Atha, Roberta

From: David Keller <dkeller@eelriver.org>
Sent: Thursday, February 3, 2022 5:16 PM
To: Atha, Roberta
Subject: [EXTERNAL] FOER letter to FERC re: next steps for Potter Valley Project 2/1/22
Attachments: FOER to FERC re 2BP no application Feb 22 FINAL.pdf

Importance: High

Dear WAC and TAC members:

Attached is Friends of the Eel River's letter to the Federal Energy Regulatory Commission requesting the prompt start to the License Surrender and Decommissioning of PG&E's Potter Valley Project.

Please let us know if you have any questions or comments.

Sincerely,

David Keller
Bay Area Director
Friends of the Eel River

www.eelriver.org

FRIENDS OF THE EEL RIVER

Working for the recovery of our Wild & Scenic River, its fisheries and communities.

Tuesday, February 1, 2022

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street N.E.
Washington, D.C. 20426

Re: Potter Valley Project (Project No. 77)

Dear Secretary Bose,

This letter is intended to convey Friends of the Eel River's understanding of the current status and probable future of the Potter Valley Project, in view of Mendocino County Inland Water and Power Commission et. al.'s January 31 letter to the Commission stating they "will not file a final license application for the Project."

The Potter Valley Project (Project) is a hydroelectric complex consisting of Scott and Cape Horn dams on the upper Eel River, and diversion works which transfer water from the Eel to a powerhouse in Potter Valley, at the headwaters of the East Branch Russian River. Pacific Gas and Electric (PG&E) has owned the Project since 1930.

PG&E's license with the Commission to operate the Project expires April 14, 2022. Nor does PG&E have any interest in operating the Project a moment longer than necessary. The utility sought to sell the Project before it sought protection in bankruptcy court in January 2019 from billions of dollars in liability for harms to the victims of wildfires caused by PG&E's inadequately maintained equipment. Because PG&E then withdrew its 2017 Notice of Intent (NOI) to relicense the Project, it cannot relicense the Project.

After PG&E abandoned relicensing, the Commission offered PG&E's place in the process to willing and qualified applicants. The only response to FERC's offer to complete Project relicensing came from the Two Basin Partnership,[1] who submitted their own NOI June 28, 2019. (We will follow FERC's convention in describing the partnership as the NOI parties here.)

The NOI parties have now confirmed they will not relicense the Project. While we appreciate their candor, the NOI parties appear unwilling to withdraw their NOI and Preapplication Document, as PG&E did. Thus, it falls to the Commission to conclude the relicensing process for the Project and to initiate its license surrender and project decommissioning processes. We urge the Commission do so expeditiously.

[1] The Two Basin Partnership consists of the Mendocino County Inland Water and Power Commission (MWIPC), Sonoma Water, California Trout, Round Valley Indian Tribes, and Humboldt County.

HUMBOLDT OFFICE
707.798.6345 • foer@eelriver.org
PO Box 4945, Arcata, CA 95518

The NOI parties' efforts were not entirely unavailing. They were able to accomplish some important work that will help inform the pending license surrender and decommissioning processes. A series of technical memos[2] will help FERC and interested parties clarify the questions that do remain.

As well, the parties report continued fundraising efforts relevant to project decommissioning. Of particular significance, Sonoma Water was awarded a grant by the California Department of Water Resources to support, among other things, organization of Russian River water users to finance continued diversions from the Eel River, and Sonoma Water's proposed purchase of Cape Horn dam and the Project diversion works.

The Project and its operations cause take, and risk jeopardizing the survival, of salmon and steelhead listed under the California and federal Endangered Species Acts.

For Eel River salmon and steelhead, justice delayed could be survival denied. It is essential to the recovery of Eel River fisheries that license surrender and project decommissioning move as quickly as possible to removal of Scott and Cape Horn dams. The Project directly and indirectly affects Eel River salmon and steelhead listed under both the federal and California Endangered Species Acts.[3]

Northern California Summer Steelhead were listed by the California Fish and Game Commission as Endangered in June 2021. While Chinook salmon and steelhead in the Eel River are listed as Threated under the federal ESA, the best available scientific information[4] strongly suggests these runs are more seriously imperiled, not least by the existence and operations of the Project.

Scott dam, constructed in 1920-22, is 130 feet tall, and lacks any provision for fish passage. It blocks access to a significant amount of high-quality habitat in the Upper Mainstem Eel River, which a recent National Marine Fisheries Service (NMFS) study concludes:

---

[2] These include studies of: Eel River Hydraulic Modeling: Upper Eel Sediment Supply; Eel Restoration Framework; CHD Fish Passage Improvements; Scott Dam and Cape Horn Dam Removal; Coarse Sediment Transport; Potter Valley Irrigation District Water Supply Alternatives. Under **Potential Considerations for Potter Valley Project Future**, see Phase 2 Feasibility Study at http://pottervalleyproject.org/information/

[3] California Coastal Chinook were listed as Threatened under the federal ESA in 1999 (64 FR 50394), a decision confirmed in 2005 (70 FR 37160). Northern California steelhead were first listed as threatened in 1997 (62 FR 43937), a decision reaffirmed in 2006 (71 FR 834). Northern California Summer Steelhead were listed as Endangered under the California Endangered Species Act by the California Fish and Game Commission in June 2021.

[4] As we noted in our 2017 comments on PG&E's SD 1, the state of the art review of the status of California salmonids by Moyle et. al. strongly suggests that Eel River (i.e., California Coast) Chinook salmon rate a "high" level of concern notwithstanding their Threatened federal status. As well, they argue that while the Eel River's winter steelhead face "moderate" threats to survival – arguably consistent with their Threatened federal status – the threat to summer steelhead is in fact "critical." See Moyle, P., Lusardi, R., Samuel, P., and J. Katz. 2017. *State of the Salmonids: Status of California's Emblematic Fishes*, 2017. 555pp. San Francisco, CA.

> "*… could likely support populations of winter-run steelhead, summer-run steelhead, and fall-run Chinook salmon … Based on our evaluation of the quality and quantity of suitable habitat and potential capacity, enabling access to the blocked Upper Mainstem subbasin would be comparable to adding another Van Duzen subbasin to the Eel River Basin."*[5]

The absolute barrier to salmon and steelhead migration that Scott dam presents has tended to overshadow the partial barrier presented by Cape Horn dam, twelve miles downstream. Though Cape Horn dam does allow fish passage, its Van Arsdale fish ladder is the tallest and longest in California. Even for its target salmonid species, the fish ladder has never succeeded in providing upstream passage that approaches the functional equivalent of an undammed river. There is no provision for downstream passage of juveniles or steelhead kelts.

The fish ladder has been modified repeatedly since Cape Horn dam's construction in 1908, most recently with the addition of steel doors to the 'fish hotel,' intended to reduce the chronic obstruction of that structure, if not the ladder itself, by sediment carried by high flows. Previously, enterprising fisheries biologists had constructed a supplemental passage system for the Eel River's namesake lamprey out of dryer hose, allowing those ancient animals functional access above Cape Horn dam for the first time in a century.

Notwithstanding the temporary utility of the new doors in reducing gravel intrusion into the fish hotel, it remains clear that listed Chinook salmon and steelhead are subject to harms that meet the legal definition of "take"[6] under the federal ESA by the existence and operations of Cape Horn dam and the Van Arsdale fish ladder. As noted, the ladder itself remains subject to chronic obstruction by sediment during the migration of listed runs. As well, the structure provides opportunities for predation, including by otters, of fish in the lowest pool of the ladder. It is also clear that NMFS has not issued an incidental take permit allowing such foreseeable harms to listed fish at Cape Horn dam and the Van Arsdale Fish Station.

The take coverage PG&E does have at present comes under NMFS's 2002 Biological Opinion and Reasonable and Prudent Alternative (BiOp/RPA). But that document is based on NMFS's jeopardy finding – the agency's determination that Scott dam, and the operations of the Project, not only cause take of listed Chinook salmon and steelhead, but that implementation of the flow schedule and other license terms set by FERC in its 1983 relicensing of the Project would risk

[5] FitzGerald, Alyssa M. *Physical and biological constraints on the capacity for life-history expression of anadromous salmonids: an Eel River, California, case study Canadian Journal of Fisheries and Aquatic Sciences*, 4 December 2021 https://doi.org/10.1139/cjfas-2021-0229

[6] Under the ESA, "take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" with respect to a listed species. NMFS defines harm as "an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding or sheltering." (50 CFR 222.102)

their extinction. The Project has been operated under the flow schedule set by the RPA, and most of its other terms,[7] since 2004.

Nonetheless, conditions for the Eel's fisheries have grown significantly worse in the decades since, while the condition of the listed runs have, at best, failed to improve. Precipitation in the Upper Mainstem Eel basin has declined while temperatures have increased, compounding stressors on cold-water dependent salmon and steelhead while creating more warm water habitat for invasive pikeminnow that heavily predate young salmonids. Reduced flows have forced PG&E to seek variances from the RPA's flow schedule in seven of the last nine years.

The question confronting PG&E, FERC, and NMFS today, therefore, is what *additional* protective measures can be implemented to prevent jeopardy to Eel River Chinook and steelhead populations during license surrender and decommissioning. The question is nearly as urgent for the human institutions involved as it is for the fish. This is because the incidental take coverage associated with the Biological Opinion's Reasonable and Prudent Alternative expires with PG&E's license on April 14, 2022. Both FERC and PG&E appear liable for unpermitted harms to Eel River Chinook salmon and steelhead after April 14. Only by proceeding to removal of both Scott and Cape Horn dams at the earliest date with protective measures in place can this liability be reduced, if not eliminated.

To this end, it is imperative PG&E and FERC immediately initiate formal consultation with NMFS, as required by the ESA when a federally licensed project "may affect" listed species. 50 C.F.R § 402.14(a) In addition, PG&E and FERC would be well advised to agree with NMFS on a set of robust interim protective measures for any operations of the Project under an annual license.[8] Such interim conditions must be at minimum sufficient to ensure survival of listed fisheries pending dam removal.

Until the dams can be removed, the most important problem for Eel River salmon and steelhead appears to be maintaining effective reproduction and outmigration in the reach above Cape Horn but below Scott dam. Among the issues that appear most urgent are the need for additional flows to support fish migration in spring and fall, more robust provisions for retention of an adequate cold pool in the Lake Pillsbury reservoir through summer and fall, and attention to water quality issues downstream of Scott dam. While climate-driven drought continues to reduce inflows into the Lake Pillsbury reservoir, all of these considerations are likely to require limiting further diversions to the Russian River.

Removal of the Eel River dams offers extraordinary promise for fisheries recovery.

Conservationists and independent scientists have long argued that removal of the Eel River dams is likely to yield large ecological benefits, especially by allowing the recovery of keystone

[7] With the conspicuous exception of effective actions to suppress pikeminnow introduced into the Eel River watershed via the Lake Pillsbury reservoir.

[8] See, e.g., *Southern California Edison Company*, 106 FERC P 61,212, at 61,717 (March 4, 2004); *Platte River Whooping Crane Habitat Maintenance Trust v. Federal Energy Regulation Commission* (Platte River II), 962 F.2d 27 (D.C. Cir. 1992).

species like steelhead and Chinook salmon in the Upper Mainstem Eel River. We have contended the upper Eel River above Scott dam offers one of the best opportunities for salmonid recovery on the West Coast.

Again, FitzGerald et. al. concur, and emphasize the potential recovery not only of Chinook and winter steelhead populations, but the likely return of a summer steelhead run that has not been seen in the Eel River for a century – the southernmost such run on the planet:

> *[W]e conclude that the Upper Mainstem could likely support populations of winter-run steelhead, summer-run steelhead, and fall-run Chinook salmon based on the amount of thermally and geomorphically suitable habitat for multiple freshwater life stages during warm months and during drought. But a potentially more important question is: if access was provided to the Upper Mainstem, would these populations rebound? In a similar system, multiple anadromous salmonid populations have recolonized – both naturally and with human assistance – the Elwha River in Washington since the removal of the Elwha Dam, which had been in place for over 100 years (Bellmore et al. 2019, McMillan et al. 2019). In the Eel River Basin, a recent steelhead genetic study showed that fish with summer-run and winter-run alleles still reside upstream of Scott Dam after 100 years of isolation from other anadromous populations (Kannry et al. 2020). If downstream access was provided to the Upper Mainstem, these fish have to potential to "restart" the anadromous populations, potentially without additional reintroductions, recolonizations, or translocations from other subbasins (Kannry et al. 2020).*

FitzGerald et.al. also note that the upper Eel could provide critical refugia for salmonids from predation by pikeminnow introduced by the Project.

> *We found that in general, the Upper Mainstem harbors a larger amount of thermally- and geomorphically-suitable habitat relative to most other subbasins, even during drought. For juveniles rearing, the Upper Mainstem could provide an important cold-water refuge from the predatory Sacramento pikeminnow (Ptychocheilus grandis). … Together, these results indicate that the Upper Mainstem could provide an important cool-water refuge for multiple anadromous salmonid populations in the Eel River Basin, even during drought years.*

The Eel is no ordinary river. It is, with the Klamath River, one of two great opportunities on the US Pacific Coast to restore salmon and steelhead by removing economically worthless hydroelectric dams. The fact that the Potter Valley Project is an extraordinarily expensive source of electricity is why PG&E sought to sell the Project before it abandoned relicensing altogether.

The Potter Valley Project is failing.

We have previously emphasized that an unsafe Potter Valley Project is an unreliable Russian River water supply. We noted some of the more obvious potential failure points around Scott Dam, including blockage of the dam's only low level outlet by sedimentation, mobilization of the ancient landslide above the dam, the earthquake hazards posed by the Bartlett Springs fault below the Lake Pillsbury reservoir, and an inadequate spillway.

We have also noted that the public has very little information about these issues because PG&E and FERC choose to conceal nearly all information regarding dam safety behind CEII classification. As well, we have pointed out that the Commission's refusal to address dam safety questions in relicensing fails to inform the relicensing process with important information about the reliability of these aging structures.

The failure of the main transformer bank at the Potter Valley powerhouse has now rendered the project incapable of generating electric power unless and until a new machine is built for the purpose. Because its overhead costs are so high and its power production so small, the Project has long since ceased to generate power for which there is any economic demand. As PG&E's managers are only too well aware, the utility is about to commence license surrender proceedings.

Replacement of the transformer bank would therefore seem to be a poor investment both for PG&E and for its electrical customers. However, because the Project is not generating power, PG&E has restricted the flows it diverts to the Russian River to those required by its contract with the Potter Valley Irrigation District. PG&E's understandable caution to divert without hydroelectric generation is causing concern for Sonoma Water, which has long enjoyed the luxury of using PG&E's abandoned water from the Eel to cover its minimum flow obligations in the upper Russian River below the Lake Mendocino reservoir.

The Project appears to be failing comprehensively. Even if it were legal to do so, it appears very unlikely the Project would be able to continue to operate under current license terms for another decade. Again, PG&E has had to request variances from the RPA to operate the Project in seven of the last nine years.

It is striking that it was the unanticipated transformer bank failure that has resulted in the Project ceasing to be a reliable water supply. This failure is unlikely to be the last at the century-old project's facilities. PG&E's long history of failing to invest in the safety and maintenance of its pipelines and powerlines offers little support for the hope that it will have kept the Project's various and complex components in good condition.

Cape Horn dam must be removed during the decommissioning process.

As noted, Sonoma Water has been awarded a grant by the California Department of Water Resources to support, among other things, that agency's efforts to acquire and modify Cape Horn dam, in addition to the tunnel and other works which allow diversions from the Eel to the Russian River through Potter Valley. Friends of the Eel River was not advised of this request before it was submitted. We would have objected had we been aware of the details.

Cape Horn dam is an obsolete structure more than a century old. The dam failed in its design purpose within a decade of its construction, when its small reservoir largely filled with Eel River rock, leaving it with its present storage capacity of less than 400 acre feet.

Critically, as we have noted here and detailed elsewhere, Cape Horn dam causes serious and continuing harm to Eel River Chinook and steelhead. The dam causes ongoing take for which no incidental take coverage exists. Despite many efforts to rebuild the Van Arsdale fish ladder, it remains the locus of continuing harms to Eel river Chinook and steelhead, including predation. We assume Sonoma Water will argue the problem of take at Cape Horn could finally be solved by rebuilding the Van Arsdale fish ladder yet again. Again, because the problem at Cape Horn is fundamentally the location of the dam itself, no conceivable alterations to the fish ladder would bring it up to contemporary standards.

For all of the reasons noted above, Cape Horn dam must be removed during the decommissioning process. To remove Scott dam but leave the Eel River significantly impaired would incur the costs of dam removal without securing its benefits. On a related note, proposals to constrain Scott dam removal to avoid impacts to Cape Horn dam have the matter exactly backwards. Cape Horn dam should be removed first to allow sediment and debris from Scott dam removal to pass with less effect on the Eel River.

The Commission need not be concerned that Russian River interests cannot get water.

Sonoma Water seeks to retain Cape Horn dam to maintain an inexpensive diversion from the Eel River. Water supply is not an issue over which FERC has jurisdiction. In California, questions of water use and water rights are matters for the State Water Resources Control Board (SWRCB). The Commission may nonetheless be concerned by the potential for impending decisions over surrender of the Project license and project decommissioning to affect Russian River water users who have long enjoyed the co-benefits of PG&E's operations. It need not be. Russian River water users have many options. What they – and all other stakeholders – need most is for the Commission to do its job straightforwardly, so that other agencies can do theirs, thus providing all stakeholders with the clarity they need to make wise investments.

The Commission should be aware that Sonoma Water continues to misrepresent the significance of Eel River diversions in water supplies to the Russian River and even areas south of that watershed. Sonoma Water implies that Eel River diversions are important in meeting those needs. In truth, even if 75,000 acre feet were available from the Eel, which it has not been in recent years, it would not go very far in supplying more than a half million people.

What is true is that Sonoma Water has come to rely on diversions from the Project to easily meet its minimum flow requirements below the Lake Mendocino reservoir without enforcing effective limits on upper Russian River diverters. As the last few years have shown, in the Russian River, more water is claimed than exists in dry years. Adjudication of the basin is necessary. Despite State Water Board orders to forbear from diversions in the summer of 2021, many Russian River irrigators continued to pump from the river. Neither state nor local governments have the will or the resources to enforce forbearance orders.

Under these circumstances, it is hardly surprising that Russian River water users are eager to maintain diversions from the Eel River, as long as they don't have to pay for them. In fact, Russian River users of Eel River water hold their fates in their own hands. The question they face is whether a continued Eel River diversion is a better investment than alternative

investments within their own watershed. Sonoma Water may hope to use the Commission's reluctance to act to help it secure a deal to keep Cape Horn dam in place. They would be well advised to seek more practical solutions.

If a diversion from the Eel River is continued, it will have to be via a no-dam diversion. The NOI parties' own analyses show no-dam diversions from the Eel to the Russian River are viable. See the discussions of three alternatives (Control Section with Pump Station, Roughened Channel with Gravity Supply, and Upstream Diversion with Gravity Supply) under Cape Horn Dam Removal in *Scott Dam and Cape Horn Dam Removal Alternatives.*[9] No-dam diversion alternatives will not only work, but would provide a more secure long term supply than the present Project.

Russian River interests who seek to maintain a diversion from the Eel River would be well advised to focus their efforts not on retaining Cape Horn dam, but on securing funds to construct and operate a no-dam diversion. To date, they have given the appearance that they wish to continue to enjoy the benefits of the Project but are unwilling to bear its costs. That is not the Commission's problem to solve, nor one it can.

Potter Valley Should Look to Its Own Backyard

No entity has benefited as much from the existence and operations of the Project over the last century than the Potter Valley Irrigation District (PVID). None has been more vocal in its insistence that any change to the Project would be catastrophic, continuing to act as if removal of even Scott dam, broadly understood to be inevitable, would be an existential threat to its future. But the NOI parties' own study, *Potter Valley Irrigation District Water Supply Alternatives*, shows more than a quarter of the water Potter Valley is importing from the Eel is wasted through unlined canals.[10] It further suggests that nearly three quarters of PVID's irrigation use is for pasture, which combines high water demand with low value. As well, the report explains that PVID and its members are eligible for a number of programs which support water conservation and storage.

The extraordinary benefits PVID has reaped from abundant free, and then merely very cheap, water diverted by PG&E's operations of the Project have continued to the present day, as growers reaped triple croppings of hay during historic drought. PVID may hope, as *Potter Valley Irrigation District Water Supply Alternatives* suggests, to "limit the overall capital cost of a PVID storage and delivery project to about $50 million and to limit the cost of water to no more than about $65/acre-feet." It is notable that earlier "alternatives investigated were ultimately thought to be too expensive for both the District and its customers" where "the cost of water per acre-foot was estimated to be above $100 and the total project capital cost was estimated to be between $59M and $71M." Clearly, PVID hopes both to continue its unsustainable ways and to set its own price to do so. Neither will happen.

---

[9] *Scott Dam and Cape Horn Dam Removal Alternatives*: Under **Potential Considerations for Potter Valley Project Future**, Phase 2 Feasibility Study at http://pottervalleyproject.org/information/

[10] *Potter Valley Irrigation District Water Supply Alternatives*: Under **Potential Considerations for Potter Valley Project Future**, Phase 2 Feasibility Study at http://pottervalleyproject.org/information/

PVID can and should end its ordinary waste of water, a use to which no valid right can exist under the California constitution. PVID's growers can continue to adjust their crops for best use of their water supplies. But PVID cannot compel PG&E to continue to operate the Project merely to provide it a water supply. Nor does the district have any right to force Eel River fisheries to continue to bear the burden of its bounty a moment longer than necessary to remove the Eel River dams.

Conclusion

In summary, the Commission should immediately conclude Project relicensing, and move with alacrity into the license surrender and decommissioning processes that will help resolve the future of the Eel River. The Project is failing in every dimension; delays will only amplify the harms its failure does.

Again, PG&E does not have an incidental take permit allowing it to take listed species at Cape Horn Dam and its Van Arsdale fish ladder. The current Biological Opinion, which does grant the rest of the project coverage for ESA related liabilities, expires April 14, 2022. After that point, the project may only be operated with interim measures sufficiently protective of listed species to ensure they will not be driven to extinction while the project that is killing them is removed.

It is urgent FERC and PG&E begin to define the interim measures under which the Project will continue to operate over the next few years. And it is long past time for Russian River water users to wake up to the fact that the Project is going away. If Russian River interests truly wish to continue to supplement their water supplies with water diverted from the Eel River, it must be done in a way that does not risk the future of Eel River fisheries.

Thank you for your attention to these important questions.

Sincerely yours,

/s/
Scott Greacen
Conservation Director
Friends of the Eel River