural variability is expected to mimic benefits to the natural ecology. The four papers DeJuilio highlighted represent 5% of the full suite of literature on the importance of natural flows. DeJuilio clarified the proposal does not try to mimic natural flows but to tie aspects of natural flow to ecosystem services that benefit fish. He wished they could have done a more in-depth analysis on tribal fisheries, but they used the same analysis as the original EIS, which only analyzed recreational fisheries.

Hayden asked if the proposed action would need to be approved each year, or if winter flows would be implemented periodically depending on the water year to catch up with riparian objectives. If so, how would the decision tree determine which years needed flows? DeJuilio explained the winter flows could take place during any water year but annual recommendations would be at the discretion of the Flow work group, IDT, and TMC. The proposal would allow for the release of water under any year while retaining water to meet ROD objectives and learning how these shifts affect the ecology and fish. Lindke thought the decision should not be an on/off annual decision. There are numerous presumed benefits with the main objective focused on increasing juvenile production, which could increase adult returns. Since salmon have a multi-year life cycle, implementing winter flows haphazardly or only for one year will make it difficult to quantify the effects. Lindke recommended implementing it for at least a few years.

Groves asked if the flows would impact July or August reservoir levels. DeJuilio explained the TRRP's actions only occur at Lewiston Dam with storage managed by Reclamation. While the levels may start lower, they would be more stable since the ROD releases would be lower. Over the long-term, there could be benefits when storage levels are high as safety of dam releases would be less likely. Gogan asked if this would result in lower lake levels by June and if they would still be able to meet their temperature objectives given the last year being critically dry and the lake currently at 20%. Abel explained the action does not remove any more water from the reservoir than already planned. Reservoir levels would remain unchanged with the potential benefit of reducing the need for safety of dam releases since those count as ROD water without counting against the volumes. Gogan was concerned the action would reduce the amount of water available in June. Abel explained the beginning water elevation would be slightly lower, but the TRRP would use less water over the summer resulting in the same levels by June since the same amount of water is released. Lindke added the level of the lake after ROD flows would be achieved sooner in the year, but the overall level would be the same since the volume released in the winter is determined by the B120 report in April. Gogan thought it would be hard not to have lower lake levels by June if they were releasing flows while the lake was at 20%. DeJuilio explained flows are also reduced rapidly during a critically dry year to 450 cfs by June. There would be more of a difference during wetter years. But it is nearly impossible to know where the lake levels will be outside of the water year determination.

Hetrick asked if they did any additional analysis given the State's recent listing of Spring-run Chinook and asked if the reduction in flows in mid-May to July would have a temperature effect

on adult spring run's fish. DeJuilio explained the criteria for the adult run was 60 degrees at Junction City, but the action would not likely affect it.

Orcutt was concerned with how information trickled down on the proposal and the DOI's recent direction. He asked if DOI planned to provide anything in writing to support their recent guidance (e.g. no NEPA needed to support winter flow water use). The TMC had been down this road before and if there is uncertainty on how long this guidance will last, they need to know. Previous guidance from the Solicitor was different and DOI took action based on TMC recommendations (e.g. September 2019 flow recommendation). Would this action be implemented by DOI if its voted down by the TMC? Bader explained the TMC gives its hydrograph recommendations to the Regional Directors.

Orcutt explained the recent guidance wiped out twenty years of legal opinions on flow management. The Program decided to develop an EA based on the recommendation of the Solicitor. Other previous actions appear to be at the discretion of the Secretary. The TMC needs to know if this guidance will be permanent since they are discussing reallocating major volumes of water. It was unclear if other evaluations or impacts were assessed as part of this direction. Bader explained the rationale he was given is that the action is within the bounds of adaptive management prescribed by the ROD. Orcutt noted the Program has been trying to do adaptive management for twenty years, but no one questions this new guidance despite being a change in DOI's position. DeJuilio asked if reallocation was the correct word here because the same water volumes were being used. Orcutt explained if water was used before April 1, then different volumes and durations of flows occur after April 1, with less flexibility to extend flows later in the year, which could disregard potential heat and climate effects.

Abel explained the action would still allow the Program to meet water order standards for adult holding temperatures through baseflow management. The goal is to allow the river to warm earlier in the year to benefit outmigrants and encourage earlier migration. By the time fish reach the Klamath, it is too warm. While they can keep the fish cold when they're there, they are being set up for failure when they leave. There is the need for flexibility, but there are other mechanisms that can address those concerns. While the action could exceed standards at Douglas City, overall there's not a major impact on adult holding targets. Orcutt asked to meet with DOI regardless of the vote and asked not to introduce the Klamath issues into the discussion because it was a separate problem. The action could affect other ESA listed species, like Coho, in the Trinity, and they should be doing consultations based on this proposal.

Ly explained if the action does not have additional adverse effects to coho than what was assessed under the 2000 Biological Opinion (BiOp), then it may be possible for Reclamation to use that BiOp. Also, it is Reclamation's decision whether to use that opinion or consult again. Kormos' iterated the TMC needs to consider implementing the change for multiple years in a row to gain any useful insights since they would be unable to determine anything after a single year. He suggested the TMC commit to implementing the flows for a set period of time and then evaluate their effectiveness in a similar fashion as the ROD flows. Since there are concerns about

whether this is beneficial it might be good to implement it for a shorter 5-6-year term. Bader explained the TMC has authority to approve annually, which they can revisit later.

Hayden made a motion for the TMC to approve the proposed winter flow variability flow recommendation from the Flow Work Group for water year 2022.

Ly seconded the motion.

Orcutt explained he had listened to the science, but based on the policy implications, the Hoopa Valley Tribe could not support the motion as there could be implications since the law requires concurrence with the Hoopa Valley Tribe and it appears to be overridden by the Secretary's decision. This implies they will not have the ability to fully and independently advocate for restoring the river and fisheries.

Dixon iterated each TMC member was appointed by their agencies to fulfill their commitment under the ROD to restore the Trinity River and are delegated to vote for the highest priorities for the Program to pursue. This vote is the most important one the TMC has made in several years and it has been well thought out and analyzed with full consensus of the IDT. While there is some discussion on its permanence, it is no different than recommending the annual hydrograph. The Program will continue to monitor and adjust its modeling to create more informed proposals, but the change is not a panacea. While the action will not result in instant success, they will not see success if they continue with their current actions. This motion is in favor of the Program scientists' recommendation and for using adaptive management to restore fisheries. Orcutt disagreed and thought more public input was needed as there are several people concerned about its implications.

Gogan made a competing motion for water year 2022 to implement elevated base flows for normal, wet, and extremely wet water years to limit volumes to 60 kaf in normal, 80 kaf in wet, and 100 kaf in extremely wet water years and to no implement flow synchronization this year due to poor reservoir conditions.

No one seconded the motion. The competing motion was not considered.

The motion failed with six votes in favor and two opposed. Hoopa Valley and Trinity County were opposed.

Public Forum

No comments were submitted.

Adjourn for Day 1 4:12 pm

Day 2, December 9, 2020, 9:00am

Public Forum

At the beginning of the meeting, Supervisor Groves stated that Trinity County may want to reconsider its vote on the winter flow proposal.

NFWF Watershed Grant Program Introduction

Freiberg, Karlan, and Birdsong from NFWF introduced themselves from the Western Region office of the National Fish and Wildlife Foundation (NFWF). Freiberg is the Senior Manager for water programs in the Western Region. Karlan is the Water Investments Coordinator with the Western Regional Office and will provide program support. Birdsong is the Western Regional Director based out of San Francisco.

NFWF is a non-profit organization that supports, sustains, restores, and enhances wildlife by collaborating with federal agencies and the private sector. Their Board is appointed by the Secretary of the Interior and vetted by the White House. Their focus is on planning and design information for restoration projects and studies to inform conservation decisions. They are the largest conservation grant maker in the country, and fund large and small projects, making their approach nimble and multi-faceted. They work with a variety of funding agencies to leverage their grants with private sector partners including corporate and foundational partners to help increase on-the-ground conservation.

They use a science team to identify and review projects for funding. The team determines if proposals meet the funding goals and develop business plans to align species and habitat outcomes so grant programs can determine how well they're meeting their conservation goals.

In CA, the NFWF business plan focuses on identifying headwaters and connecting them to streams, rivers, and estuaries to address ecosystem health. Currently their aquatic focus is on Coho in the Klamath, Trinity, and Eel Rivers; Sierra Meadows; and Trabuco Creek. NFWF has invested in the Klamath Basin for 10 years while managing $12.7 million in active funding agreements to enhance anadromous and native fish survival. Strategies include removing passage barriers, improving access to cold water refugia, and enhancing instream habitat and connectivity. While they have invested throughout the Basin, the Trinity was a missing piece.

Freiberg and Karlan will be the primary contacts for the contract. They will start by conducting partner consultations to solidify the program priorities, geographic scope, and expected outcomes. Once done, they will solicit projects, develop funding requests, and broadly circulate them. Once the RFP closes and the projects are identified, they will conduct programmatic and technical reviews to determine conflicts of interest. NFWF will provide their recommendations to their partners and notify Congress and the NFWF board to review and approve. Once approved, the funding awards are announced, and the projects can start implementation.

Orcutt explained the TRRP has defined objectives and that TMC has modified over time and asked how much influence the TMC would have selecting potential grants based on their advisory role for the TRRP? Birdsong explained NFWF would work with the TMC as part of the initial consultation to ensure the grant program's goals align with the TRRP and TMC's goals. Orcutt thought NFWF's work with the Coho enhancement money was a good example of their approach but noted the infrastructure bill could input money into both programs so Hoopa Valley Tribe had some concerns but was supportive of consolidated management of both programs. Ly

asked how NFWF planned to time the funding announcements between the Trinity and the Klamath. Birdsong explained they plan to issue one RFP for both. They do not want to create extra burdens for applicants and want to coordinate with Reclamation for both the Klamath and the Trinity. They aim to get the RFP out in the spring.

Hetrick asked them to describe their technical review process and how it would minimize conflicts of interest. Freiberg explained they look at the projects and determine what skill sets or expertise should review them. They use technical staff from various agencies to review proposals, often using Reclamation, State programs, and academic experts to review. They talk with the primary funding partner to identify who could assist and select a non-associated person to review them. If there is potential overlap, they have the reviewers sign a conflict-of-interest statement to recuse themselves. They use a broad group of technical experts along with the NFWF science team and aquatic experts as well. In closing, NFWF plans to do individual introductions with each TMC member if anyone had additional questions.

Fish and Fire in the West

Dr. Ashley Rust from the Colorado School of Mines in Golden, Colorado presented her research on the impacts of fire on water quality and fish. Dr. Rust is a water quality specialist for Colorado Parks and Wildlife. After fires, most people observe erosion, which mobilizes nutrients and heavy metals and impacts water quality. Impacts, which include elevated nitrogen, phosphorous, and dissolved metals, are highest in the first year and recover around 5 years. The main factor in improving recovery and reducing water quality impacts is related to how well vegetation recovers at sites since vegetation intercepts nutrients and prevents erosion.

Dr. Rust investigated the impact of wildfire and erosion on water quality and fish in two case studies near the headwaters of the Rio Grande. The first was at the West Fork Complex. These fires were started by three lightning strikes over the summer, which merged together. 60% of the burned area was moderately to severely burned, with severe area impacting water quality the most. Her team monitored the watershed in controlled (unburned) and impacted sites. During the monsoon season that year, a major landslide in Trout Creek (burned) increased suspended solids and killed numerous fish in the tributary. For this region, while snow melt will cause some mud flows to increase sediment, the heavy monsoonal storms dislodge sediment and cause the greatest impacts post-fire.

Looking at macroinvertbrates post-fire, the number of taxa and the number of sensitive taxa were significantly decreased in the area, including the control sites one year after the fire. This was likely because the control areas are close to the fire and were impacted by smoke and ash. However, after three years, the taxa configurations were similar to pre-fire conditions and water quality also normalized. Fish populations in the mainstem of the river did recover after fire. If fish can move to less impacted areas, they can avoid the major impacts. In the tributary where the fish kill occurred, fish were smaller, but no adults were observed in the first year after the fire. However, three years later, healthy populations had returned, and the fish had moved back

in. These probably migrated from above or below the land slide area due to the lack of barriers on the river that make it easier for fish to return.

The second site they look at was from the 416 Fire in 2018. This area had been closed off in the summer due to fears of an accidental fire. However, sparks from a tourist train are believed to cause the fire. While smaller than the West Fork Complex, it was close to Durango where the Gold King Mine spill impacted the Animas river in 2015.

This study looked at the Hermosa Creek, where the fire burned and compared it to the unimpacted Junction creek, which both feed into the Animas. The major impacts observed were high turbidity and increased suspended solids and heavy metals. Aluminum, cadmium, and zinc increased in the burned tributary with little change in the unburned tributary. The macroinvertebrates showed a similar pattern to the West Fork Complex, with a decrease in sensitive taxa and increases in pollution tolerant species. However, these changes taper off over time with 2019 and 2020 results looking similar to pre-fire conditions. Additionally, they looked at heavy metal concentrations in macroinvertebrates and showed a 10-fold increase in iron, cadmium, and zinc after the fire.

For fish, stocked rainbow and brown trout numbers dropped off post-fire while native bluehead sucker remained unaffected. Additionally, a lineage population of cutthroat trout long thought to be extinct in the area was found in Hermosa Creek and salvaged during the fire and mine spills. These were used in breeding programs, and CPW started reintroducing them in the area.

Overall, post-fire water quality impacts can last for three or more years at burned sites, but fish can recover quickly if the affected rivers are connected and fish can leave. Macroinvertebrates also shift and recover quickly post-fire. There is the potential for mobilized metal to move into fish tissue and up the food chain in response to fire, but the long-term implications are unclear.

Dixon thought the findings were reassuring regarding impacts to water and fish from bad wildfire. He asked if they saw a difference in macroinvertebrates in intermittent streams, which can flux to recolonize those areas. Rust thought intermittent streams were often overlooked for their ecosystem value. While she has not studied them, her thought is these streams below burned areas are likely impacted and most ecologists do see a return of flow once the debris is moved out by large flow events. She posited they would bounce back and recover just as quickly.

Lee asked if the dipterans observed after the fire were smaller. Rust stated that while the total number of insects did not change, the ones observed were smaller, representing less calories. As a result, they expected fish weights would be different if fish were confined to those impacted segments. However, they did not see a significant mass change in the fish, likely because they could move out. Lee explained the Program is focused on juveniles which may benefit from smaller species. They also have synchrony between colonizing fish and their offspring, which may benefit from smaller fish.

Guczek asked whether they looked at potential impacts of prescribed burns on water quality data and fire severity mitigation. Rust thought it was a great idea, but their research focuses on fires

where more than 15 to 20% is burned because that's when the impacts are seen. Fuel treatments are excellent at reducing severity and mitigating post-fire impacts. But they have not detected a change in flow as there is still enough vegetation on the ground to mitigate potential responses. She thought there could be potential to use fuel treatments with satellite data to determine when vegetative recovery occurs and whether that aligns with aquatic recovery.

Ott asked whether her research observed introductions of different constituents following burns in the wildland-urban-interface (WUI) and whether she had any recommendations for restoration designs. Rust had not done research in the WUI but noted the East Troublesome fire near one of Denver's major water sources where they detected several constituents and metals in the water, such as organics and petrochemicals mobilized during the first year. Once the areas are cleaned, those constituents go away but it raises concern on how water quality affects source water.

DeJuilio asked whether the lack of flow following treatments was due to lower fire severity or increased water yield. Rust noted a study in Oregon, California, and Northern California that looked at paired watershed. Vegetation was the same and one site was treated. They did not detect a hydrological signal after treatments, which could be due to the size of the treatments. Natural fires tend to clear out vegetation, similar to a clear cut, and clear cuts increase flow while selective cutting does not. Fuel treatments are also smaller and the response is only seen after severe fires. Low and moderate fires also don't show a hydrologic response. Rust clarified that while people may think more water is released after fire, it is also loaded with sediment, which should be filtered and treated. She did not think cutting and burning trees should be the answer to gaining more water.

BREAK

Refinements Update

Smith gave an update on the Program Document and the Science Plan development. The Program Document Drafting Committee has two meetings scheduled in December and January, and another proposed in February. Smith plans to do a large document review for the February meeting with the goal of finalizing the document in March. Overall, the Program Document and Science Plan will be based on the purpose and goal statements and will implement Phase III of the Program. Phase IV is anticipated from 2033 to 2043, depending on TMC input.

Phase III milestones will be used by the TMC to evaluate how the TRRP is making progress and how it will present their work to the public. Four milestones have been outlined but will be ironed out during the next Drafting Committee meeting. Smith presented the new proposed organizational structure, which would elevate the role of independent science review and add the TRRP Stakeholder Advisory Committee at the same level as the TMC. Both groups would be under the Secretary of the Interior. The Committee is still working on challenges with the structure, how information would flow, and how to address pinch points.

The Committee's November meeting focused on getting a clean draft of the Program Document, but there are still some thorny and fundamental issues they need to address. These include

reviewing the Solicitor's comments on the Law of the Trinity, the organizational structure, TMC voting structure, and stakeholder involvement. The stakeholder committee would reconstruct the FACA committee and Smith has drafted a charter, but they need to figure out who is on it. There are also concerns with conflicts-of-interest, independent science, and the budget. They are hoping to set a high-level budget for Phase III to be more proactive with the budgeting process and determining their funding options. The other issue is how adaptive management fits in both documents and how policy concerns are addressed the Program Document and the Science Plan.

Much of the Science Plan issues are tied in with the Program Document. The Science Plan priorities need to speak to the milestones in the Program Document. Right now, the group is wrestling with adaptive management. The updated charter for the SAB is also still in process and they are working on how to knit the Science Plan with the Program Document together. Their next meeting will be from January 20 to January 21.

Abel noted the organizational chart did not include the Design Work Group and asked why peer review was elevated as a direct report to the TMC. Smith explained they are still working on Independent Science Review organization. The idea is to better connect the SAB as tool. There is also uncertainty on what peer review means for the Program. The way its proposed in the chart is for the TMC to ask for independent scientific counsel, which could come from the SAB or other independent peer reviewers. It still needs discussion and wouldn't replace internal peer review.

Hetrick asked how the Science Plan and Program Document would refer to each other while being completed at different times. Smith explained he was still working on that piece and determining whether the TMC wants both done before signing off on them or whether the two had progressed enough to approve the Program Document while the Science Plan is being completed.

Naman asked, given the recent vote on winter flow, how the Program could move forward with a science-driven Program when non-science concerns impede implementing adaptive management and to ensure scientist do science the Program will use. Smith, who was not present for the vote, explained adaptive management is a complex societal collaboration that is not just based on science. Non-science concerns can prevent specific science-based actions, but Smith hoped the organizational chart included processes and procedures to better prioritize the science. The hope is the Program Document and Science Plan merge the vision with the science to overcome the non-science concerns as part of a societal collaboration to make it work better.

DeJuilio explained that while votes should be pro forma and the TMC should be well informed, not all members have the same level of staff support. He asked if the Document included anything on what participation meant and how to better address it. Smith explained such concerns would be part of the discussion next week for the organizational chart. All TMC members should have someone participating in lower work groups. The work groups should know who is on it, what their positions are, and what they're responsible for. But not participating in a work group should not stop something from happening. Every entity should

also have someone participating at the IDT level and there needs to be a place for everyone on the TMC to have representatives and technical folks to participate before the TMC meetings.

Orcutt did not think the TMC should revisit the vote but should focus on how the Program is run, including sideboards that affect the Program. For Refinements, partners need to reflect and figure out what they need to do. Smith added the TMC is the decision-making body in charge of the TRRP. The Program will not get everything they want from the TMC, but Refinements should smooth those disagreements out.

DeJuilio noted the failure of adaptive management is often blamed on the science, but the question is what to do when it is not used for management. How science and management are meshed is not about the science but how management considers science in decision-making. Hayden added the TMC is the decision-making arm that sets the policy. They need to consider the science but there will always be other concerns and issues that influence those decisions. The hardest part of adaptive management is determining when they have "learned" something and when people accept the new state of knowledge with a common vision of how to implement it. Orcutt thought that if the TMC continued to revisit it they should understand the policy and legal implications for the proposal. There are reasons some actions are not implemented, such as the availability of water and the politics and legal decisions around it. The TMC should also know the rationale for the Secretary's decision to allow the TMC to implement the TRRP's winter flow variability proposal.

TMC Dates for 2022

The TMC determined the following dates for the 2022 quarterly meetings:

- March 30-31 (Date was moved to allow more time for hydrograph development and due to schedule conflicts for USFWS)
- June 15 – 16 (Hetrick and Dixon will reserve the Humboldt Bay Aquatic Center)
- September 14 -15 (Hayden will confirm meeting at Weitchpec)
- December 7 -8 (Butz will confirm meeting at the USFS Redding Office)

The March meeting may be a hybrid meeting due to changes in DOI telework status. Dixon will provide an update as more information is available.

The TMC approved the following dates for the 2022 monthly teleconference call:

- January 13
- February 10
- April 14
- May 12
- July 14
- August 11
- October 13
- November 10

Public Forum

No comments were submitted.

Adjourn Day 2 at 12:20 pm

Channel Rehabilitation Review Scope of Work (closed session)

TMC Representatives Present

Representative Seat	Primary	x	Technical Representative	x
Bureau of Reclamation, Chair	Don Bader	x		
NOAA Fisheries, Vice Chair	Justin Ly	x		
U.S. Fish and Wildlife Service	Nick Hetrick	x	Conor Shea	x
Trinity River Restoration Program, Executive Director	Michael Dixon	x	Chad Abel	
Hoopa Valley Tribe	Mike Orcutt	x	Justin Alvarez	X
California Department of Water Resources/Fish & Wildlife	Brett Kormos	x	Seth Lawrence	
Yurok Tribe	Tim Hayden	x	Kyle DeJuilio	x
U.S. Forest Service	Ramona Butz	x		
Trinity County	Liam Gogan			

Others in attendance: James Lee, Trevor Morgan, Radley Ott, Chad Abel

The group reviewed the draft SOW prepared by Dixon and reviewed by the Design and Physical Workgroups and made edits. TMC members will work with their technical staff to review questions incorporated into the review process proposed for the SOW. Member agencies should provide comments before the end of the calendar year.

Adjourn Special Session 3:35pm