MEETING SUMMARY*
BISHOP CREEK HYDROELECTRIC PROJECT
AQUATIC TECHNICAL WORKING GROUP
FERC PROJECT NO. 1394

DATE: February 26, 2019, 3:00 p.m. – 5:00 p.m.
LOCATION: Conference Call & Webinar

**These meeting notes are documentation of general discussions from the meeting held on the above-noted date. These notes are not a verbatim account of proceedings, are not meeting minutes, and do not represent any final decisions or official documentation for the project or agency.*

ATTENDEES:

Sheila Irons, USFS
Kary Schlick, USFS
Todd Ellsworth, USFS
Nick Buckmaster, CDFW
Steve Parmenter, CDFW
Chase Hildeburn, SWRCB
Finlay Anderson, Kleinschmidt
Michael Donovan, Kleinschmidt
Tyler Kreider, Kleinschmidt
Brandon Kulik, Kleinschmidt
Terra Alpaugh, Kearns & West
Matt Woodhall, SCE
Paul Schmidt, SCE
Samantha Nelson, SCE

1.0 ACTION ITEMS

- CDFW to look into the 3 inch vs 6 inch sampler size question and get back to the Team with their recommendation.
- SCE to review CDFW's IFIM suggestions and circle back with any concerns or questions.

2.0 OBJECTIVES

- Review the timeline for study plan development and revisions
- Identify outstanding concerns about aquatic study plans and ways to address them
- Agree on process and venue for resolving outstanding issues/questions

3.0 SUMMARY

3.1 REVIEW OF RELICENSING TIMELINE & PROCESS

Finlay Anderson, Kleinschmidt, reviewed the timeline relating to the study plans going forward: SCE hopes to file the PAD and study plans in early April, at which point it hopes the study plans will include as much of the agencies feedback as possible and reflect a consensus product. If there are outstanding issues at that point, SCE will continue to work with the TWGs to refine the plans until the end of the FERC comment period, at which point ideally all parties can voice their support of the plans to FERC. Finlay reminded the group that consultation will continue after that point: adjustments to direction can be made after reviewing the first year study results.

3.2 DISCUSS AQUATIC STUDY PLANS

The Relicensing Team (hereafter, the "Team") presented a matrix listing each aquatic study plan and organizing feedback by significant remaining issues, smaller items that should be resolved before March, methodology questions to address in ongoing consultation before July, and ideas for baseline study work that can be accomplished before full implementation starts.

The Team walked through each study, presented their impression of its status, and asked for outstanding feedback. Participants offered a range of input, which is summarized by study below:

- *Operations Model Study Plan:* CDFW requested access to the model, so they can use it to test various scenarios. Finlay suggested a webinar to explain its inputs and design, followed by a sharing agreement outlining how it can be used and distributed.
- *Water Quality Study Plan:* SWRCB does not have any additional substantive concerns. The Team noted that the next step is developing an implementation plan but explained that could be done after filing the study plan. CDFW agreed.
- *Sediment and Geomorphology Plan:*
    - CDFW requested a quantitative assessment of sediment; they are particularly interested in how much sediment is landing in the intakes year-to-year. They suggested using a sonar unit for bathymetry or simply doing rough depth estimates to gage what is settling out in each area – particularly Intake 2, Weir Pond, and the South Fork Diversion and possibly including Intakes 3, 4, and/or 5. It would be ideal to have three years of data, but given that the study period will only provide two years of data before decisions are made, the Team will take this under advisement and consider how this might be accomplished, if necessary. One approach may be to take sediment measurements in both years and using them to calibrate and compare to the model results. At that point, they can consult with the TWGs about what additional monitoring may be needed. CDFW supported that plan.[1]
    - USFS suggested that SCE might consider studying the sources of sediment into Bishop Creek for insight into how USFS/SCE could take action to stabilize certain areas.
    - The Team explained that they are now proposing use of a 3 inch (rather than 6 inch) sampler in the study because it can be deployed by hand and is logistically simpler. The

[1] Per a phone call on March 5, 2019 with the Team and Nick Buckmaster (CDFW), quantification of annual sediment inputs is no longer requested, as per the call, the USFS' objectives for this system are as follows" (a) maintaining a diverse mix of sediment size classes for habitat diversity, and (b) providing gravel and cobble substrates for macroinvertebrates and other ecosystem functions. The group concluded that the study should focus on determining flows that would mobilize sediment and could result in an operations modification to improve sediment transport in Bishop Creek during certain flow events. As such, the study should focus on what flows would be suitable to flush sediment from the impoundment and the feasibility of getting sediment through the impoundment to downstream reaches. The group generally agreed that the quantification of sediment inputs is not necessary as part of this study plan.

only drawback of this approach is that it will preclude larger sediment. CDFW committed to looking into the sampler size question and getting back to the Team with their recommendation [ACTION ITEM]
    - The Team are also suggested not studying the suspended load, since historically there has not been much clay or silt; instead, they will focus on coarser materials (e.g. sands, gravels, cobbles). The TWG members agreed with this approach.
    - The Team plans to initiate planning in 2019, including a reconnaissance visit to set up cross sections, start cross section surveys and substrate characterization, do quantitative characterization of impoundments, and if there is extra water, start the bankfull sediment transport as baseline work.
- *Fish Distribution Study Plans:* The Team noted that they have received comments from USFS, largely focused on implementation details. CDFW asked about specifying the statistical methods they plan to use to analyze the data. The Team explained that they are hesitant to commit to specific tests before knowing the sample size they will end up with. In general, they will implement statistics of comparison and dispersion (e.g. collecting length frequencies for brown trout, enabling them to calculate mean length and confidence intervals around that mean to compare to historic parameters). CDFW does not expect an exact commitment to methods but would like the plan to include some discussion of potential metrics and how the analysis will evaluate a significant change in the population. Participants also requested that the frequency and number of sites for each fish survey be clarified.
- *IFIM:* The TWG and the Relicensing Team agree that the new IFIM study cannot rely on the old IFIM study without the original data. They have reworked the study but the following details remain open: (1) which CDFW mesohabitat and transect selection protocols should be used; (2) confirmation of whether or not an HSC validation study for brown trout is necessary (they think not), and (3) selection of study sites. CDFW has provided bullets explaining their approach to the above; SCE needs to digest those bullets and circle back with CDFW with any concerns [ACTION ITEM].