Draft Meeting Notes

TRINITY MANAGEMENT COUNCIL

December 16-17, 2020
WebExVideo Conference

Day 1, December 16, 2020 9:00am

TMC Members

Primary	Representative Seat
Justin Ly	NOAA Fisheries, Chair
Dan Everson	U.S. Fish and Wildlife Service
Don Bader	Bureau of Reclamation
Michael Dixon[1]	Trinity River Restoration Program, Executive Director
Mike Orcutt	Hoopa Valley Tribe
Teresa Connor	California Department of Water Resources
Dave Hillemeier	Yurok Tribe
Lois Shoemaker	U.S. Forest Service
Keith Groves	Trinity County

Others in attendance: James Lee, Chad Abel, Kevin Held, Eric Peterson, Oliver Rogers (TRRP), Nick Hetrick, Bill Pinnix (FWS), Elizabeth Hadley, Linsey Walker (Reclamation), Seth Naman, Roman Pittman (NOAA), Kari Otto (USFS), George Kautsky, Justin Alvarez, Shaun Green (Hoopa Valley Tribe), Kyle DeJuilio, Chris Laskodi, Max Ramos, Oshun O'Rourke (Yurok Tribe), Wade Sinnen, Ken Lindke (CDFW), Trevor Morgan (DWR), Jasmine Shen, Alison O'Dowd, Dominick Davis (HSU), Chad Smith (Headwater), Darcy Pickard (ESSA), Liam Gogan (FOTTR)

[1]Michael Dixon was unable to attend during the morning portions of the meeting. James Lee presented in his place.

Kari Otto will be taking over as primary for USFS in January.

Notes: Sabrina Kleinman (EPP)

List of Motions

Dan Everson moved to approve the December 2020 TMC Agenda.
Lois Shoemaker seconded the motion.
The motion passed unanimously.

Lois Shoemaker moved to approve the September 2020 TMC meeting notes.
Dave Hillemeier seconded the motion.
The motion passed unanimously.

Hillemeier made a motion to send a response to the FOTTR pointing out that many of the issues highlighted in their letter will be addressed through the NEPA process and point out that the TRRP has an open-door policy and we invite them to contact the TMC or our TRRP ED with any TRRP related issues and questions in the future.
Connor seconded the motion.
Motion passed with 7 votes in favor, one opposed. Hoopa Valley opposed the motion.

Action Items from the Meeting

- James Lee will create spreadsheet for the targets and objectives to track their progress.
- Dixon will send links to Welch's coast-wide survival studies to the TMC.
- Held will create a list of public engagement opportunities to share with Michael Dixon and the TMC.
- Held and Lee will update the TRRP website to make public attendance at Work Group meetings more explicit.

Welcome and Introductions

Justin Ly, Chair, opened the meeting with a roll call of TMC members, stakeholder agency participants, and the general public.

Approval of Agenda

Dan Everson made a motion to approve the meeting agenda.

Lois Shoemaker seconded the motion.

Motion passed unanimously

Approval of Sept TMC Meeting Minutes

Lois Shoemaker made a motion to approve the September 2020 TMC Meeting Minutes.

Dave Hillemeier seconded the motion.

Motion passed unanimously

Public Forum

No comments were submitted during the Public Forum session

Report from Executive Director

As Dixon was unavailable, James Lee gave the Executive Director's report. Lee gave the Organizational and Science Updates, Chad Abel provided the Implementation Update, and Kevin Held gave the Public Outreach Update. The Work Group Coordinators gave updates for their group, with Lee providing the update if the Coordinator was not present.

Organizational Updates

Dutch Creek was completed this fall. Since then, the Program has focused on finishing the FONSI for the Chapman Ranch project. The TRRP is currently on a maximum telework status, which affects their in-person availability. The TRRP is moving forward with filling the Fish Biologist vacancy through an MOA with the Yurok tribe. The MOA has been completed and the Program is discussing how to fund the Yurok's AFA for the position. The TRRP has decided to keep the civil engineering tech position vacant for now.

Implementation Update

Chad Abel reported on the completion of the Dutch Creek project. Revegetation of the project was done through October 13th. Since then, the Implementation Team has focused on preparing for Chapman Phase B, which will begin in 2021. The Yurok Tribe has started grubbing the site. The CLOMR was recently submitted, which should not affect the construction timeline. The team is working with Lois at USFS to finalize their FONSI and post it to the USFS website to

avoid construction delays. Design for Sky Ranch is on pause as the team waits for the pending land exchange to happen, which is scheduled for early 2022.

The Draft EA for Oregon Gulch has been delayed for public comment until January 15. Since the Yurok Tribe did not receive state funding for the project, the TRRP Implementation budget is looking to provide funding for fiscal years 22 through 24 unless other funding sources are identified.

The joint Yurok and State Design Team is starting its work on the early design for Evans Bar but has stopped to look at potential close-out designs for the old Sawmill site. The Upper Conner Creek 30% design report should be ready for review this winter. The Hoopa Design Team is still gauging the level of support it will have among landowners. The TRRP is working to complete some remaining wetland delineations and reporting as required by the North Coast Regional Water Quality Control Board.

Outreach

Kevin Held reviewed the TRRP's recent outreach efforts. Much of their outreach work is still hampered by COVID restrictions and the team has created more videos and online content. They finished updates to the Program brochure, which is available online. They are currently working with a videographer to finalize the video on Dutch Creek, which is being reviewed by Reclamation Public Affairs office for public release.

The Program has replaced much of its in-person educational events with videos and other virtual tools. They hosted a public engagement meeting on the Oregon Gulch project. They will participate in a STEM event at North State on January 15 and continue to work with landowners on the Upper Conner Creek project and ironing out realty agreements for Chapman Phase B this summer. The Outreach team is working with the Riparian and Aquatic Ecology Work Group to plan the upcoming science symposium on the synthesis reports for the Program.

FY20 Budget Updates

Lee reported that since September's meeting, the Program identified some surplus funding in the budget spreadsheet from CDFW and has reallocated those funds to fully fund the active monitoring projects, which include the Chinook Coded Wire Tagging, Fall Run Scale Aging, and Outmigrant Monitoring projects. Approximately $175,000 of watershed funding awarded to USFS, was also unspent. The Program was able to retain those funds and use them to toward the FY21 Watershed Grants. These additional funds should pay for the third party grant administrator and reduce the amount paid for by the watershed grant fund itself.

Science Update

No new synthesis reports have been finished since the September meeting. However, the fine sediment report is in peer review until the end of January. The effectiveness monitoring report is currently in final edits and should be ready in a month as well as the vegetation encroachment report. Lee updated the schedule for the synthesis reports in the Executive Director's report.

The Work Groups continue to work on finalizing their objectives and targets, which are due January 1 to the IDT.

WG Briefings

Fish (Ken Lindke) – The group met once on October 26 to discuss targets/objectives refinement and receive updates on relevant synthesis reports. They also met with the Physical work group and a few other technical specialists to discuss future management of Hamilton Ponds. For their targets, they have two they are still working on: juvenile outmigration at Weitchpec and predation and competition between hatchery and wild salmonids. They are on track to complete the targets by January 1, including write-ups. Lindke credited the group with providing justifications and documentation for each. They do have a few targets that will be deferred to later date as they wait on the synthesis reports or other outstanding information need to complete them. The synthesis report on adults is nearly ready for peer review as the PI for the paper is incorporating the last analyses. There has also been progress on the juvenile synthesis report, but no dates on when it will be ready. The report was delayed by turnover at Fish and Wildlife. They have worked on the initial analysis for the cohort reconstruction study and will distribute to the Work Group soon for review.

For the meeting on Hamilton Ponds, the work groups reviewed the findings from Buxton's sediment report that indicate a fine sediment deficit in the mainstem Trinity River near Grass Valley Creek in response to mitigation to reduce sedimentation. The consensus from the work groups is to allow the ponds to fill and supply sediment to the mainstem Trinity River and allow natural processes to take over again. The group has recommended no more dredging of the Ponds and discussed options for future management including allowing the ponds to fill and evolve naturally or routing Grass Valley Creek through Lowden Meadows to form a meandering wetland. They had no recommendations on future management for the area yet and are collecting additional information, such as measuring the elevation at the pond outlet to understand how the system may evolve on its own. They will provide a summary to the IDT with additional input. They hope to schedule a meeting next month to discuss gravel augmentation near the hatchery. Lee added that the author of the outmigrant synthesis report plans to have it out for internal review in a few weeks.

Design – The group met on November 10 and revisiting work at Vitzum Gulch east of Douglas City. They edited the list of sites circulating between work groups and discussed work on Rush Creek as Sky Ranch is on hold. Dave Gaueman also led a discussion on a new 2D water temperature model.

Flow (Seth Naman) – The group met a month ago to discuss a strategy for the 2021 flow year. Jasmine Shen presented on her invertebrate drift study and the group reviewed synthesis report updates. Since the year is expected to be drier, the group agreed to use a previously developed hydrograph for this upcoming water year. They have not seen much difference between the ROD hydrographs and their more recently developed ones and are hesitant to develop a new one this year. They discussed modeling for 2021 and other upcoming studies that could affect planned

flow projects. They plan to present the flow recommendations in March. The group also discussed the peak flow synchronization memo and are waiting to hear back from Reclamation.

Watershed (Chad Abel) – The group met on Nov 9 and reviewed the new grant review process proposed for FY21 with a third-party administrator. The proposal is being reviewed by the Region and the Solicitor's office and they are working to get the solicitation out early in 2021.

Physical –The group met on Nov 20 and will provide its objectives summary to IDT in Jan. They reviewed the list of new gravel augmentation sites and started a process to prioritize the sites for the Implementation Branch. They have worked with the TRRP staff on a workflow sequence for effective valley width, which part of one of their new targets to estimate how much of the valley the river should reclaim.

Riparian (Chis Laskodi) – The group finalized four objectives and divided into subgroups to prepare the justifications for the IDT. The current list was sent to the IDT. The group worked on the science symposium to present the synthesis reports and will meet in January to develop its formal recommendation on how to organize the symposium. Currently, they are proposing a combination of virtual and in-person presentations with a few presentations each day over the course of a few weeks and finishing with an in-person meeting in the fall to discuss next steps.

IDT (Lee)– The IDT met twice since Sept. Most of their meetings have focused on the objective refinements, Hamilton Ponds dredging, flow scheduling for WY21, the science symposium, work with the SAB, and developing a FY22 Science Work Plan. As part of the Refinements process, they have had some initial discussions with Chad Smith about the FY22 Science Work Planning Process. They are not expecting any major budget changes and are hoping to dovetail the process with the work planned for the Science Plan, which could be done simultaneously. The plan will provide a pathway for funding new projects as funds become available. The IDT will focus on targets and objectives in January, which will inform the Science Plan.

Lee provided a brief update on the synthesis reports. Three are posted to the website and others are being developed. The hope is that working on the science symposium would provide a hard deadline for the authors, who will present their findings on the reports.

Orcutt recommended that the TRRP needs to be cautious and consolidate and evaluate the findings of the reports against the core objectives from the ROD to determine what adjustments would best serve the Program. Lee agreed that reviews of the synthesis reports should help the Program on a better path toward fisheries and river restoration. He noted that the Science Plan had not kicked off yet, but was hopeful that finishing the synthesis reports, developing the Program document, and the Science Plan would foster those discussions. If the science symposium does hold a fall in-person meeting, it could provide the forum for discussing program changes in light of the synthesis report findings.

Ly asked about the status of the SAB. The SAB has 3 members right now and two openings. The existing members have expressed interest in moving off the Board but understand it would be helpful to stay on for a time as new members are added to allow for overlap. The open SAB

positions have not been formally flown and Lee and others have done informal recruitment but have not received strong interest. They are looking to more formally announce the opening and they are looking for folks with expertise in river restoration and fisheries or related fields. Funding for the open SAB positions has been allocated. They hope to fill the positions soon.

George Kautsky asked if the TMC could get an overview on progress in developing the targets, similar to the synthesis report schedule to keep them apprised of what targets are being considered and which are done. Lee agreed to put one together and noted that the IDT will make its recommendation to the TMC on the targets and objectives in March. Kautsky suggested discussing them in more detail in January with the IDT.

Liam Gogan asked if the $175,000 savings from the watershed restoration funding was going to go back to restoration projects or other funding. Abel explained it will be returned to the watershed grant program to cover the additional costs for hiring a third-party grant administrator. Liam agreed that the TMC should review the synthesis reports in the same manner they did during their Stage 1 review.

CVP Operations Update

Don Bader reported Shasta Lake is 44% full at 2 million AF and Trinity Reservoir is at 52% with 1.2 million AF. Releases are down to winter bare minimums at 3250 cfs at Sacramento River and Trinity is at 300 cfs winter base flow. Rain is way below normal with tracking below normal in Trinity and Sacramento Basin. There is a storm expected today, but little expected for the rest of the month. It is a poor start to the year. While last year there was good carryover storage, without a good rain in January and February, there will be limited storage at Shasta and Trinity to start the year. Orcutt commented that the way allocations are calculated for water diversions versus fishery flows is 47/53% with the average computed based on a four-year average, which may result in higher diversions relative to what comes down the river. He wondered if that would result in substantial drive down of the reservoirs since they may be drawing on prior years. Bader explained that projections for next month are currently maxed out. The region will be starting the year in a deficit and will need precipitation to help cover it.

BREAK

Dutch Creek Channel Rehabilitation Project Recap

Trevor Morgan (DWR), from the state design team presented on the Dutch Creek Channel Rehab project. The presentation is available on the TRRP website. Restoration focused on the runway bar, which is has a long, flat terrace near a 2018 redd survey site. Landownership for the site is a mix of BLM and USFS and is one of the first restoration sites on USFS land. The main feature of the final design is a meander channel complex that forces flows to the right of the valley and a lowered terrace that feeds into a scour channel (R1). That channel is designed to activate at near base flow, which required cutting 9 feet of elevation from the terrace. In the downstream portion, the floodplain was lowered by 7 ft. (R2), which will activate at 2700 cfs. There is a mid-channel bar plug that will force flows into the meander (IC4) with an engineered log jam feature (IC3).

The team worked with USFS large wood specialists from Washington to assist with designing the log jam feature. At the downstream portion (IC7), the team added a notch in the right bank to slow velocities and create a depositional zone to bring in sediment. Spoils were used along the right side of the valley (U2) to match the existing slope. Post-construction, the backchannel has water and the scour channel is started to fill, providing a better connection between the channel and the floodplain.

Construction required equipment staging at Evans Bar, which then crossed the river to access the site. Construction ran from July 1 until the end of September and beginning of October. Riparian plantings and erosion control were installed another two weeks after construction and finished by mid-October. COVID restrictions created some complications as one operator was sick. Other challenges include frequent equipment breakdowns and USFS closures dues to wildfires. While the team did start contingency planning in the event of a prolonged closure, they were able to restart work with limited impact to the schedule. Aaron Martin took pre- and post-construction photos and plans to take some drone footage to see how the site responds at different flows.

Connor asked what the approximate costs of the project were. Morgan believed Dixon would have the exact number but estimated it costs around $2.9 million. Ly asked if the team ran any 3S modeling to see differences in fish production habitat or improvements. Morgan explained the team did some habitat modeling along with hydraulic modeling. Lindke added they estimated habitat capacity across a range of flows on the pre-construction and proposed design, which showed substantive habitat increases. However, without vegetation at the post-construction site, the modeling did show less than expected habitat. However, the team does expect that to change as riparian cover is established. The Fish Work Group plans to do some additional modeling as part of their normal follow-up on sites.

Indian Creek Stage Zero Restoration Recap

Kyle DeJuilio discussed restoration at Indian Creek. The presentation can be found on the TRRP website. Implemented this fall, construction lasted 6 weeks, with one week for staging, four weeks for construction, and one week of revegetation work. The site is located in the Indian Creek watershed near Douglas City, about mid-way in a 2-mile alluvial valley. While the site is not on tribal lands, it is an important tributary for production. The site has diverse ownership with a quarter of the site on private land. The site was devoid of vegetation and was a large expanse of exposed rock from mining waste. Vegetation was limited to areas where a bedrock fault pushed groundwater to the surface.

Flow at the site is intermittent. At the upstream end, water flows at a few cfs and then disappears into the substrate. It re-emerges at a few areas but disappears back into the substrate. The channel is pretty incised with lots of hard substrate. Pine and invasive weeds comprise the limited vegetation at the site. In winter 2018, the project team did a geological investigation and dug several test pits and installed more piezometers to monitor groundwater conditions. The information was used to develop the design. The valley survey indicated that the headcut at the site was splitting the groundwater from the channel bed, causing it to go underground. During a

substantial portion of the year, and longer during drought years, a substantial portion of flows goes underground, which impact nearby downstream fisheries.

To restore the site, the team decided to use a Stage 0 design strategy. The strategy focuses on alluvival floodplains where river flow creates a variety of wetlands within the floodplain prior to channel development and river constriction. To restore grassy wetlands or woodlands, and their ecological benefits, the bottom of the floodplain is raised to reduce headcuts and constriction of the floodplain and restore their depositional benefits. DeJuilio noted that this strategy is only appropriate for alluvial valleys where the entire valley bottom is available for restoration and there is no development.

At Indian Creek, changes to the floodplain changed the depositional environment of the channel, driving the water below the surface and limiting its ecological benefits. Previous restoration efforts in the reach focused on channel-centric measures that didn't adequately address the process and function of the river or the stream power to width issues with the river, which was high due to how coarse the river became. This resulted in many of the measures being destroyed during high flow events. This approach appealed for this effort as it would address functions and processes for the entire floodplain, large storms were welcome and would allow the site to evolve favorably over time, and it would address the water table issue. The downside was that the construction would have a large footprint since it covered the entire valley floor.

The team excavated the site to a consistent valley grade and used the material to refill the main channel. Since Indian Creek is a smaller system, the team let the site naturally revegetate as flows returned. Fill was tapered to valley grade and merged with the existing terrain. Significant vegetation was left on pedestals in the valley, while the true valley grade had limited vegetation. Wetland depressions were also created. Using this design, hydraulic modeling showed more wetting and midsummer base flows, with the entire valley inundated during winter base flows. However, the final design was limited as a mining claim was submitted in the upstream portion of the site, which decreased the project by 2 acres.

During construction, the team repurposed the boulders from previous restoration projects as subsurface hydraulic controls and extra protection for plant propagation. Once filling started, the water level jumped four feet over one week. Water emerged downstream and by the time construction was completed, water started flowing on the surface on the downstream portion of the site. The upstream portion is still dry, but the team hopes that rain could start it flowing as they have noted water levels rising in portions where it previously went underground. They have noted a change in the ground water dynamics as water is refilling more slowly but draining quickly.

Everson asked if monitoring standards would change for a Stage 0 restoration to determine success. DeJulio explained the monitoring team is having the rethink their approach and are looking at some ideas used in Oregon. If the site gets revegetated, they will see that as a success, but impacts to fisheries will be a challenge as they are based on flow patterns. While the team is also expecting some scour, they want to limit incision and head cuts. Currently Josh Belmore

from NOAA has introduced some monitoring designs focused on spatial monitoring for vegetation, substrate, and depth the team is hoping to use.

Everson asked if the channel was chemical sealed or if there was something unique to the site that explained why the water rose with the changes to the channel. DeJuilio was unsure if the site had been chemically sealed and the team did not find a clay lens or anything that prevented infiltration. The flows indicate that water travels at a high rate and infiltrated slowly. The subsurface was capable of transmitting flows but the groundwater aquifers fill slowly because of how fast water was running through it. Gogan commented that he visited the site a month ago and that it seemed to be working and suggested having Aaron Martin get some drone footage of the site during the next precipitation event.

Ly asked if the team installed piezometers to monitor groundwater change over time. There are 13 at the site and the team has monitored groundwater since the geological investigation in 2019. Five were installed as part of a 2011 project. The team installed 9 during the geological study, but a few have been destroyed. There are still 9 at the site and they have been monitoring them to see the groundwater rise in response. Ly asked if water has continued to rise after construction. DeJuilio reported surface water starts at the 1700 marker at the site, which is 150 ft from where it was before, down to the 3600 marker. The piezometers also detect water at the 2000 marker station, but they haven't seen an increase beyond that as water needs to increase in the rest of the site.

LUNCH

Status of Flow WG Winter Flow Variability Proposal

Seth Naman gave an update on the current status of the flow variability proposal considered by Reclamation. The TMC passed a motion in June to direct the TRRP to pursue studies for releasing flows prior to April, which is currently a constraint. Following the motion, the Flow Work Group developed a memo requesting Reclamation evaluate the feasibility of shifting some water from typical spring flow releases to the winter, and whether there were administrative concerns that would prevent them from proceeding. Several folks have worked on this concept over the years but were limited by administrative issues due to perceived limitations of environmental coverage on flows outside the ROD period. The flow proposal is an attempt to get on the same page and investigate impacts from adjusting flows, with the TRRP conducting the analysis and studies to support the action. The letter was seeking buy-in from Reclamation before people started working. Thus far, the proposal has been shared with Reclamation. Dixon added they have had a few briefings with CVO staff and the Deputy and Regional Directors and the Solicitor's office and are developing informational briefings. The TRRP is operating on TMC's guidance to develop compliance document if the proposal moves forward. Naman added that CVO has not raised any operational concerns regarding the proposal. Dixon noted they have asked for 72-hours' notice for any geomorphically-relevant releases for operations scheduling and that they consider dropping any releases from Lewiston to perhaps 6,000 cfs to add a greater margin of error to protect private property during storms.

They are currently discussing scoping alternatives and next steps. Bader suggested that power impacts should be analyzed and estimated that they would be minimal with a one-day peak. He asked for clarification on next steps from the TMC as Reclamation is ready to move forward. Naman explained the motion indicated that, barring any concerns from CVO, Reclamation should proceed with preparing the environmental documents. Hillemeier agreed and while Friends of the Trinity River raised a concern about looking at other alternatives, the NEPA process would provide an opportunity to address them. Dixon added they would look at alternatives as long as they meet the Purpose and Need.

Orcutt commented that Hoopa Valley is supportive of the studies and finding out information on how to best manage the water supply they are responsible for, but the studies should look at where the water volumes are coming from. There have been suggestions to use the Proviso 2 water, which has been hard to get based on the ROD. He suggested waiting until the flow synthesis report was complete and the TRRP could then evaluate their options so they operate on the best available science. Otherwise, the TRRP is operating on selective pieces of information to reshape the hydrograph with a finite amount of water that is excruciatingly controlled.

Naman appreciated Orcutt's comments but was unsure how much the Flow Work Group could do to reevaluate the flow volumes in the ROD and whether they could under the current motion. Reclamation has been comfortable moving forward and has been adamant that they stick with the ROD volumes. The Flow Work Group is confined to working within the ROD volumes and would need direction from higher levels to consider water outside that. Reconsidering the ROD volumes would likely send the proposal to a different track. Regardless of the volumes, the temperature synthesis indicates that the volumes released in the spring have made the river colder later in the year than historic conditions, making it colder than the optimal growth range for salmonids.

Macroinvertebrate Drift Study Findings

Jasmine Shen (HSU) presented her preliminary findings from drift study conducted this summer. This presentation is available on the TRRP website. The study builds on previous research conducted in 2018 by Thomas Starkey-Owens, who investigated invertebrate drift rates and juvenile Chinook consumption using benthic macroinvertebrates (BMI) composition and abundance over time in response to pulse flows. In his study, flow did not have an effect on mean biomass concentration, but it did increase biomass flux, with different taxa associated with different flow conditions. Shen's research replicates the studies to increase sampling and sites. She sampled across four pulse flows at four sites. However, time requirements for sampling limited each site to only being sampled twice, with sampling staggered between sites and pulse flows (i.e. two sites were sampled during pulses 1 and 3, and the others were sampled during pulses 2 and 4). Sawmill and Steel Bridge were repeated from the previous study, with Sawmill serving as the reference site.

Using a linear mixed effects model with streamflow (continuous), biomass concentration increased with streamflow at all three experimental sites compared to Sawmill, suggesting that

streamflow was having an effect. Biomass flux had the same relationship, but was different at all three sites and stronger p-values. She compared the sites to each other for concentration and flux. The results indicate the strongest response at Sawmill. Taxonomic differences based on biomass flux show greater diversity during the pulse flow at each site. Additionally, the top five dominant taxa at each site do not increase until the pulse flow hits. The results indicate that higher flows do correlate with higher estimates of biomass concentration and flux, but the increases are not linear as each site responded differently, with Sawmill having the strongest response. In terms of impacts to fish, Shen is currently working on the data analysis to how these changes in taxa and biomass affect food availability.

Dixon asked what Shen would recommend the next person work on for this study. While Shen is still working on the analysis, she would be interesting to see if the BMI response was due to site-specific or pulse-specific differences. Naman commented that it would be interesting to see what percent of the increase in drift flux was associated with the pulse flow considering the dramatic increase in biomass. Orcutt asked what the studies underlying hypothesis was and if it was exploratory or still being refined. Shen answered that the working hypothesis was whether BMI increased during pulse flows since Owens study had mixed results with no changes in concentration but significant increases in flux. She noted a study by Mallory Jensen that indicated that flows need to increase by an order of magnitude to maximize drift. However, there may be a stream flow threshold that may affect calorie content and size distributions which make increases in BMI less beneficial for fish as they become less suitable as a food source. Orcutt asked what magnitudes of change Shen was evaluating. Shen explained the magnitude does become muddied in the downstream sites as tributary inputs reduce their impact, which may be why the most dramatic change is at Sawmill.

Ly asked why there was a two-week lag between the baseline and peak flow sampling. Shen explained the control samples needed to be as close to the actual pulses as possible, however, they did not have the hydrograph until right before they needed to collect the pulse samples. Once they knew, they picked up the sampling timeline and moved it to right before the pulses. However, this change may affect the data as a snow event triggered a bump in the hydrograph at the downstream sites. Ly asked if Shen planned to submit a report on the study to the TRRP or if her thesis would be the report. Based on discussions with DeJuilio, Shen would provide an annual update and her thesis would be her final deliverable. DeJuilio added that Shen could provide notations to her slides as her annual report. Shen did want to turn her study into a publication as well.

Hettrick asked if they considered time of day in their sampling approach since drift has strong ties to diurnal fluctuations, with drift occurring at the crepuscular hours under baseline conditions and more consistently during disturbance events. Shen tried to address that in the sampling design by sampling during the same time of day before and during the pulse flows. She added that the team did think the effects of stream flow could also mute out the diurnal effect, which was included in the model. Hettrick added that the study should expect to see differences

during flows sampled in the middle of the day, as some biomass wouldn't be present in baseline conditions.

Max Ramos asked if there were temperature effects on the preferential taxa for fish groups, since the flow temperatures are outside of the preferential range for fish. Shen explained temperature was included in the model but did not have a significant effect, but she had not looked at it in relation to specific taxa. She noted that temperature did not have much variation and did not expect to see much effect.

Trinity River Hatchery Chinook Return Size and Age Analysis

Dominick Davis (HSU) who worked as a NOAA undergraduate intern, presented his study on possible declines in size and age of salmonids returning to the Trinity River. The study looked at data from hatchery returns for Chinook salmon and saw normal size fluctuations until 2010, when fish in all age groups had steady declines in length and weight. Such declines could affect the overall fecundity of salmonids, as fish have fewer surviving eggs as their weight drops.

Davis compared his results to other rivers in the Pacific North West and saw similar declines in size, with the steepest in the Copper and Kenai Rivers, which are known for having the most robust Chinook populations in the world. While it is uncertain what is happening, a few factors could be increases in marine mammal populations, which are nearing the species carrying capacity, and changes in sea surface temperatures, which could reduce growth. Such regional declines in sea surface temperatures could affect tribal and recreational needs. If the declines continued, it could result in other issues, such as reductions in the supply of marine derived nutrients to rivers. While fluctuations in size at return are normal, the current decline is notable for its duration.

Orcutt asked how the study was funded. Davis was funded through NOAA. Orcutt asked if Davis used a multiplicative factor since the marked hatchery population only represents 25% of the overall population. Davis and Naman explained that the fish data was weighted to account for the difference. Orcutt suggested they talk offline as Dave Hankin had been working on similar studies that could be linked together. Hillemeier asked whether Davis tested the significance of the declining slope to the rest of the time data, which had periods of declines and increase. Davis and Naman explained the declines from 2010 to 2017 are the longest period in the record that showed a consistent decline, but have not been tested for significance. While it was not a large trend, it is the longest period in that trend. Sinnen asked if they did any analysis comparing fingerlings and yearlings. Davis looked at them as well as differences in spring and fall populations. Sinnen added that yearlings are smaller at age, which would skew size distributions if they're combined with fingerling releases. Hillemeier commented that last year's fish were the smallest he had ever seen, which was concerning given the extremely warm ocean temperatures. Sinnen added that it would be good to look at the provisional size estimates for jacks, which are scaled from a portion of the run and are used for sport fishing regulations, which looks at average size over time.

BREAK

Coast-wide Collapse in Marine Survival of Chinook and Steelhead

Dave Welch from Kintama Research Services presented on a study he conducted that indicates a coast-wide decline in survival for west coast Chinook. A few years ago, he and his coauthors were working on a paper about whether there was a critical period in Chinook development. As part of that, they pulled the data for Southern British Columbia and looking at survival of salmon smolts out of the rivers with high survival that declined by the time they came back. The results suggest that survival decline may be less from river and more from ocean conditions. The group increased the scope of their study throughout Puget Sound and found the same result. Expanding out further, the group looked at survival numbers for the entire coast back to the 1960s and saw that all populations dropped to levels similar to the Snake River over time. While restoration for fisheries has focused on getting freshwater habitats back to pristine levels, the issue of ocean conditions has not been addressed.

The team has published two papers on their results. A non-peer reviewed version is in *bioRxiv* and included steelhead populations from Alaska to Oregon. The data looked at both hatchery and wild populations and combined tagging methods. A peer-reviewed version is in *Fish and Fisheries* and only looked at Chinook populations while adding in data for one population on the Sacramento River. The data for this paper also separated the fish based on hatchery or wild populations and tagging methods. Both studies found that smolt-to-adult returns (SAR) had fallen with no delayed mortality and the peer-reviewed study also found that PIT-tagging did not incorporate harvest rates over time. Dixon agreed to send links to both papers to the TMC.

Cooler temperatures are associated with better salmon survival and 2014-2020 has been an almost continuous period of high ocean temperatures, which are expected to increase. Projected increases in CO_2 and sea temperatures are looking bad for salmon and current habitat improvements have not been successful at improving SAR numbers. Data indicates that while smolts die in the river, there are still many problems and uncertainties when they are in ocean. Fisheries are already seeing impacts from warm oceans in the Gulf of Alaska and Canada where it's been the worst salmon returns in the history of the region.

Looking at just the last five years of available data (2010-2014) at the compiled sites, nearly all the populations for sub-yearlings have either similar or lower survival than the Snake River, which was used as the baseline survival rate. The one exception is the Oregon Coast, where survival was substantially better. But looking at the yearlings, most of the areas have similar survivals that have collapsed over time. If you look at it year by year, the survivals go down over time. If the data is broken down by decade, survivals have come down over a two-decade period for many of the regions, with most regional survival having a 1:1 relationship with the Snake River. The steelhead analysis shows similar trends.

What's driving the poor SAR survival? The Snake River has better freshwater survival, but poor marine survival. However, the California data (Sacramento River) indicates better marine

survival. On the Columbia, while sufficient smolts are produced, adult returns are not meeting current demand. The real problem is that there are so many habitats for salmonids. If the ocean is the problem, can freshwater modification compensate for the declines? Welch believed that the problem needed to be addressed from a different angle since areas with pristine freshwater habitats in northern British Columbia and southeast Alaska were also seeing drop-offs. It's uncertain where the life cycle is dropping, but the marine phase is certainly a large contributor. These widespread declines raise questions about how effective freshwater restoration is to recovery, especially as survival rates are associated with temperature regimes in the ocean.

Hillemeier asked why the regions were compared to the Snake River as their populations have increased over time. Welch normalized the data to the Snake River since they are the prime example of poor survival, which saw numbers decline in the 1970s with dam construction. By comparing the sites to the Snake River, it asks the questions of why all the areas are still getting similar numbers. Welch added that numbers had been going up, with the lowest survivals in the 1990s that have since increased. He noted that while Snake River populations have gone up, southern resident killer whale populations have gone down, so the correlation and causation relationships may not be as clear as assumed. Hillemeier asked if the numbers had been normalized around the median for each decadal period, and Welch clarified that it was for each 5-year period since each site had data for differing numbers of year, which could obscure the numbers. But comparing the sites does show that survival has gone down for virtually all the populations, with relative survival at 2-3 times compared to the Snake River, rather than 18 times what it was 20-30 years ago.

Hillemeier agreed that oceans could be a driver but that they should look at how to improve areas in the freshwater. He thought comparing areas that were improving by saying they've declined could also obscure the analysis. Kautsky asked how the sub-yearlings had better survival than the yearlings, which is opposite to what is occurring on the Trinity. Welch explained that on the Columbia River, harvest was not included in the PIT tagged survival numbers. Fall Chinook tend to have higher harvest levels than Spring Chinook since they stay on the shelf, while the Spring Chinook move off the shelf, outside of most fishery ranges. However, Kautsky was correct that sub-yearlings are smaller in size and tend to have lower survival, but that the SAR numbers depend on where the juveniles rear in the ocean rather than their size when they reach the ocean.

Naman asked if they looked at what portion of the salmon eggs survive to smolts as part of their estimates. Welch reviewed some of their current work with the Beverton-Holt Curve which shows that the size of the adult population is density dependent compared to the egg and smolt size. While poor marine survival can reduce the number of eggs and fry, reducing the future size of adult populations, higher numbers of eggs and smolts have a limited effect on increasing recruitment of adults. If freshwater enhancement happens after the density dependence, the returns will be limited. However, its uncertain where the density dependency occurs. Welch recommended that restoration should occur where pre-smolts are holding territories and creating surplus animals.

Sinnen asked if Welch had a hypothesis on the proximate cause of the ocean mortality. Welch believed it was a variety of causes including lack of food, habitat, and predation. What is clear is habitat is going down and predation is going up and they do not know what the most important processes are in the ocean. Government agencies have known there is a problem in the oceans but have redoubled efforts in freshwater. Because the effectiveness of freshwater efforts depends in part on density dependence, some of those efforts may lose their effectiveness at improving survival. Abel asked how increases in hatchery production could affect the SAR data. Welch had not looked at it but other data suggests that pinks are abundant and could suppress the growth rate of other salmon species in the Bering Sea and Pacific Ocean, but was unsure if that applied to the southern hatcheries. Abel noted that the BPA has funded number hatcheries in the last 50 years that could affect what is happening in the Columbia basin. Welch was open to discussing and encouraged the group to think about how they compare the smolt survival to the SAR survival.

Lindke pointed out that hatchery releases of Chinook in the Klamath River do not follow the same pattern as the Columbia in terms of sub-yearling vs yearling and spring vs fall Chinook releases. For example, fall Chinook are released as both sub-yearlings and yearlings, so differences in the ocean distribution Welch described as an explanation for differences in survival between sub-yearlings and yearlings, as explained by differences in ocean distributions between spring and fall Chinook, do not apply to Klamath populations. Lindke also pointed out that modern methods of freshwater habitat restoration have only been applied for about the past 20 years, during which time learning and adaptation of methods have rapidly developed. Such changes make it unreasonable to expect dramatic changes in survival as there is still a lot of work needed to reverse the trend. He thought looking at broad analyses across the coast could miss the nuances that have occurred in individual sites. He noted high survival rates in the Oregon coastal populations presented in Welch's paper and other populations between Cape Blanco and Cape Mendocino due to the unique ocean conditions those areas and the more local ocean distributions of those populations as compared to Sacramento populations that have a broader and more northern ocean distribution. Lindke asked why the Klamath River populations, which have some of the longest and highest quality coded-wire tag data on the west coast were not included in the analysis, noting thatSacramento populations are not the best representation of what they are seeing in California. Welch claimed he was unaware of the coded-wire tag data for Klamath populations and would like to use them in further studies to put the results into perspective for California. He also wanted to look further into the effect of the Oregon populations staying resident and if that could contribute to their better survival.

Public Forum

Gogan requested links or copies of the papers Welch discussed.

Adjourn for Day 1 3:51 pm

Day 2, December 17, 2020, 9:00am

Public Forum

No comments were submitted from the public.

Refinements Program Document.

Chad Smith (Headwaters) presented a summary on what the Drafting Committees had done since August. The Program Document Drafting Committee is working on a focused roadmap to implement adaptive management and other TRRP science learning for the program. Smith has facilitated small group discussions with leadership and technical experts about the Program Document to address issues of organizational structure and function and get agreement on what should change to incorporate adaptive management with the Program Document. The TME approved the Drafting Committee members in July. Both documents should be finalized in Spring 2023.

Chad reviewed the current proposed project schedule. Currently they are finishing Task 2 and have conducted 5 virtual meetings to train members on how to use the technical tools, outline conflict resolution protocols, discuss barriers to Refinements, and compare other restoration program with the TRRP. This is still the major focus. The committee understood there would be barriers and issues that would arise while ironing out the new Program Document. The committee has outlined a conflict-resolution process and will likely adopt the same process for the Science Drafting Committee. Key to the process is understanding different perspectives. The process could potentially be adopted in the Program Document.

The committee identified the following barriers to program refinement:

- ROD flexibility
- TRRP structure in terms of function, legal constraints, and process.
- TRRP process, which are within the Program's control.
- External barriers such outside organizational control and broader impacts that affect their goals.

In general, there is not an inclination to replace the ROD, but a consensus to proceed within the current ROD conditions while learning and understanding their potential options. The structural barriers were the same as those identified during the first phase of Refinements, while process barriers include longstanding issues of trust and how to work collaboratively among partners.

Smith will continue to review the relevant programs they've identified. His general observations from these programs is that each is fundamentally different and case-specific, with no underlying similar models. Most are experimenting and learning about governance and adaptive management, with limited direction on how to replicate their structure or processes. However, all have similar origin stories with the intent to do good things for their rivers while allowing for

water use. Currently, Smith is comparing the restoration programs based on nine essential attributes.

A major issue for the TMC is that with the TAMWG disbanded, the TRRP is falling behind in engaging stakeholders and how they can reinstate or restructure that organization. Another question is whether the TRRP should use adaptive management. If adaptive management is still being considered, the team should discuss what that will mean for the TRRP before the Science Plan Committee begins. Another key element of the TRRP that is unique is role of tribal governments in the restoration program. Tribal participation in the TRRP has been more robust and deeper than for many other similar programs. The Program Document should reflect that rich history of tribal involvement and think about the tribal role relative other major program attributes.

Currently, the Program Document Committee is working on recommendations for the major attributes being reviewed, with members working in various subcommittees to work on each one. Smith is developing a Program Document Guidance Framework to consolidate and summarize the discussions from the main and sub committees that will assist in building the Program Document and the Science Plan.

Pickard added that the subcommittee discussions are also brainstorming potential alternatives and looked at the pros and cons for a range of strategies for each attribute. The subcommittees have presented those back and are looking at a range of approaches. In considering tribal roles, they found that tribal involvement was interwoven with many of the other attributes and wanted to maintain that. In terms of adaptive management, one of the questions is whether the TRRP is an adaptive management program or whether it was a restoration program that uses adaptive management, with the group leaning towards the latter characterization. The consensus is that framing the program as a purely adaptive management program presents some barriers and restrictions, while incorporating elements as appropriate seemed more conducive to their current work.

Over the first few weeks of January, Smith will layout a schedule and plan for drafting the Program Document. He hopes travel will pick up in the fall to allow for a few marathon meetings as development picks up. However, the subgroups will continue to do independent work and collaboration to keep the effort moving forward.

Orcutt thought that discussions they've been sharing on the history, perspectives and background on the ROD and legislation have been invaluable in understanding the tribal role and how unique it is for tribal fisheries and a major reason for their participation. The B23 provision in the CVPIA requires concurrence with the tribe, and without it, the tribal role would be at the discretion of DOI. The challenge will be how to develop language that amplifies and describes their intent.

Sinnen asked if Smith saw any fundamental differences between the Science Plan and the IAP. Pickard thinks the number one thing is to make the Science Plan shorter and more focused. It

will be tricky to effectively prioritize work without replicating efforts. But the Program needs a more focused document, so she anticipated some difficult conversation on how to focus the document better. One recent discussion was on how to refocus the frequency of these discussions and how to allocate efforts more appropriately considering which items should be discussed annually and which can be done less frequency.

Smith explained that staggering the development of the Program Document and Science Plan was intentional to establish some high-level guideposts before tackling the science discussions. This allows the Program Document to provide some direction that will be matched with the Science Plan. This way allows the Program Document to filter some of the discussions for the Science Plan. Ly asked when the Science Plan Drafting Committee would begin. Smith estimated that when the team is done with Task 2, he would like to start discussions for drafting the Program Document in early February. The Science Plan Committee could start meeting around the same time. The proposal had them spaced 2-4 months apart, but Smith was unsure of whether that is necessary, but estimated that they would likely start meeting by spring. Kautsky noted the IDT was thinking of queuing up ideas for the Science Plan with James to help facilitate discussions as they prepare for the Spring. Smith thought it was a good idea to have those cross-pollination discussions as they discuss priorities moving forward.

BREAK

Public Engagement in a Time of Refinement and COVID

Dan Everson discussed potential options for public engagement with the TMC and how best to reach out to partners and the public. It has been a challenge trying to update the public on projects and activities. At Fish and Wildlife, there have been some challenges in directing people to the right staff and they've tried to add a few extra options to their website and voicemail to provide better direction. He asked what the TRRP was doing for outreach and technology, noting that the TRRP website did not have a specific mention of COVID adjustments but did see a few events for the Design Team. Held explained the Program has shifted its in-person activities to remote venues and held a large virtual public meeting for the Oregon Gulch Project. For that meeting they used Teams, recorded the meeting, and posted the recording to YouTube and the Trinity RCD website so those who could not attend could stay informed. The meeting information was posted to the website and the TRRP posted fliers and created a press release for the meeting. They also attended the local farmers' market with sign-up sheets and fliers. Since the Program is in a small community, in-person engagement is still important and they regularly monitor the website email and the phone lines.

Ly suggested having a list of activities the public could attend so they know how to participate so the Program could have a better measure of whether complaints about access were valid. Held agreed to make a list and share it with Dixon and the TMC. He explained that the Program does conduct public workshops, scoping, and comment periods for all its NEPA documents as well as smaller in-person meetings with landowners and neighbors. Hadley noted that the Executive Director's report has a list of public events each quarter and the list could be used on the website

to bring them to the forefront. Connor noted that DWR has done similar meetings with limited public participation than in-person meetings. Groves noted similar issues at the County, which is investing $60,000 on Zoom rooms to help reduce some of the technological issues with larger gatherings.

Everson asked if partners were receiving complaints about limited access to information. Held had not. They had previously received complaints about accessing large EA documents, but they now print out a few copies and make them available at the library by appointment, which seemed to address the issue. Held noted that the office did have a sign on the main door telling folks how to call to make an appointment but was unsure if their email information was also on the sign. Everson commended the stakeholders for their efforts and encouraged everyone to continue working together.

DeJuilio had heard complaints about the Oregon Gulch TEAMS Live meeting format and how moderated the meeting was, rather than allowing for more open dialogue. Kautsky suggested that the TRRP advertise any public meeting planned for the flow release recommendations so folks are aware of the schedule and can clear the floodway for safety. Held recommended hosting a virtual meeting and with specifics on the platform and whether the TRRP is looking to have a conversation with the public or presenting information.

Lee added that January and February are when the Program typically engages with the public about the flow releases. Ly asked whether those meetings solicited public input or just informational on how the hydrograph would be implemented. Lee explained that they did not directly solicit input, but the public will sometimes let them know about potential issues with the schedule. For example, Indian Creek Lodge planned a special event for Veterans during one of the large flow days, so the TRRP adjusted the timing to accommodate it. Kautskey added that occasionally the public will provide input on the hydrograph's objectives and how to meet them. Everson asked if the TAMWG had been involved in flow release planning. Hadley explained the TAMWG would review the draft proposed flow schedule about a week before the TMC and provide its recommendation. Hettrick added that the TAMWG also participated at all TMC meetings. Groves recommended advertising public events on the Facebook group, Trinity Alerts to provide information on the meetings since they had a larger audience than the paper. Lee thought posting announcements would be good but was reluctant about giving the public forums to gripe. Held noted that the Outreach team did use Trinity Alerts to send out information about flows but did not engage with the public over social media as they have limited control on what can be posted. Hillemeier suggested noting that comments would be welcome at the meeting but not addressed on social media.

Connor noted that the work groups used to be open to the public but was unsure of why it had shifted and whether they were still open to the public. Lee thought they were still open to the public but had not seen much involvement or attendance. He thought it would be good to allow the public to attend and observe. Ly noted that it was not clear on the website on whether the public could attend the Work Group meetings. Hettrick explained that the Work Group Manual

did allow for the public to attend but not to actively engage in conversations and debates. The public previously learned about the meetings through the TAMWG. Members believed that absent TAMWG, allowing public attendance at Work Group meetings could provide more opportunities for engagement. After a discussion on whether the work groups were in fact open to the public, and whether the TMC needed to make a motion to open them up to provide more engagement with the public, Hadley texted Dixon who explained that the Work Groups are open the public. All meetings and agendas are posted to the website along with website links to allow access. Ly asked James and Kevin to update the TRRP website to make public participation at Work Group meetings more explicit. Gogan suggested that he and Groves could announce upcoming meetings at the County Supervisor meetings.

Dutch Creek Project Video

Lee shared the project video for this summer's Dutch Creek Project with the group. The video has been reviewed by Mid-Pacific Public Affairs but not by Washington. Due to technical issues, Lee shared the link to the internal video link with attendees.

LUNCH

Friends of the Trinity River Letter

The TMC received a letter from the Friends of the Trinity River (FOTR) outlining their concerns around the flow variability proposal. Dixon thought that many of the concerns and items they are asking for would be part of the NEPA review process, such as different options for flow timing, impacts to fisheries, and redd scour. He did not see any issues that the TRRP would not be prepared to examine as part of the undertaking. Hillemeier agreed noting that the letter did not consider the work the TMC has already done to examine this question that would be compiled with the NEPA analysis for proposed actions and potential alternatives. Ly appreciated the concerns from FOTR but would prefer if they work with TRRP leadership before elevating it to the TMC and Regional DOI leadership. He did not want to hamper comment but explained that the TMC had been discussing this topic for a while based on analysis presented at previous TMC meetings on the effects of temperature changes from peak flows resulting in colder water for juveniles and how it may affect their growth. The memo's intent was not to provide analysis but to consult with Reclamation leaders to ensure the TMC would not run into any policy or infrastructure issues by pursuing an earlier peak release. Dixon agreed, noting that the TMC has had a year and a half of presentations on preliminary findings so the proposal was not a knee jerk reaction. He agreed that it would have been good for FOTR to discuss that at the lower levels before jumping the chain of command. He clarified that the proposal was not considering reducing the summer base flows. He encouraged people to discuss such items with him over a phone call. Connor wondered if it would help to explain the NEPA process to FOTR and how it would address their concerns.

Gogan apologized for the letter and agreed that FOTR has had open and forthcoming dialogue with Dixon. He was also caught off guard by the letter and had not thought it should go out.

Gogan will talk with FOTR and that any future letters should go to the TRRP first, and then move to the TMC or other leadership if necessary, out of respect for their relationship with DeJuilio, Dixon, and Hillemeier. Groves was disappointed by the letter as the TMC is looking to do bold things through Refinements and the letter seemed to want to keep the status quo. He hoped it was just a miscommunication. Sinnen also offered to discuss any concerns with FOTR to describe the issues in a separate letter regarding weir operations was sent to their Director. Ly noted that their Regional Administrator also received a letter regarding weirs and fisheries, which would have been nice to discuss before elevating it. Gogan did not think a discussion on NEPA was necessary and reiterated that he would speak with the FOTR about using the proper channels before sending letters.

Hillemeier thought it would be good to send a brief response to summarize that the issues would be addressed during the NEPA process and that the Executive Director has an open-door policy to address any future questions.

> **Hillemeier made a motion to send a response to the FOTTR pointing out that many of the issues highlighted in their letter will be addressed through the NEPA process and point out that the TRRP has an open door policy and we invite them to contact the TMC or our TRRP ED with any TRRP related issues and questions in the future.**
>
> **Connor seconded the motion.**

Orcutt thought the motion sounded like a repudiation for sending the letter. He preferred to have staff do outreach rather than having the TMC respond. Hillemeier thought a letter was appropriate and would show those CC'd on the letter that they were addressing it. Dixon noted that either response was fine but that Reclamation had deferred its response with the understanding that the TMC would address it. Gogan noted that he and Paul Catanese were planning a meeting with Dixon soon, which would be easier to address. Hillemeier thought a response was appropriate since non-TMC entities were included, such as Humboldt County and a letter would inform those recipients that they are addressing it. Groves agreed and noted that this was part of the concern with elevating the issue.

> **Motion passed with 7 votes in favor, one opposed. Hoopa Valley opposed the motion.**

Mid to Long-term Strategic Plans for TRRP

Ly was interested in developing an interim game plan to address the continued concern that the TMC was not effectively funding science and monitoring projects that provided meaningful results to inform their goals and objective. Ly thought an interim strategic plan could help lay out their priorities for funding projects. He suggested the TRRP could develop the plan in coordination with the Work Groups, which would be reviewed by the SAB before it was presented to the TMC for approval. Ly saw the strategic plan as an interim document to the Program Document.

Orcutt thought the TMC had enough on their plates with Refinements and COVID planning. Outside of Refinements, a strategic plan would be added work rather than the firm, sound, and consistent participation with Refinements. Shoemaker thought a plan could provide the TMC and TRRP with some direction but was concerned about the timing. Refinements would set a foundation for how the TRRP and TMC would function. A strategic plan could be most valuable in implementing the Program Document and ironing out the details on the ground. Dixon thought that the Science Plan Drafting Committee would be doing much of the same work and the TMC should give them a chance to weigh in. Abel is currently working on a Table of Contents for an implementation framework based on a 10-year outlook for restoration and funding, which could be framed as part of a strategic plan based on Dixon's guidance. Ly explained his aim would be to provide a better vision for prioritizing work regardless of the Refinements process. Abel suggested that a strategic plan could help provide a course of action for implementation based on the Program and Science documents, which he is currently working on. Ly deferred to that effort and encourage Abel and Dixon to share the plan with the TMC when it's ready.

Election of new Chair and Vice-Chair

Dan Everson explained that the USFWS was eligible for the Vice Chair but not the Chair position. Shoemaker also declined to nominate the U.S. Forest Service as their primary representative would not be starting until January and was coming from outside the agency. She felt it would be unfair to take a leadership position with the TMC at this time. Voting was done over Mentimeter and was tied between Justin Ly and Don Bader. Barring TMC objections, Bader and Ly will share the Chair and Vice Chair roles. Bader will serve as Chair and Ly as Vice Chair in 2021. They will switch roles in 2022.

Topics for March TMC Meeting and Scheduling

2021 Scheduling

Based on the bylaws, the TMC discussed potential options for quarterly meetings in 2021. The proposed dates are

- March 10-11
- June 16-17
- September 15-16
- December 8-9

The date for September was moved due to a conflict with the annual USFS leadership training and potential issues with wildfire staffing shortages. The USFS will look at sending an alternate if the primary and secondary representatives are unavailable. Orcutt noted that Hoopa Valley may be in a transition with their schedule and preferred to confirm meeting dates over email. All other TMC members approved the proposed dates, which will be tentative until Ly confirms the dates with the Hoopa Valley Tribe. Monthly calls have also been scheduled for the second Thursday of each month from 10 am to noon, except for months where quarterly meetings are scheduled.

Agenda Topics for March

- Fall augmentation releases – Orcutt would like to discuss funding for the action and meeting with Reclamation staff to discuss assistance. He recommended Paul Zedonis.
- Hydrograph Approval
- Gravel augmentation proposal
- Selection of third-party administrator for watershed grants
- Preliminary analysis 2020 run sizes.
- Winter flow EA proposal
- Strategic Implementation Plan (Dixon or Abel)
- Juvenile and/or adult synthesis report – Hetrick noted they would be in peer review by then and the authors could present their preliminary results.
- Fine sediment synthesis report – Lee will confirm if it is finalized by then
- Update on Science symposium
- Initial annual budget planning

Public Forum

DeJuilio was planning a tour of the Indian Creek site on Friday at 1:30 pm and invited others to join them.

Adjourn Day 2 at 3:41 pm.