

Barnes, Peter@Waterboards

From: Tristan Leong <riverstewardship@gmail.com>
Sent: Friday, February 27, 2015 3:44 PM
To: Barnes, Peter@Waterboards
Cc: Ragazzi, Erin@Waterboards; Wetzel, Jeff@Waterboards; Grober, Les@Waterboards; Heinrich, Dana@Waterboards
Subject: Comments on the Upper North Fork Feather River Draft EIR
Attachments: Formal Comments on Draft EIR UNFFR.docx

Peter & SWRCB Relicensing Staff,

Attached you will find my comments regarding the Draft EIR and Notice of Availability for the Upper North Fork Feather River Relicensing Project. Please confirm receipt and include them in the administrative record.

Note that the comments expressed herein are my own personal views and do not reflect those of my employer.

As listed in Chapter 11 of the Draft EIR, I worked as the State Water Resource Control Board's Project relicensing manager from June 2007 through May of 2010. During this time I served as a primary author and the lead editor in the development of the Level 3 Technical Report and a 2010 Draft EIR for the Project. Before I left the Board in May of 2010, in preparation to circulate the Draft EIR, I briefed Board Members Doduc and Spivy-Weber on the 2010 EIR's preliminary findings and implications and provided administrative copies to management. After nearly five years, the Board released a Draft EIR that selectively edits the original 2010 version. The changes between the 2010 version and the 2014 version can only be construed as a contorted attempt to justify a measure that is less "politically" controversial than thermal curtains, since the staff recommendation on its own is fundamentally flawed, unreasonable, and was never fully analyzed (since it was shown to be incapable of accomplishing the Board's objectives). Approval of the staff alternative would entail the Board abandoning its responsibilities and obligations under the Clean Water Act.

Respectfully Submitted,
Tristan Leong

STATE OF CALIFORNIA
STATE WATER RESOURCE CONTROL BOARD

Pacific Gas and Electric Company

Upper North Fork Feather River Hydroelectric Project

P-2105

Comments on UNFFR Draft Environmental Impact Report

I hereby request that the State Water Resource Control Board (Board) direct Board staff to make changes to their Draft Environmental Impact Report (DEIR) and Notice of Availability for the Upper North Fork Feather River (UNFFR) Hydroelectric Project, Federal Energy Regulatory Commission (FERC) No. 2105. Such changes must be implemented to comply with the California Environmental Quality Act, as well as the Federal Clean Water Act (CWA).

The administrative record, as presented in the DEIR, does not contain any evidence to support staff's recommendation that releasing 250 cubic feet per second from Canyon Dam from June 15 through September 15, as a stand-alone measure¹, would adequately protect the Water Quality Control Plan for the Central Valley Region (Basin Plan's) designated cold water beneficial use for the NFFR. In fact, this particular recommendation was specifically not analyzed as a measure to comply with the Clean Water Act, and indeed, the administrative record (including the current DEIR) contradicts this proposed action. To support this recommendation, staff has asserted that modeling results utilizing a thermal curtain at Lake Almanor in conjunction with releases from Canyon Dam provides a sufficient "book-end"² upon which to base solitary releases from Canyon Dam. However, this assertion is based on a faulty understanding of the water temperature model, and relies upon assumptions that have been neither tested nor validated. Staff has completely ignored or does not understand that the two "alternatives" evaluated in the DEIR both require a thermal curtain to obtain measureable temperature reductions to comply with the Basin Plan

If the Board relies upon the current DEIR and staff recommendation to certify the project under Section 401 of the Clean Water Act, the Board will be acting in an arbitrary and capricious manner by making a decision without basis and contrary to the administrative record.

BACKGROUND

¹ Or as part of yet-undescribed adaptive management plan noted within the Board's Notice of Availability

² As per Erin Ragazzi's description of staff recommendation -Rock Creek Cresta ERC Meeting 1/21/2015

A. Upper North Fork Feather Project Affects Coldwater Habitat in the North Fork Feather River.

1. Description of Project

Pacific Gas & Electric's UNFFR Hydroelectric Project is located in the Feather River basin. It is one of the upstream-most projects in a series of water resource and hydroelectric projects in the Feather River basin. PG&E owns and operates four other hydroelectric projects in the basin: Hamilton Branch (unlicensed), Rock Creek-Cresta (FERC No. 1962), Bucks Creek (FERC No. 619), and Poe (FERC No. 2107). These projects are upstream of the California Department of Water Resource's (DWR's) Lake Oroville Project. The UNFFR Project is operated in conjunction with PG&E's other projects to help meet the electricity demands and ancillary service needs of PG&E's customers and the state.³

The UNFFR Project consists of three reservoirs (Lake Almanor, Butt Valley, and Belden Forebay) with dams; five powerhouses (Butt Valley, Caribou No. 1 & No. 2, Oak Flat, and Belden powerhouse); tunnels and penstocks connecting the reservoirs to the powerhouses; and transmission, operations and maintenance (O&M), and access facilities. PG&E operates Lake Almanor, the Project's largest reservoir, for storage of rain and snowmelt during the spring and summer months and then slowly draws down the reservoir during the summer and fall months for power generation. The total installed capacity for the UNFFR Project is 342.6 megawatts (MW). The UNFFR developments are operated in an integrated manner, and their operation is coordinated with other facilities in the Feather River system, including the upstream unlicensed Hamilton Branch Project, and downstream Rock Creek-Cresta, Bucks Creek, and Poe projects.⁴

Portions of the North Fork Feather River (NFFR) do not meet the water quality objective for temperature as set forth in Basin Plan. The physical habitat alterations of the NFFR caused by construction and operation of the hydropower diversion dams, inundation of the river channel behind the dams, and alteration of streamflows, including effects on the river's water temperature regime, have long been identified as important factors limiting the NFFR coldwater fishery (Wales and Hansen 1952; PG&E 1979; Wixom 1989; Moyle et al. 1983). The State Water Board and the EPA examined multiple lines of available evidence, including water temperature records and data on the historic and current conditions of cold freshwater habitat and fishery resources, when listing the NFFR as a water quality limited segment for water temperature in 2006 (State Water Board 2006, 2010). Changes in the relative diversity, abundance, and distribution of native coldwater species within the NFFR are attributable, in part, to a combination of hydroelectric project-related factors and other watershed factors, including habitat alteration, changes in flow and temperature regimes, sedimentation, hydromodification, and introduction of non-native species. The adverse impacts of water temperature impairment to the cold freshwater fishery were noted to become progressively more significant downstream of the UNFFR Project through the Rock Creek-Cresta and Poe hydroelectric project reaches, where summer maximum water temperatures are highest (State Water Board 2006).⁵

UNFFR Project Clean Water Act Section 401 Water Quality Certification Process

³ DEIR Chapter 3. Section 3.3

⁴ FERC EIS 2.1.1.1

⁵ Appendix F DEIR

On October 23, 2002, PG&E submitted an application to the Federal Energy Regulatory Commission to relicense the UNFFR Project. This license expired in 2004, and PG&E has continued to operate the UNFFR Project under annual extensions. Prior to the issuance of a new license, PG&E must obtain Clean Water Act section 401 water quality certification that the project will be in compliance with specified provisions of the CWA (33 U.S.C. § 1341) including State water quality standards as contained in the applicable water quality control plan.⁶ During the relicensing process, Board staff discussed the need for the Project to meet the water quality objective for temperature as set forth in the Water Quality Control Plan for the Basin Plan. To partially address these concerns PG&E conducted studies to evaluate the effects that implementing various measures would have on water quality, however it did not determine with reasonable certainty the effects of some measures.⁷ On April 22, 2004 various relicensing parties entered into a Settlement Agreement to address a variety of protection mitigation and enhancement measures for the UNFFR Project. The final Settlement Agreement for the UNFFR Project did not include any measure specifically aimed at addressing water temperature.⁸

As the final Settlement Agreement did not resolve issues related to the Project's compliance with the Basin Plan, the Board initiated a process—known as levels 1, 2, and 3—to develop an array of measures that could reduce water temperatures in the North Fork Feather River below Canyon dam. The process is briefly described below; detailed information on the process and the measures considered are available in the “Level 1 and 2” and “Level 3” reports (Stetson Engineers, Inc. 2007 and 2009).

In the Level 1 and 2 Report, a wide range of potentially feasible measures for seasonal cooling of water temperatures in the North Fork Feather River was considered, including measures identified by PG&E and others during the CEQA scoping process. During Level 1, the first phase in the screening process, the State Water Board “cast a wide net” to capture all possible water quality measures and then subjected them to the following coarse screening criteria:

Effectiveness and reliability—Is there a reasonable potential that the measure can effectively and reliably achieve the preliminary temperature target of 20 °C (consistent with temperature objectives identified in a previous licensing proceeding on the North Fork Feather River), or is the effectiveness and reliability of the measure overly speculative?

Technological feasibility and constructability—Can the measure be implemented with currently available technology and construction methods?

Logistics—Can the measure be implemented considering current legal obligations, public safety needs, right-of-way and access needs, and other real world logistical constraints?

Reasonableness—Are there clearly superior or more reasonable measures available based on the three criteria listed above, or would implementation of the measure be remote and speculative?

Fatal flaws—Does the measure have any fatal flaws?

⁶ DEIR ES-1

⁷ FERC EIS 3-54

⁸ FERC EIS 3-59

The set of water quality measures remaining after the Level 1 screening represented *a reasonable range of potentially effective and feasible* measures that were carried forward to Level 2, or the second phase in the screening process.

Level 2 screened out the water quality measures (passing Level 1 screening) that, after closer examination, would clearly be ineffective or infeasible or were inferior to the other measures. In Level 2, the measures were analyzed using the best information available. The measures were modified or refined based on the analysis, and rough engineering designs and cost estimates were developed. The measures were subjected to the same screening criteria as Level 1, as well as the following additional criteria:

Substantial further study—Is there sufficient information currently available or can it be readily developed in order to evaluate the potential effectiveness and feasibility of the measure, or is substantial further investigation or study required?

Environmental challenges—Are there obvious environmental consequences or problems associated with the measure that would pose a major challenge to overcome?

Economic feasibility—Can the measure be implemented at a reasonable cost, including capital, operations and maintenance, and energy replacement costs?

The resulting Level 2 measures represented the set of potentially effective and feasible water quality measures that were advanced to Level 3, the final phase in the design process.

As described in the Level 3 Report, 16 discrete water quality measures were advanced from Level 2, including measures within and outside the UNFFR Project boundary (i.e., the FERC Project No. 2105 boundary). Measures outside the boundary included flow-related operational measures for the downstream Rock Creek, Cresta, and Poe reaches and physical modification measures for the Poe reach. In the Level 3 Report, combinations of measures were packaged into alternatives, and an alternative was labeled as a UNFFR Project-only alternative if all measures (facility or operational modifications) that constitute the alternative are entirely within the UNFFR Project boundary and subject to FERC jurisdiction in the 2105 relicensing process. No detailed screening of water quality measures was conducted for reaches outside (downstream) of the UNFFR Project boundary in the Level 3 analysis.

The outcome of Level 3 was four possible modifications to UNFFR Project facilities or operations that would reduce mean daily water temperatures during the summer period to varying degrees along the North Fork Feather River downstream of Canyon dam to the Poe reach. These measures are:

- install a thermal curtain at the Prattville intake on Lake Almanor,
- install a thermal curtain near the Caribou No. 1 and No. 2 intakes on Butt Valley reservoir,
- modify the low-level outlets at Canyon dam and increase releases from the dam to up to 600 cubic feet per second (cfs), while decreasing releases to the Prattville intake, and/or
- use Caribou powerhouse No. 1 preferentially over Caribou powerhouse No. 2.⁹

⁹ DEIR Chapter 4

In Level 3 these measures were packaged (and modeled) as combinations called alternatives: 3, 3x, 4a, 4b, 4c, and 4d. Each alternative was then compared to baseline conditions and evaluated by its effectiveness in reducing adverse stream temperatures in the NFFR for rainbow trout (*Oncorhynchus Mykiss*) – a cold-water dependent species endemic to the NFFR chosen as an appropriate proxy.¹⁰ An alternative that reduced Maximum Weekly Average Temperature (MWAT) $\leq 20.0^{\circ}\text{C}$ over a range of simulated conditions was considered to be protective of the NFFR coldwater beneficial use. All alternatives carried forward in Level 3 significantly improved conditions, reducing average annual MWAT from a baseline above 21 degrees¹¹ to a low of 19.2°C and/or $\leq 20.0^{\circ}\text{C}$. For a further discussion of the temperature assessment framework and of each measure’s biological performance relative to one another and the baseline, see DEIR Appendix F p.7-17.

From these alternatives the Board chose to evaluate alternatives 3 and 4a in the DEIR. Both alternatives require the use of a thermal curtain at Lake Almanor and Butt Valley Reservoir to achieve conditions the Board considers protective of the NFFR coldwater beneficial use. The only difference between these alternatives is that alternative 3 includes the addition of a 250 cfs release from Canyon Dam that would marginally improve temperature conditions over thermal curtains alone. Board staff has intentionally misconstrued this result to suggest that a release of 250 cfs from Canyon Dam by itself would achieve a sufficient level of protection of the NFFR coldwater beneficial use. There is no basis for the staff recommendation in the administrative record. In fact, the record clearly demonstrates staff’s recommendation is ineffective and unable to achieve the established metrics the Board has determined to be protective of the NFFR coldwater beneficial use. For this reason, and a number of other procedural problems, described in detail below, the Board should rescind the staff recommendation, modify the DEIR, and put forth a 401 Certification that complies with the CWA and CEQA.

ARGUMENT

1) The Board Failed to Correctly Identify the Proposed Project and its Role and Authority in Issuing Section 401 Water Quality Certifications for the Relicensing of the UNFFR Project.

The DEIR does not clearly articulate that the “Project” being considered within the document must include measures necessary to satisfy water quality requirements in order for the Board to issue a water quality certification.

Section 1.5.1 of the DEIR states:

For the purposes of this EIR, in accordance with CEQA, a “project” is defined as “*the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment*” and that is “*an activity involving issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies*” (Cal. Code Regs., tit. 14, §15378, subd. (a)(3)). Further, the “term ‘project’ refers to the activity

¹⁰ DEIR Appendix F Exec-1

¹¹ Level 3 Report Tables 2-6 thru 2-10

which is being approved and which may be subject to several discretionary approvals by governmental agencies. The term ‘project’ does not mean each separate governmental approval” (Cal. Code Regs. tit. 14, § 15378, subd. (c)). In this EIR, PG&E’s Proposed Project is generally defined as:

- continued operation of the UNFFR Project under a new FERC license, as outlined in PG&E’s application to FERC, the 2004 Settlement Agreement, federal agencies’ mandatory conditions, and FERC’s Staff Alternative.

Some of this language is again mirrored in Section 4.4.1:

The Proposed UNFFR Project, as outlined in Section 3.5 of this EIR, consists of the elements of PG&E’s application to FERC and the Project 2105 Relicensing Settlement Agreement (2004 Settlement Agreement), Section 18 Conditions, Section 4(e) Conditions, and FERC’s staff Alternative.

The DEIR’s Project definition contains every action except the Board’s discretionary action. The definition does not clearly include the Board’s issuance of certification and the corresponding conditions necessary to ensure compliance with the Basin Plan. When the State Water Board issues a water quality certification for a project, it ensures that the project will comply with the applicable basin plan and that the beneficial uses of the applicable water bodies will be protected. Therefore, the “whole of the action” must consist of operation of the UNFFR Project as proposed by PG&E, together with any conditions that the Board has identified as necessary to satisfy water quality requirements. As discussed in the background section these were identified in the Level 1-2-3 Reports.

A correct description of the Project would generally include:

- continued operation of the UNFFR Project
- implementation of the measures identified in the Settlement Agreement AND
- implementation of a combination of measures sufficient to reduce water temperatures in the NFFR to comply with the Basin Plan.

This is a critically important distinction because if the Board does not properly identify and analyze the conditions necessary to satisfy water quality requirements in the DEIR, it will have failed its basic obligation to disclose the discretionary action before it, while simultaneously failing to address how the project will comply with the CWA, its primary role in certifying the project. This error, whether unintentional or deliberate, incites confusion over the role, if any, that the Board plays in the FERC relicensing process. The Board must clearly explain in the Project definition that the purpose of this DEIR is to analyze measures arising from the Board’s obligation to meet the CWA.

2) The Board Uses Confusing Terminology by Defining the Combination of Measures to Comply with the Basin Plan as “Alternatives”

The California Environmental Quality Act (CEQA) generally requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of proposed projects, and to reduce those environmental effects to the extent feasible. If the project may cause adverse environmental impacts, the public agency must prepare a more detailed study called an Environmental Impact Report (EIR). An EIR contains in-depth studies of potential impacts, measures to reduce or avoid

those impacts, and an analysis of alternatives to the project.¹²

According to the CEQA Guidelines, an EIR must describe a reasonable range of alternatives to the proposed project [or plan], or to the location of a proposed project that attain most of the basic objectives of the project in a feasible manner, but avoid or substantially lessen any of the significant effects of the project. The comparative merits of these alternatives must be evaluated (CEQA Guidelines §15126.6(d)). In the case of relicensing the UNFFR Project, the proposed project is continued operation under the terms of the Settlement Agreement. Here the status and operation of the project would remain largely unchanged, and no potentially adverse significant effects would arise. However, in order for the project to comply with the Basin Plan and be certified under Section 401, the Board must include measures that satisfy water quality requirements. From these measures, potential impacts could arise. The DEIR must analyze the physical effects of the proposed Settlement Agreement and water quality measures on the environment and consider the extent of changes from the baseline conditions. As such, the Board's use of the CEQA term "Alternative" to describe measures required by the CWA is misleading and confusing to the public, since a reader would assume that the two Alternatives discussed in the document minimize adverse effects of relicensing the project. Instead, these measures provide different mechanisms to meet Basin Plan water quality objectives, criteria that must be met if the project's operation is to continue.

3) The Board Failed to Analyze the Staff Recommendation in the DEIR

The DEIR on page 4-9 under the heading *Canyon Dam Releases up to 250 cfs Independent of a Thermal Curtain* states: ***While not separately evaluated as an alternative***, increased releases out of Canyon dam of up to 250 cfs from June 15th to September 15th could be implemented to reduce temperatures in the North Fork Feather River. The impacts of the Canyon Dam releases independent of a thermal curtain would be a subset of those identified for Alternative 1. While the water temperature benefits of this sub-alternative would not be as great as those for Alternative 1, there would be improvements to temperatures in the North Fork Feather River, as seen in the modeling for the Seneca reach.

Again, the ambiguous use of the term "alternative" is not clearly defined within this section. The Board is either trying to state that it hasn't analyzed the independent release of 250 cfs (staff recommendation) as part of the CEQA project under consideration in the DEIR, or more shockingly is acknowledging and admitting that the staff recommendation will not meet the Board's responsibility to ensure the project will comply with the CWA. Recommending a project with an alternative never included in the DEIR violates the spirit, if not the letter, of CEQA. As mentioned in 2), above, the Board's use of "Alternatives" do not reflect alternative project configurations but rather different combinations of measures to comply with the Basin Plan. By stating that the water quality benefits of the Canyon Dam releases would be a "subset" of, and thus inferior to, Alternative 1, Board staff admits that they are recommending a condition that cannot satisfy their obligations under the CWA. This alarming declaration is confirmed when reviewing the Level 1-2-3 reports, none of which analyze the staff recommendation as an independent action capable of complying with the Basin Plan.

The DEIR clearly states that both "alternatives" being considered in the document include the use of

¹² CA Office of Planning and Research

thermal curtains at Almanor and Butt Valley Reservoir. The only distinction is that Alternative 1 also includes the release of an additional 250 cfs in June-September. The staff recommendation simply cannot be supported by this document, as it is neither a CEQA alternative (since the DEIR clearly states it was never analyzed in the DEIR), nor can it be viewed as a stand-alone measure to comply with the Basin Plan, since the additional releases were never analyzed separately, and decoupling them from Alternative 1 to meet protective temperature thresholds ignores the fact that the benefits gained depend on relationships present between all the measures.

4) The Board Failed to Provide Evidence that the Staff Recommendation Complies with the Basin Plan

By recommending 250 cfs Canyon dam releases without the use of thermal curtains as the staff alternative for Section 401 certification, Board staff must believe that this measure ensures that the project will comply with the applicable Basin Plan and that the beneficial uses of the applicable water bodies will be protected. However, such reasoning is without basis and no evidence is provided to substantiate such claims. This position is at odds with the analysis provided in Level 1-2-3. In Level 1-2-3 alternatives were developed using a combination of measures necessary to meet a temperature threshold determined to be protective of the cold water beneficial use. When queried about how the staff alternative would meet the threshold the Board has established as protective of the cold water beneficial use, staff provided non-committal answers or suggested that the benefits could be implied by looking at modeling results and comparing the benefits of thermal curtains to thermal curtains with additional releases, then projecting the additional benefits of the releases to baseline conditions¹³. However, to take such a view, one would have to break all the modeling relationships the Board uses in its own analysis - akin to assigning a transitive property to the relationships of the measures, when in fact they are intransitive. Staff has fundamentally misunderstood the limitations of the model and the data to mean that one can simply view the benefit of releases in isolation, separate from thermal curtains. Thermal curtains are integral to achieving the Board's objective of compliance with the Basin Plan. Furthermore, the statement found on page 4-9 of the DEIR states "...there would be improvements to temperatures in the North Fork Feather River (with independent Canyon dam releases), as seen in the modeling for the Seneca reach." This statement completely misdirects the public towards an analysis that marginally improving water temperatures in a non-impaired reach of the NFFR would satisfactorily address the longstanding concerns of water temperature and Basin Plan compliance in the impaired sections of the NFFR. Staff has provided no analysis from which to draw the conclusion that a release of 250 cfs will address the concerns present for the impaired reaches.

5) Evidence in the Record Clearly Demonstrates that the Staff Recommendation will not Comply with the Basin Plan

The statement, made repeatedly by staff, that the benefits of Canyon dam releases independent of a thermal curtain are a "subset of" (or could be extrapolated from) Alternative 1¹⁴ is completely erroneous. Attempting to isolate the individual benefit of Canyon dam releases requires a unique modeling run, since

¹³ Per personal telephone conversation with Peter Barnes December 2014; Erin Ragazzi's explanation at Rock Creek Cresta ERC meeting 1/21/2015

¹⁴ in the DEIR, and Alternative 3 of the Level 3 report.

the Level 1-2-3 reports simulate a combination of measures working synergistically. The benefits of any one combination of measures are intrinsically and dynamically linked to one another within the Level 1-2-3 model. Removing thermal curtains from a combination would fundamentally change the temperature benefit calculation. Without performing a new calculation, staff has assumed that a constant benefit to water temperature at Belden Forebay from independent releases can be derived from the difference between Alternatives 3 and 4a from the Level 1-2-3 model. This mistakenly establishes a relationship for equilibrium water temperatures at Belden Forebay that does not exist within the parameters of the model. Simply put, when one removes the use of thermal curtains from the model, the volume of the cold water pool in Almanor available for release changes slower than with its use. The absence of thermal curtains also greatly affects the mixing of water at Belden Forebay, since the majority of water being withdrawn from Almanor and Butt Valley continues to be pulled from the warmer epilimnions of both reservoirs – the primary driver of warm water temperatures downstream. Table 2-4 of the Level 3 report clearly demonstrates that the relationship staff has established does not exist, as it shows that for each package of measures, increasing releases out of Canyon dam has a different corresponding temperature benefit in the months of July and August. Thus the exact benefits of isolated Canyon dam releases are not reflected in the difference between Alternative 1 and Alternative 2, as claimed by staff.

The Level 1-2-3 reports neither analyzed nor seriously considered the benefits of an independent 250 cfs release out of Canyon dam because releases below 600 cfs at Canyon dam were shown to be ineffective at reducing temperatures in the NFFR to a level protective of the cold water beneficial use. This is also confirmed by PG&E's own analysis and modeling efforts (that form the basis for Levels 1-2-3), which demonstrated much higher flow releases are needed to meet the temperature threshold if pursuing Canyon dam releases¹⁵. The closest modeling in Level 3 to a stand-alone release of 250 cfs out of Canyon dam can be found in Figures 2-24a and 2-24b on page 2-40 of the Level 3 report. Figures 2-24a and 2-24b show Belden Reservoir July and August water temperatures for a range of release rates at Canyon Dam for Alternative 4d. Alternative 4d simulates the release of 600 cfs out of Canyon dam with the installation of a single thermal curtain near Caribou #1 and #2 intakes in Butt Valley Reservoir. The use of a thermal curtain at Butt Valley Reservoir provides a small increase in the simulated temperature benefits for a range of release rates at Canyon Dam under Alternative 4 over an independent release out of Canyon Dam. As seen in the figures, a release of 300 cfs from Canyon dam (50 cfs more than the staff alternative) and the additional benefit of a thermal curtain at Butt Valley Reservoir would result in temperatures at the Belden Reservoir only slightly below the boards threshold of 20.0°C in July and would exceed this threshold in August 25% of the time. Corresponding temperatures in the impaired section of the NFFR downstream of Belden Reservoir would exceed the 20.0°C threshold every July and August except during very cool July conditions for certain sections of the Rock Creek Reach, and would always exceed this threshold for all other climactic scenarios and NFFR segments down to the Poe Reach (see Figures 2-25a, 2-25b, 2-26a, 2-26b, 2-27a, 2-27b). It is abundantly clear from these results that even a 300 cfs Canyon Dam release with a Butt Valley Reservoir thermal curtain, which includes additional and more conservative measures than the staff alternative, is ineffective at reducing water temperatures to protect cold water dependent species.

¹⁵ See McGurk and Tu 2005; PG&E and Bechtel 2005; FERC EIS Appendix D, D-4 Measure 8.

6) Issuing a Certification with the Staff Recommendation Would Overstep the Authority of the Water Board – Allowing “Compliance” to be Achieved through Deferred Mitigation Measures with Unenforceable Criteria

The staff recommendation, as outlined in the Notice of Availability, would incorrectly and illegally imbue the Board with a new authority when issuing Section 401 certifications – the ability to issue a certification that lacks conditions ensuring protection of water quality standards. Issuing a certification in this manner is in direct contradiction to the Board’s clearly stated authority in the DEIR: “When the State Water Board considers issuing a water quality certification for a project, it evaluates whether the project will comply with the applicable water quality control plan (basin plan), in this case the Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan) (Central Valley Regional Water Quality Control Board 2011). **The State Water Board must protect water quality standards in any water quality certification it issues.**” (emphasis added)

If the Board were to certify the UNFFR Project using the staff recommendation it will allow the project to operate without the very measures the Board determined were both adequate and necessary to achieve compliance. Unfortunately, in this scenario the temperature impairment of the NFFR would largely continue unabated, completely negating the clear intention of the CWA to protect and promote healthy vibrant fish, invertebrate, and wildlife communities and the habitat upon which they depend. In what appears to be a partial acknowledgement of this conundrum, staff recommend a “reservation of authority” to defer until such a time as it is later determined by the Board, through a non-transparent and undescribed monitoring effort, that a thermal curtain or some other measure is warranted¹⁶. It is absurd to imagine that the Board would “certify” a project using a condition based purely on the incorrectly identified benefits of independent 250 cfs Canyon dam releases, and furthermore would indefinitely defer the level of protection required under the CWA. It runs completely counter to the Board’s obligation and authority when issuing a certification.

Further, staff’s belief that the Board can “adaptively manage” the NFFR system and achieve compliance by requiring PG&E to address the temperature impairment caused by the UNFFR project via other NFFR project relicensing efforts is completely at odds with the Level 1-2-3 report¹⁷. Achievement of sufficiently protective temperatures in the impaired sections of the NFFR cannot be attained without addressing the problems at the headwaters and source: the UNFFR Project. As such, the Board cannot attempt to use PG&E’s other NFFR projects that are undergoing relicensing to address the impairment caused upstream by the UNFFR Project. Even if protection could be achieved somehow through adaptive management, staff has failed to provide any detail within the DEIR or elsewhere to describe how the program would work, would be implemented, or which conditions would be imposed. The staff recommendation’s adaptive management component therefore lacks any credibility or basis in the record to proceed as a lawful endeavor

7) The Staff Recommendation is Fundamentally Unreasonable

¹⁶ As per Jeff Wetzel’s comments – 2/10/2015 Sacramento Bee Article - *Cooling Feather River is Centerpiece for of plan for thermal curtain.*

¹⁷ Notice of Availability Page 4 – staff is relying upon the Poe and Bucks Creek projects to provide “additional opportunities” to address temperature impairment on the NFFR

Regardless of how one views the staff recommendation, whether as a “CEQA Alternative,” or as a stand-alone measure to comply with the Basin Plan objectives, it should be summarily dismissed as unreasonable. If examined under CEQA, the “Alternative” selected in the Staff Recommendation is neither the environmentally-superior alternative nor the most economically feasible alternative. This is because the staff recommendation, when compared to thermal curtains, is three times as costly and results in less than one-third the temperature reduction benefit¹⁸. There is no evidence in the record to support a reasonableness determination as to the staff’s selection. For the same reasons, the staff alternative fails the Level 1-2-3 Report’s screening criteria, and should be summarily dismissed because as described above it cannot meet the minimum temperature thresholds established by the Board.

8) The Staff Recommendation Would Conflict with other Potential License Requirements

Although speculative, it is worth noting that Article S9 of the Oroville 401 Certification requires DWR and PG&E to implement a habitat expansion agreement in lieu of fish passage at both the Oroville Facilities and the UNFFR Project. Should the HEA fail, NMFS and the Board may require anadromous fish passage facilities at both projects to establish threatened fish in their historic habitat within the NFFR. Passage would be precluded under the staff recommendation since Central Valley Spring-run Chinook salmon’s thermal tolerances are lower than its potential temperature benefits.

Conclusion

To meet obligations under the CWA when certifying the project, the Board must select from either Alternative 1 or 2 presented in the DEIR, which include the use of thermal curtains. The DEIR does not contain any evidence to support the staff’s recommendation that releasing 250 cubic feet per second from Canyon Dam from June 15 through September 15, as a stand-alone measure would adequately protect the Basin Plan’s designated cold water beneficial use for the NFFR. The staff alternative is economically unreasonable when compared to other measures, and staff’s attempt at qualifying the stand-alone releases is based upon a fundamental misunderstanding about its perceived benefits. If the Board relies upon the DEIR to certify the project using the staff recommendation as a condition under Section 401 of the Clean Water Act, the Board will be acting in an arbitrary and capricious manner by making a decision without basis and contrary to the administrative record.

Respectfully Submitted,

Tristan Leong

¹⁸ See Table ES-3 of the Level 3 Report – Capital cost of Thermal Curtains - \$23,567,000 versus 250 cfs release - \$1,715,000 annual generation loss x theoretical 35 year license = \$60,025,000