

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Pacific Gas and Electric Company

Project No. 606-027
Kilarc-Cow Creek Hydroelectric
Project

**COMMENTS OF TETRICK RANCH AND
EVERGREEN SHASTA POWER, LLC, ON
DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR THE KILARC-COW CREEK
HYDROELECTRIC PROJECT LICENSE
SURRENDER AND PROPOSED
DECOMMISSIONING**

Pursuant to the Commission’s Notices dated June 22, 2010,¹ and July 1, 2010,² and the Commission’s June 29, 2010 Federal Register Notice, 75 Fed. Reg. 37,429, Tetric Ranch and Evergreen Shasta Power, LLC (“ESP”), submit their Comments on the Draft Environmental Impact Statement (“DEIS”) prepared by the Commission Staff pursuant to the National Environmental Policy Act of 1969 (“NEPA”), 42 U.S.C. § 4321 *et seq.*, for the application for license surrender and proposed decommissioning of the Kilarc-Cow Creek Hydroelectric Project (“Project”), sought by Pacific Gas and Electric Company (“PG&E” or “Licensee”). Tetric Ranch and ESP are authorized to state that Shasta County, the Abbott Ditch Users, and Sierra Pacific Industries, Inc. (“SPI”), also support these comments.

¹ Notice of Availability of the Draft Environmental Impact Statement for the Kilarc-Cow Creek Hydroelectric Project and announcing intention to hold public meeting, eLibrary No. 20100622-3000.

² Notice of Extension for Filing Comments on Draft Environmental Impact Statement, eLibrary No. 20100701-3022.

ESP was created to have the capacity to own and operate Project No. 606.

Members of Evergreen Shasta include individuals associated with Tetrick Ranch and SPI. Tetrick Ranch timely moved to intervene in this proceeding on July 13, 2009; Evergreen Shasta is filing a separate Motion to Intervene in this proceeding, pursuant to Rule 380.10(a), 18 C.F.R. § 380.10(a), concurrently with these DEIS Comments. Tetrick Ranch and ESP reserve the right to supplement their comments after transcripts from the August 17, 2010 Public Meeting in Whitmore, California are available. In addition, Tetrick Ranch and ESP understand that Shasta County has submitted a Freedom of Information Act (“FOIA”) request to National Marine Fisheries Service (“NMFS”) requesting information on the scientific basis for NMFS’s position with respect to the proposed decommissioning. They therefore also reserve the right to supplement their comments, based on NMFS’s response to that FOIA request.

The DEIS is deeply troubling to the Project community. The DEIS recommends that the Commission authorize the removal of Project infrastructure that has been in place and relied upon by the citizens for over a century. The evidence shows that decommissioning would destroy valuable and unique features that contribute greatly to the well-being and survival of the rural community surrounding the project. It would interfere with long-held water rights and water delivery that predates PG&E’s ownership. And despite the overwhelming local opposition to the PG&E proposal for decommissioning Project No. 606 and despite a clearly viable alternative to decommissioning, the DEIS prepared by the Staff recommends the approval of both PG&E’s proposed surrender of its Project No. 606 license and its Proposed Decommissioning Plan, with only minor adjustments.

These Comments demonstrate that there is not substantial evidence to support the Staff's recommendations on decommissioning the Project. The DEIS falls far short of NEPA's requirements and is inadequate to assist the Commission in making the public interest determination required by the Federal Power Act. It also inadequate to assist the Commission in the important task of deciding how to condition PG&E's surrender of its license and whether a functioning hydroelectric project should be decommissioned. Among its substantial shortcomings, the DEIS does not adequately address important issues raised throughout the license surrender and decommissioning process that go to the heart of the survival and continuity of the community surrounding the Project. It will result in unnecessary hardship to individuals and local governmental entities. As such, the DEIS must be substantially revised and reworked based on the comments and materials constituting the entire record in this proceeding, in order to properly inform the Commission and the public of the impacts of the proposal, and so that the Commission can make a decision consistent with its statutory obligations.

In light of the insufficiencies of the DEIS, the circumstances of this proceeding, and the lack of a clear opportunity for the public to comment after August 25, these Comments also outline a framework that would enable the Commission to reach a decision that not only allows it to take appropriate action on PG&E's license surrender application but also would establish a basis for a comprehensive resolution, consistent with national objectives and the objectives of the Federal Power Act.

BACKGROUND

The 5 MW Kilarc-Cow Creek Hydroelectric Project was built in Shasta County, California over 100 years ago; PG&E acquired the Project some ten years later. It consists of two developments: (1) the Kilarc Development on Old Cow Creek and (2) the

Cow Creek Development on South Cow Creek. Built in 1907, the Project and its features have become integrated into the local environment and economy in a number of important ways.

The Cow Creek Development diverts water from South Cow Creek to the Cow Creek powerhouse, DEIS at 23, and the farming and ranching community in South Cow Creek valley relies on the Project water delivery facilities and the discharge from the Project tailrace to sustain its business operations and residences. Water discharged from the Cow Creek powerhouse waters Hooten Gulch and the Abbott Ditch, significant ecosystems that have also existed for nearly a century and rely on the continuous flows provided by the Cow Creek Development. DEIS at 103, 166. The Tetrick Ranch and the Abbott Ditch Users (“ADU”) rely on water discharged from the Cow Creek Development for agricultural and domestic consumptive uses, DEIS at 166; for more than a century, the ADU have relied exclusively on flows discharged from the Cow Creek Development to obtain the water for which they have consumptive rights under state law. The exempt Poulton Hydroelectric Project, FERC Project No. 6594 (referred to as the “Wild Oak Development” in PG&E’s surrender application), is also located in Hooten Gulch and is powered by the discharge from the Cow Creek powerhouse. DEIS at 37 n.16; Transcript of July 14, 2010 Public Hearing at 97 line 15 to 98 line 14 (hereinafter “Tr. page:line”, when referencing July 14, 2010 hearing.), eLibrary No. 20100714-4022.

Kilarc Lake, the forebay of the Kilarc Development, has long been and remains a popular recreational asset for the local community. Today, the site is available to day picnickers and regularly stocked with fish, including rainbow trout. DEIS at 78. Several generations of local residents have learned to fish at Kilarc Lake. The Lake provides a

site for fishing and other recreational pastimes accessible to the disabled, a rare feature in the area. *Id.* at 149-50. Kilarc Lake also serves as a source of water for firefighting, *id.* at 177, and may well provide invaluable and irreplaceable groundwater recharging to the many residences downgradient. *Id.* at 52.

The existing license for the Project, which was issued in 1980, expired on March 27, 2007; the Project has been operating under annual licenses since that time.³ In 2002, PG&E filed a Notice of Intent (“NOI”) to relicense the Project with the Commission. PG&E states, in its License Surrender Application⁴ at ES-1 to ES-2, that after the 2002 NOI was submitted, it decided, based on the anticipated costs of protection, mitigation, and enhancement (“PM&E”) measures that the resource agencies indicated they would require,⁵ that the additional costs under a new license would render the Project uneconomic to it.

In March 2005, PG&E and various resource agencies and non-governmental organizations signed the Kilarc-Cow Creek Project Agreement (“Agreement”) (LSA Attach. 1 of App. A). Under the Agreement, the resource agencies, including National Marine Fisheries Service (“NMFS”), U.S. Fish and Wildlife Service (“USFWS”), California Department of Fish and Game (“CDFG”), and California State Water Resources Control Board (“SWRCB”) committed, “to the extent permissible, [to] support [PG&E] in the necessary regulatory processes to decommission the Project, including

³ *Pac. Gas & Elec. Co.*, 10 FERC ¶ 62,112 (1980); DEIS at 1, 23.

⁴ License Surrender Application, Project No. 606 (Mar. 12, 2009), eLibrary No. 20090312-5107 (“LSA”).

⁵ PG&E and the resource agencies have not disclosed what specific measures were discussed, despite a FERC Staff request. See Response to FERC Additional Information Request in Letter Dated Nov. 13, 2009, Response to Question 4 at 6-7, Project No. 606 (Dec. 23, 2009), eLibrary No. 20091223-5141.

[PG&E]’s efforts before the [California Public Utilities Commission] to recover the costs [PG&E] incurs to decommission the Project.” Agreement § 3.7. While the Agreement explicitly states (§ 2.1) that the resource agencies retain their authority with respect to the Project and that the Agreement is not “a pre-decisional act or commitment by any of the governmental agencies as to the disposition of the Project assets or water rights,” the agencies, particularly NMFS and CDFG, though not the SWRCB, have taken the position in this proceeding that their decision was made in 2005, and that they are not required either to provide the basis for their decision for the record in this proceeding or to consider any new evidence that has been developed or come to light in the five and a half years since the Agreement was signed.

In March 2009, as agreed in the Kilarc-Cow Creek Project Agreement, PG&E filed its LSA for the Kilarc-Cow Creek Project.

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

I. PURPOSE OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

According to the FERC Staff, the DEIS “assesses the effects associated with the proposed surrender and decommissioning of the project, evaluates alternatives to PG&E’s Proposed Action, and makes recommendations to the Commission on whether or not to approve PG&E’s application, and if approved, recommends conditions to become part of any surrender order issued.” DEIS at 5. The purpose of the document under NEPA is to provide the Commission with complete and accurate information about the effects of approving PG&E’s LSA and the proposed decommissioning plan, and of reasonable alternatives. It is not an advocacy document. If Staff makes recommendations to the Commission, those recommendations must be consistent with

the Commission's public interest obligation.⁶ Once issued, the DEIS discloses the Staff's analysis to the public, and under the Commission rules applicable to this proceeding, parties may comment on the DEIS.

II. THE DEIS FAILS TO ADEQUATELY AND ACCURATELY ADDRESS IMPACTS TO FISHERIES OF THE VARIOUS ALTERNATIVES

The DEIS fails to adequately and accurately identify and evaluate the impacts of the Proposed Action on the fisheries and the aquatic environment. According to the DEIS, with respect to the Kilarc Development on Old Cow Creek:

The removal of project features and the cessation of diversions would return the bypassed reaches to more natural conditions of flow and sediment transport and deposition, which is expected to result in significant long-term benefits for aquatic species.

DEIS at 88; *see also id.* at xix. The DEIS also concludes with respect to the Cow Creek Development on South Cow Creek:

Significant long-term benefits would be associated with the restoration of full natural flows, allowing steelhead and fall-run Chinook salmon to migrate upstream through the bypass during their respective spawning run.

DEIS at 140-1. These two conclusions are crucial to the DEIS and the Commission Staff's recommended action, because these claimed fishery benefits (which also appear in the DEIS as benefits to Rare, Threatened and Endangered Fish Species, and as the reason why increased Water Flows are considered beneficial) are essentially the *only* alleged

⁶ Since Commission Staff is recommending a particular decision by the Commission, and the Commission's decision must comport with the FPA, Staff's recommendation should take the FPA requirements into account as well.

moderate or major beneficial impacts of the proposed decommissioning of the Kilarc and Cow Creek Developments. DEIS at 260-61.⁷

Both of these conclusions, however, are unsupported by record evidence, or by any analysis or evaluation contained in the DEIS. To the contrary, as discussed below, the better evidence shows that any fishery benefits from the Proposed Action would be minimal or non-existent, and that conclusion should be part of the environmental documentation for the proposed decommissioning.

A. *The Proposed Decommissioning Will Not Result in Any Significant Benefits for Anadromous Fish*

1. The Proposed Decommissioning of the Kilarc Development Will Not Expand Anadromous Fish Access or Habitat on Old Cow Creek

The DEIS appears to concede that removal of the Kilarc Development will not improve access to habitat upstream of the Kilarc diversion dam, because of the impassable barrier (unnamed falls OC-11) located within the Old Cow Creek bypassed reach. DEIS at 85. However, notwithstanding this conclusion, other parts of the DEIS include the contradictory statement that anadromous fish may be able to pass OC-11 under “extreme high flows.” *See, e.g.*, DEIS at 81, 99, 140, 143. There is no record evidence to support the latter assertion. To the contrary, there is broad agreement—including among all of the relevant resource agencies—that OC-11 is an impassable barrier to all anadromous salmonids.⁸ The proposed decommissioning of the Kilarc

⁷ The DEIS also claims that “[t]he purchase of California RPS-eligible renewable energy for replacement power at lower cost represents a moderate long-term benefit to PG&E’s customers.” DEIS at 201. As explained in Part IV.C, *infra*, this claimed benefit is spurious as well.

⁸ PG&E, Kilarc-Cow Creek Hydroelectric Project, FERC Project No. 606, Biological Evaluation 4-4 (2009) (“PG&E Biological Evaluation”).

Development would therefore open up at most 2.6 to 2.7 miles of the Kilarc bypass reach to anadromous fish.⁹

Whitmore Falls, an existing natural waterfall over 9.5 feet high (Carey Aff. ¶ 6)¹⁰ located 8.8 to 9.3 miles downstream from the Kilarc powerhouse¹¹ (DEIS at 80), however, will prevent even that very minor potential benefit from occurring. As explained in the attached affidavit of Robert Carey, a Certified Wildlife Biologist with more than 17 years of experience working in northeastern California, anadromous fish have never been observed above Whitmore Falls on Old Cow Creek. Carey Aff. ¶ 6, The fact that steelhead have never been seen above Whitmore Falls is persuasive evidence that steelhead in fact do not migrate above Whitmore Falls.¹² There is an approximately 9-mile stretch of river upstream of Whitmore Falls to the Kilarc powerhouse. There are several residences near the powerhouse, and the entire stretch of river is used by many recreational fishermen, hikers, and equestrians. The river can be viewed from the road in some places. In short, this is not an isolated or inaccessible area; there are many potential eyewitnesses. Carey Aff. ¶ 8. Further, almost 90% of steelhead die after spawning. *Id.* ¶ 5; Shapovalov and Taft 1954.¹³ The carcasses of post-spawning steelhead are white, Carey Aff. ¶ 8, and visible enough to be counted from airplanes. The fact that there is no

⁹ The DEIS, at 81, describes the distance as 2.7 miles; the GIS analysis attached as Ex. 3 to the Affidavit of Robert Carey, Attach. A hereto (hereafter “Carey Aff.”), shows that the distance is 2.6 miles.

¹⁰ The DEIS estimates the height of Whitmore Falls as 12 to 14 feet.

¹¹ The DEIS, at 80, states that the distance from Whitmore Falls to the Kilarc powerhouse is 9.3 miles; the GIS analysis, Exh. 3 to Mr. Carey’s affidavit, shows that it is 8.8 miles.

¹² It is worth noting that local fishermen have, based on their own observations and long experience in the area, testified that fish simply cannot make the required leap. Tr. at 25:2-7; 53-54; 63-64.

¹³ L. Shapovalov & A.C. Taft, *The Life Histories of the Steelhead Rainbow Trout (*Salmo gairdneri*) and Silver Salmon (*Oncorhynchus Kisutch*) with Special Reference to Waddell Creek, California and Recommendations Regarding Their Management*, 98 Cal. Dep’t of Fish and Game Fish Bulletin 1 (1954).

record of anyone seeing a steelhead, alive or dead, above Whitmore Falls, means that it is highly unlikely that steelhead are migrating above Whitmore Falls to spawn.

In fact, all of the resource agencies considered the waterfall to be a complete barrier to upstream migration until 2002-2003. DEIS at 80; PG&E Biological Evaluation at 4-4. At that time, however, three staff members from the CDFG visually assessed Whitmore Falls and concluded that it might be possible for steelhead to ascend the waterfall at some flows. DEIS at 80; Carey Aff. ¶ 6 and attached as Ex. 2. That 2002 CDFG reassessment, however, is based on incorrect assumptions about the ability of anadromous salmonids to leap over natural barriers. Specifically, CDFG appears to have based its reassessment of Whitmore Falls on a 1985 study conducted by Powers and Orsborn¹⁴ that estimated the maximum vertical height that a steelhead in peak physical condition could leap as just under 11 feet. Carey Aff. ¶ 7.

In that study, however, Powers and Orsborn expressly recognized that the vertical leaping capabilities of fish are in part determined by their physical condition. As anadromous fish proceed upstream, their condition deteriorates because they stop feeding and must spend large amounts of energy migrating. The model developed by Powers and Orsborn in their 1985 study therefore calculates the maximum distance a fish can leap, using an equation that includes an assigned coefficient of fish condition (C_{fc}). That coefficient of fish condition is based on the amount of time the fish has been in fresh

¹⁴ Patrick D. Powers & John F. Orsborn, Albrook Hydraulics Lab., Dep't of Civil & Envtl. Eng'g, Wash. State Univ., *New Concepts in Fish Ladder Design: An Analysis of Barriers to Upstream Fish Migration: An Investigation of the Physical and Biological Conditions Affecting Fish Passage Success at Culverts and Waterfalls* (1985), <http://pisces.bpa.gov/release/documents/documentviewer.aspx?doc=36523-1> ("Powers & Orsborn").

water, the distance the fish has migrated, how close the fish is to spawning condition, and distance to the spawning grounds. Carey Aff. ¶ 7.

Whitmore Falls is located more than 250 miles upstream from the ocean,¹⁵ and migrating fish at this higher elevation have been in fresh water for an extended time. It is clear in the case of Whitmore Falls that fish at this location would likely have a C_{fc} value of significantly less than 1.00 (“Bright; fresh out of salt water or still a long distance from spawning grounds; spawning colors not yet developed” (Powers & Orsborn at 12)), and probably less than 0.75 (“Good; in the river for a short time; spawning colors apparent but not fully developed; still migrating upstream” (*id.*)). Carey Aff. ¶ 7.

Based on the Powers & Orsborn model, the maximum leaping height for steelhead with a C_{fc} of 0.75 approaches 6 feet. The maximum height a steelhead with a C_{fc} of 0.50 (Poor; in the river for a long time; full spawning colors developed and fully mature; very close to spawning grounds (Powers & Orsborn at 12)) can leap approaches only 3 feet. The extensive stocking of steelhead in the Cow Creek watershed, DEIS at 78, has likely further reduced the leaping capability of steelhead in Old Cow Creek, because hatchery steelhead cannot jump as high as wild steelhead. Carey Aff. ¶ 7.

The DEIS goes on to state, based on the assertions of CDFG and NMFS, that fall-run Chinook salmon may also be able to migrate past Whitmore Falls. DEIS at 80-81; *see also id.* at 136-37. The maximum heights that a Chinook salmon could leap are even lower than those of steelhead. Carey Aff. ¶ 7. Even in top condition, a Chinook salmon cannot leap more than 8 feet; salmon that have swum the more than 250 miles from the

¹⁵ At the August 17, 2010 public meeting in Whitmore, Larry Farrell noted that he had canoed from Redding to the Delta and measured the distance as 387 miles. Our assumption of 250 miles is therefore extremely conservative; the fish are likely in worse condition than we estimate.

ocean and are ready to spawn would be able to leap less than half that vertical distance.

Id.; Powers & Orsborn at 15. The DEIS's references to the possibility of Chinook salmon migrating past Whitmore Falls are unsupported and incorrect.

Whitmore Falls exceeds 9.5 feet in height, and as such it is an impassable barrier for steelhead, let alone Chinook salmon. Carey Aff. ¶ 7. It would be a challenge even if the steelhead were fresh out of salt water. These significantly lower estimates for the maximum leaping height of steelhead and salmon at Whitmore Falls are also much more consistent with the values used by the State of California resource agencies to evaluate other barriers in the region when state-owned hydropower facilities are at issue. In 2004, for example, the California Department of Water Resources, the licensee for the Oroville Project, FERC No. 2100, prepared a report in connection with its proposed relicensing of that project, which stated that 6.1 feet is the maximum leap height for steelhead in that location.¹⁶ Assuming a much higher vertical leap ability for steelhead—let alone Chinook salmon—at Whitmore Falls makes no sense, particularly because the Oroville Project is located on another Central Valley tributary (the Feather River) over 100 miles downstream from Whitmore Falls and therefore much closer to the ocean.

Other conditions at Whitmore Falls further decrease the likelihood that anadromous fish can pass that barrier. According to Powers and Orsborn, turbulence and whitewater both reduce a fish's ability to leap. Turbulence tends to disorient fish and causes them to leap in directions that are not the easiest route. Whitewater entrains

¹⁶ Cal. Res. Agency, Dep't of Water Res., Oroville Facilities Relicensing FERC Project No. 2100, SP-F15 Task 1, SP-F21 Task 1, *Matrix of Life History and Habitat Requirements for Feather River Fish Species: Steelhead* 41-45 (2004), http://www.water.ca.gov/orovillerelicensing/docs/wg_study_reports_and_docs/EWG/040528a/04-28-04_fish_steelehead.pdf.

bubbles, reducing the water's density and thus the fishes' ability to propel themselves through a less viscous medium. Carey Aff. ¶ 7. Therefore, even if the vertical elevation of the Falls were reduced in high flow conditions due to a greater volume of water, the hydraulic forces associated with those increased flows (greater turbulence, whitewater, and velocity) would act to keep fish from migrating above Whitmore Falls.

The DEIS's finding (at 80-81) that Whitmore Falls can be ascended by steelhead and Chinook salmon is therefore contrary to science and should be rejected in subsequent environmental documentation. In the absence of any sightings of Chinook salmon and steelhead in the reach between Whitmore Falls and the Kilarc Development (itself strong evidence that such passage is impossible), it may be necessary to rely on theoretical models of the leaping ability of anadromous salmonids. The resource agencies and the DEIS, however, cannot pick and choose only the elements of those models that they happen to like—*i.e.*, the maximum vertical leap estimates for fish in top condition—while ignoring the parts of those models that tailor the results to the specific conditions present at Whitmore Falls. Ultimately, reason, expert advice, and available facts strongly support the conclusion that there are few, if any, significant benefits for anadromous fish that can result from decommissioning the Kilarc Development.

2. The Proposed Decommissioning of the Cow Creek Development Will Not Significantly Expand Anadromous Fish Access or Habitat on South Cow Creek

The proposed decommissioning will not expand anadromous fish access or habitat on South Cow Creek because steelhead can already access areas above the Cow Creek Development through the bypass reach, while Chinook salmon are very unlikely to be able to navigate Wagoner Canyon even at high flows. As Mr. Carey explains,

There is a fish ladder at the existing PG&E diversion dam. During the 11 surveys conducted between 2002 and 2004, we observed only 2 large rainbow trout (approximately 14 to 20 inches long, assumed to be steelhead) in South Cow Creek above the PG&E diversion and 3 redds (nest sites in gravel) that were consistent with the size of redds constructed by steelhead. While these small numbers and infrequent observations indicate that steelhead abundance in South Cow Creek is low, they also provide evidence that fish can and do migrate above the existing PG&E facilities in South Cow Creek. Thus, removing these facilities does not “open up habitat” that is currently inaccessible to steelhead.

Carey Aff. ¶ 10. Wagoner Canyon is quite steep (4.9 to 8.6 percent gradient, DEIS at 81) and contains natural falls up to six feet high (*id.* at 84), well above the leaping ability of Chinook salmon in less than top condition (Carey Aff. ¶ 7; Powers & Orsborn at 15). The DEIS in fact concedes that “only a few individual Chinook salmon make it past the canyon.” DEIS at 137.

To the best of my knowledge there are no substantiated records of salmon above the base of Wagoner Canyon although there was an alleged salmon carcass reported from Mill Creek near the PG&E diversion several years ago. This report was never verified and is not contained in any State databases or reports and has not been considered valid by local biologists.

Carey Aff. ¶ 3.

The DEIS itself repeatedly acknowledges that: (1) steelhead passage can and does occur through the bypass reach of the Cow Creek Development; and (2) the natural high flows of South Cow Creek are relatively unaffected by the maintenance and operation of the Cow Creek Development during the late fall through early spring when steelhead and (to the extent they are present above the base of Wagoner Canyon) late fall-run Chinook salmon are present. A review of the data in Tables 11 and 12 of the DEIS (at 59-60) confirms the latter conclusion. Although destruction of the Cow Creek

Development would increase summertime flows in the South Cow Creek bypass reach by a significant percentage (although by only a small volume, since natural South Cow Creek flows are so low in the summer), that period of low flows does not correspond to the times when anadromous salmonids would be present within this portion of the stream system. In contrast, there is ample water for both power generation and fish passage during fall, winter, and spring, when migrating steelhead and Chinook salmon may be present. The DEIS in fact concedes that “higher flows which exist under license conditions from November through late spring would support migration of steelhead and late-fall Chinook salmon through [Wagoner Canyon] to upstream habitat under the No-Action Alternative.” DEIS at 146.

Given that the No-Action Alternative referenced in the passage just quoted reflects conditions under the present annual license terms, the record evidence simply does not support a conclusion that the proposed decommissioning of the Cow Creek Development would have *any* significant beneficial impact on anadromous fish either with respect to fish passage through the South Cow Creek bypass reach, or with respect to habitat or access to areas above the Cow Creek Development diversion dam. Commission Staff’s subsequent environmental documentation should be corrected to eliminate this unsupported and counter-factual conclusion.

3. The DEIS’s Conclusion That Releases of Gravel Will Provide Long-Term Benefits Is Unsupported by the Evidence and in Any Event Can Be Duplicated by Alternatives to the Proposed Decommissioning

Because the proposed decommissioning will have virtually no effect on fish passage for anadromous salmonids, there is only one remaining alleged beneficial impact for anadromous fish that is identified by the DEIS: movement of gravel currently trapped

behind the existing project diversions, which the DEIS states would enhance downstream spawning habitat. According to the DEIS:

Short- and long-term benefits would be associated with the release of native material stored behind the dam, the bulk of which is of a size range that would enhance downstream spawning habitat. The release of gravels behind the Kilarc main canal diversion dam would be beneficial in the long-term as a source of spawning gravel for resident salmonids. These gravels would move gradually downstream, maintaining existing spawning areas and potentially creating new spawning habitat.

DEIS at 88-89. For the Cow Creek Development, the DEIS states that

[s]hort- and long-term benefits would be associated with the release of native material stored behind the dam, given that the bulk of this material is likely to enhance substrate in downstream spawning areas. The release of gravels accumulated behind the Cow Creek main canal diversion dam would be beneficial as a source of spawning gravel for resident salmonids. This material would move gradually downstream, maintaining existing spawning areas and potentially creating new spawning habitat.

DEIS at 91, 93.

These statements in the DEIS are ambiguous as to whether this impact would benefit anadromous fish, resident fish, or both. However, even assuming for the sake of argument that the DEIS intends to state that anadromous fish would benefit from the gradual movement of gravels currently trapped behind the project dams, there is no evidence currently in the record to support that assertion, or to support any DEIS conclusion that this effect is significant and long-term.¹⁷ In the first place, while

¹⁷ Tetric Ranch and ESP remain concerned, however, that the release of sediments currently trapped behind the 100-year-old project diversions will release toxic materials into the Cow Creek stream system that may do significant damage. This potential arises from prior mining and smelting operations in or near these streams in the past, DEIS at 230, and was not addressed in the Proposed Decommissioning Plan, though the high copper concentrations in the accumulated sediment are discussed in Appendix B to the LSA, which provided a Geomorphic Assessment. Technical Mem., N. State Res. Inc., Kilarc Diversion

augmentation of gravel is a tool that can be used for fisheries management, it involves significantly more than simply depositing a quantity of gravel at one point in a river. Although destruction of the Kilarc and Cow Creek Developments would release a substantial amount of gravel on a one-time basis, there is no reason to assume that the amount of gravel in the Cow Creek System will be significantly different in the long-run. For example, since the diversions are 100 years old and regularly overtop, gravel transport in the Cow Creek System may already have reached a stable equilibrium that is similar to the level of gravel transport that would have existed in the absence of the Project. There is also no evidence that areas above the Cow Creek and Kilarc diversion dams are the only source of gravel for the Cow Creek System or a significant one, or that the incremental addition of gravel that would have otherwise been trapped behind the diversion dams will significantly change downstream spawning habitat over the long-term. For example, as Mr. Carey notes, the geology of the Old Cow Creek drainage is comprised of finer material that limits gravel within the stream channel. Carey Aff. ¶ 5.

The addition of gravel would only be a benefit if gravel were a limiting factor in anadromous fisheries in the relevant stretches of Old Cow and South Cow Creeks, and there is no evidence that this is the case. While the PG&E Biological Evaluation, at 2-30, refers to “gravel mining” as a limiting factor in the Cow Creek Watershed,¹⁸ no study of the need for more gravel in the project area has been cited; no recommendations for

Dam Geomorphic Assessment (May 20, 2008), eLibrary No. 20090312-5129; *see also* LSA App. M at 27.

¹⁸ PG&E cites a document, CH2MHill, *Central Valley Project Improvement Act Tributary Prod. Enhancement Report* 4-7 (1998), available at http://www.srwp.org/documents/watershed/all/restfish/CVPIA_Trib_Production_Enhancement_Report.pdf, that contains the same assertion. The recommendations for Cow Creek, however, do not include gravel augmentation, although the recommendations for other streams do. *Id.* at 5-10 to 5-11.

gravel augmentation have been cited; we are aware of no gravel mining in the Cow Creek Watershed; and gravel does not appear to be a limiting factor in the project area. South Cow Creek downstream of the diversion, in particular, has abundant gravel already.

Neither the extent, magnitude, nor timing of the alleged beneficial impact of the gravel has been identified or evaluated by the DEIS. Particularly here, where the proposed decommissioning would have significant and long-term negative impacts on the local community, recreation, and 100-year-old ecosystems created and maintained by the Project facilities, the DEIS's failure to provide a detailed fact-based analysis of the sole beneficial fishery impact claimed deprives the Commission of the basic information it needs to make the public-interest determination required in this proceeding.

In addition, removing a functioning hydropower project in order to obtain gravel is unreasonable; there are far better ways to add gravel to the stream, such as dredging the gravel that is currently behind the dam or obtaining (uncontaminated) gravel from another source. The DEIS provides no evidence that any benefit from the release of gravel from behind the diversion dams would be greater than the benefit of an active management program, such as the one proposed in the Community Alternative submitted by Tetrick Ranch, Shasta County, Sierra Pacific Industries, and Evergreen Shasta Power in January 2010.¹⁹ Indeed, to the extent that releasing gravel into the waterways would significantly benefit the anadromous fishery, such releases could be funded by the Habitat Restoration/Ditch Maintenance fund expressly proposed as part of the Community Alternative.

¹⁹ Offer of Settlement of Tetrick Ranch, Abbott Ditch Users, Shasta County, Sierra Pacific Industries, Inc., and Evergreen Shasta Power, LLC (Jan. 22, 2010), eLibrary No. 20100122-5126 (“Community Alternative”).

B. The Proposed Decommissioning Destroys, Rather Than Enhances, Habitat for Resident Fish

In addition to providing no significant benefits for anadromous fish, the proposed decommissioning has significant *negative* impacts for resident fish.

The DEIS states that removal of the Project diversions “is expected . . . to increas[e] the amount and quality of habitat available to resident and migratory fish.” DEIS at 85 (discussing the Kilarc Development; *see also id.* at 90, with respect to the Cow Creek Development, “it is reasonable to expect that increases in flow would enhance conditions for resident and migratory fish throughout the bypassed reach.”). To the extent that the goal is to improve habitat for resident fish and for other organisms, however, decommissioning the Project would be counterproductive. The existing reservoirs, conveyance canals, and Hooten Gulch have developed habitat value for the past century. Dewatering or filling them would eliminate this value, without a compensatory increase in other habitat. Removing the diversions would increase flow in at most 3.7 miles of South Cow Creek and 4.2 miles of Old Cow Creek, whereas it would result in the loss of about 4.6 acres of open water (4.3 acres at Kilarc and .3 acres at the Cow Creek Development) and about 9.4 miles of channel (6.6 miles of canal, two-thirds of a mile of Hooten Gulch, and about three miles of the Abbott ditch). This would represent a net loss not only of aquatic habitat but also of wetlands. DEIS at 106.

The DEIS suggests that the habitat in the canals is not as valuable as habitat in the bypassed reaches. DEIS at 62. While the canals might not provide spawning habitat equal to what the resource agencies think might eventually develop in the bypass reaches, neither the resource agencies nor the DEIS provide any evidence assuring that high quality spawning habitat will *ever* develop in the bypass reach. In addition, many species

of vertebrates and invertebrates, as well as plants, rely on the available water in the canals. Spawning resident salmonids in Old Cow Creek (*i.e.*, rainbow trout) and resident and anadromous salmonids on South Cow Creek are not the only interest at play in this proceeding, even just in terms of available habitat. The canals and reservoirs have developed functional habitat supporting diverse terrestrial and aquatic species, including northwestern pond turtles, a California species of concern that requires open water. Carey Aff. ¶ 13. Furthermore, as the DEIS recognizes, at 92, Hooten Gulch is valuable habitat supporting “a diverse aquatic community including the seasonal occurrence of adult steelhead trout.” The DEIS does not even acknowledge the loss of this habitat in the “Our Analysis” section. *Id.* at 92-93.

In short, the canals provide real habitat for real wildlife now; that wildlife will certainly be affected or disappear if the Project is decommissioned. The canals, forebays, and Hooten Gulch are established, mature habitat that cannot be immediately – if ever – replaced; decommissioning would provide only a chance of improved habitat sometime in the future. The Commission should not destroy this existing habitat, as well as causing all of the other guaranteed adverse impacts that will result from decommissioning, to gamble on the possibility that other habitat might be improved. Even in the best case scenario, that gained habitat must be weighed against the loss of these well-established animal and plant²⁰ communities.

²⁰ Staff acknowledges the loss of wetlands and vegetation, but relies on the expectation that “natural pioneering” efforts by the existing vegetation species “would re-establish into natural native woodlands.” DEIS at 106-107. There is no evaluation of the desirability of the woodlands over wetlands, and the DEIS characterizes its entire discussion of this and other losses to the “vegetated communities” as “minor adverse impacts.” DEIS at 109, 112 (discussing Kilarc and Cow Creek, respectively).

C. *The Evidentiary Defects of the DEIS Cannot Be Cured by Relying on the Resource Agencies’ Unsupported Position Statements as to the Fishery Benefits of Decommissioning*

The DEIS must be based on scientific evidence and analysis, and the Commission Staff cannot substitute the resource agencies’ unsupported position statements on the alleged fishery benefits of decommissioning for the missing evidence. As discussed above in Part II.A.1 and in Mr. Carey’s attached affidavit (¶¶ 7-9), the sole piece of evidence relied upon by the resource agencies for the proposition that anadromous salmonids can leap Whitmore Falls on Old Cow Creek—a 2002 CDFG memo that asserts, based on Powers & Orsborn (1985), that steelhead can leap the Falls—fails to properly apply the cited model, which actually *confirms* that steelhead cannot clear Whitmore Falls. Yet, this assumption is absolutely critical to the DEIS’s conclusion that there are fish benefits to decommissioning.

The resource agencies’ claimed anadromous fish benefits have become broader and increasingly implausible. While in 2002 CDFG’s flawed memo stated that “steelhead may be able to ascend the upper falls [of Whitmore]” (Carey Aff. ¶ 8), CDFG’s DEIS comments now go even further, claiming that “[s]teelhead can get above Whitmore Falls during high flow events in the winter and spring and during most years” (CDFG DEIS Comments at 1)²¹—a position unsupported by any additional evidence and even more difficult to reconcile with the fact that no steelhead have ever been observed in the almost 10-mile reach from Whitmore Falls to the Kilarc Project. According to PG&E’s LSA, CDFG in 2008 likewise claimed that anadromous Chinook salmon can

²¹ Comments on Draft Environmental Impact Statement for Hydropower License Surrender for Kilarc-Cow Creek Project, Project No. 606 (Aug. 12, 2010), eLibrary No. 20100820-0005 (“CDFG DEIS Comments”).

also leap Whitmore Falls (LSA at E.2-42, *citing* Myers; *see also* DEIS at 80), an even more implausible assertion. Tetric Ranch and ESP do not attack the earnestness, enthusiasm, or good intentions of the resource agencies as they seek to protect California’s fisheries. However, the Commission must rely on facts and scientific evidence in making its decision.

Since the DEIS refers to no scientific or expert support for the assertions provided by the resource agencies, including any credible evidence that the target species can reach the Old Cow Creek Project area, it falls back on simply adopting the resource agencies’ assertions. *See, e.g.*, DEIS at 94 (“*The resource agencies have determined* that passage of steelhead at Whitmore Falls is possible at high flow winter conditions.” (emphasis added)); *id.* at 98-99 (“Whitmore Falls below the Kilarc tailrace is *considered by the resource agencies* to be passable for anadromous salmonids (steelhead in particular) under winter high flow conditions in most years” (emphasis added)). This is not legally sufficient to qualify as ‘substantial evidence,’ especially in light of the record evidence in this proceeding to the contrary.

While the Commission may use information submitted by others, it has a duty to verify that information independently. “[A]n agency may not reflexively rubber stamp a statement prepared by others.” *Save Our Wetlands, Inc. v. Sands*, 711 F.2d 634, 642 (5th Cir. 1983). Council of Environmental Quality (“CEQ”) regulations state clearly that, “[i]f an agency requires an applicant to submit environmental information for possible use by the agency in preparing an environmental impact statement,” then “[t]he agency shall independently evaluate the information submitted and shall be responsible for its accuracy.” 40 C.F.R. § 1506.5(a) (emphasis added). NEPA “require[s] that the agency

verify the accuracy of information supplied by an applicant.” *Utahns v. U.S. D.O.T.*, 305 F.3d 1152, 1165 (10th Cir. 2002). The Commission’s responsibility applies no less when outside information is provided by another agency rather than by the applicant. *See, e.g., Silentman v. FPC*, 566 F.2d 237, 240 (D.C. Cir. 1977). The Commission is the decisional authority, and the Commission Staff must therefore prepare an EIS that meets the necessary standards.

Where, as here, an entity, including an agency, submits assertions essentially unsupported by data or analysis, and declines to provide reasonable support, the Commission Staff cannot verify those assertions (without undertaking its own studies, which Staff has not proposed to do). Staff thus may not rely on such assertions. This is especially true in light of the fact that the key assertions made by the resource agencies in this case are demonstrably incorrect, as discussed *supra* and evidenced by the record in this proceeding.

1. NMFS’s Comments Regarding Its Central Valley Recovery Plan Should Be Given No Weight

The DEIS, appropriately, does not explicitly rely on NMFS’s “Public Draft Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter-Run Chinook Salmon and Central Valley Spring-Run Chinook Salmon and the Distinct Population Segment of Central Valley Steelhead” (“Draft Recovery Plan” or “Plan”),²²

²² NMFS, “Public Draft Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter-Run Chinook Salmon and Central Valley Spring-Run Chinook Salmon and the Distinct Population Segment of Central Valley Steelhead” (Oct. 2009), available at http://swr.nmfs.noaa.gov/recovery/cent_val/Public_Draft_Recovery_Plan.pdf.

which was cited in NMFS's May 7 Letter in this proceeding.²³ Because NMFS's May 7 Letter relies on that Draft Recovery Plan to bolster its anadromous fishery claims in this proceeding, however, we address NMFS's claims with respect to the Plan here.

In the first place the Draft Recovery Plan is a policy document, not a decisional or pre-decisional document subject to scrutiny under the same evidentiary standards as the Commission's decision in this proceeding and the Commission Staff's EIS.²⁴ Moreover, that policy document is only as good as its inputs. In the absence of scientific evidence, the Draft Recovery Plan's watershed descriptions and goals neither establish nor disprove any fact germane to this case.

NMFS's May 7 Letter describes the Draft Recovery Plan as "the guiding document for recovering federally listed salmonid species under the Endangered Species Act." May 7 Letter at 3. As is evident from the document's full title, however, the Draft Recovery Plan specifically addresses spring-run Chinook salmon, winter-run Chinook salmon, and steelhead, not all federally listed salmonids. There has been no assertion that

²³ Additional Comments and Response of Evergreen Shasta's Offer of Settlement Regarding PG&E's Kilarc-Cow Creek Hydroelectric Project, Project No. 606 (May 7, 2010) eLibrary No. 20100510-5079 ("May 7 Letter").

²⁴ Unlike agency materials subject to, for example, adjudication or notice-and-comment rulemaking, policy statements are "entitled to respect" by the courts, "but only to the extent that those interpretations have the 'power to persuade.'" *Christensen v. Harris County*, 529 U.S. 576, 587 (2000) (citing *Skidmore v. Swift*, 323 U.S. 134, 140 (1944)).

It is also worth noting that the Draft Recovery Plan contained an explicit waiver stating that Recovery Plans "represent the official position of NMFS only after they have been signed by the Assistant Administrator." In a letter to Richard L. Wantuck, NMFS, dated June 24, 2010, and included as Attachment A to the Response of Tetric Ranch to the May 7 Letter, counsel for Tetric Ranch asked, at 3, whether the Draft Plans had been executed by the Assistant Administrator. No response has yet been received from NMFS. The waiver also states that "Recovery Plans are guidance and planning documents only; identification of an action to be implemented by any public or private party does not create a legal obligation beyond existing legal requirements."

spring-run or winter-run Chinook salmon are a concern in the Project area,²⁵ and the Draft Recovery Plan does not address fall-run Chinook salmon. NMFS then asserts that “[r]egarding the biological value of the Cow Creek salmonid populations, the Draft Recovery Plan lists the Cow Creek watershed as a Core 2 population area.” *Id.* In fact, however, the Plan lists the Cow Creek watershed as Core 2 only for steelhead. Draft Recovery Plan at 65, Table 3-1. NMFS’s references to the Draft Recovery Plan’s recognition of Cow Creek’s importance to “salmonids” are thus disingenuous at best; the document is on its face relevant only to steelhead.

The Draft Recovery Plan discusses steelhead on South Cow Creek—and concedes that steelhead can and do already migrate upstream of the Cow Creek Development diversion—not on Old Cow Creek above Whitmore Falls. Draft Recovery Plan at 128-29 and App. A at 149.

That the Plan, which was released by NMFS in October 2009, states that a “hydropower project has filed decommission plans, which will return flows to their natural state, as well as remove passage impediments and entrainment concerns” (Draft Recovery Plan App. A at 144; *see also* May 7 Letter at 4), is neither surprising nor persuasive; NMFS has already made clear in this proceeding that it has believed since well before October 2009 that the Kilarc-Cow Creek Project should be decommissioned.

Accordingly, NMFS’s May 7, 2010 letter is inaccurate, and the Draft Recovery Plan is largely irrelevant to this proceeding and provides no new information; both should therefore be disregarded. *See also* Response of Tetric Ranch to Letter of NMFS (July

²⁵ Based on the maps in the Draft Recovery Plan, it does not appear that NMFS asserts there that winter-run or spring-run Chinook salmon occur as far upstream as the Project area. Plan at 11, 27.

24, 2010), eLibrary No. 20100624-5128 (providing additional reasons why the Draft Recovery Plan should not be applied to this particular watershed and area).²⁶

D. *The DEIS Improperly Assumes that the Resource Agencies Can and Will Set Minimum Flows for the Kilarc-Cow Creek Project*

Two key but erroneous assumptions made by the DEIS critically undermine its assessments. The DEIS assumes throughout either that the resource agencies that are strongly in favor of decommissioning are correct about the beneficial impacts of increased flows on the restoration of anadromous fish, or that the resource agencies have the authority to set minimum flows. For example, in describing the effects on water quantity of Action Alternative 1, the DEIS states: “[f]or the purpose of this assessment we have assumed that increased flows to the bypassed reach are a priority. Therefore, for this analysis we assume a minimum flow to the bypassed reach of 20 cfs,” and the assessment is premised on the “goal of maximizing flow in the bypassed reach.” DEIS at 62.

Similarly, in attempting to justify why Commission Staff did not consider the Community Alternative, the DEIS reports that NMFS states it “*remain[s] committed to the existing agreement previously signed by PG&E and the resource agencies*, and that decommissioning and restoration remains the most viable alternative for maximizing benefits for anadromous fish.” DEIS at 34. The discussion of the environmental effects of the Proposed Action and alternatives contains many more such instances. For example, in the discussion of the Proposed Action’s effect on fisheries, the DEIS lays out

²⁶ It should also be noted that Tetrick Ranch attempted to follow up on NMFS’s assertions in its May 7, 2010 letter by filing a FOIA request, dated June 24, 2010, which is a part of this record. NMFS responded with a requirement that Tetrick Ranch pay \$7,000 in advance for it to respond. As a result, Tetrick Ranch did not pursue its request further.

commenters' concern that the natural barriers on Old Cow Creek make the presence or absence of the Kilarc Development diversion dam essentially irrelevant to the ability of fish to migrate through and past the project area, and then states, apparently in response to those concerns: "However, NMFS and Cal Fish and Game reiterated following the EIS scoping meeting and site visits ... their commitment to the terms of the 2005 agreement and to management of Old Cow Creek above Whitmore Falls for anadromous salmonid recovery." DEIS at 86. Reiteration of NMFS's and CDFG's positions is no substitute for consideration in the DEIS of legitimate, well-supported comments and facts about the impossibility of fish migration past Whitmore Falls.

Likewise, in describing the effects of Action Alternative 1, the DEIS states: "It is clear that the resource agencies would, at a minimum, require a significant (although unspecified) increase in minimum flows through the bypassed reach to support restoration and enhancement of anadromous salmonids if diversions at the Kilarc main canal diversion dam were to continue." DEIS at 93.²⁷ The Commission, however—not the resource agencies—has the authority and obligation to establish the minimum flows required of any licensed hydroelectric project. Particularly in the circumstances of this case, where no significant benefits to anadromous fish have been demonstrated from increasing flows to the bypass reach, it is improper and incorrect for the DEIS to assume

²⁷ It is unclear what legal basis Commission Staff thinks that the resource agencies in question (NMFS and CDFG, neither of which is responsible for issuing a Clean Water Act Water Quality Certification) would have for requiring minimum flows at a FERC-licensed project. There is also a seeming misperception that minimum flows can be mandated even where there is no available water. In the summertime, for example, South Cow Creek does not, at times, provide enough water flow to support the ADU's allocated water rights. DEIS at 59, Table 11 (minimum flow is under 13 cfs from July-August.). Assuming that the river can simply produce more water because of a higher mandated minimum flow is not reasonable.

that the Commission would simply rubber-stamp the resource agencies’ requested, but unsupported, minimum flows.

The Commission, not the resource agencies, has the authority and the responsibility to determine what is in the public interest, including weighing the evidence on how much increased flows or decommissioning would benefit fisheries, and then performing the difficult balancing of benefits to fish against the many other interests the Commission must consider. NEPA review “must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made.” *Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000). Because of this, the Ninth Circuit ruled in *Metcalf* that the Federal Defendants’ NEPA review of whaling by the Makah Indian Tribe came too late; the Defendants properly issued a Finding of No Significant Impact (“FONSI”), “but they did so after already having signed two agreements binding them to support the Tribe’s proposal.” *Id.* at 1143. The Commission did not sign the 2005 Kilarc-Cow Creek Project Agreement between PG&E and the resource agencies, but because the DEIS treats that agreement and the positions of its signatories as driving the Commission’s decommissioning decision, the DEIS is as flawed as the FONSI in *Metcalf*.

Commission Staff is performing this analysis in order to provide information to the Commission. By deferring to other agencies—which have not performed a similar NEPA analysis for this project and which have neither jurisdiction over minimum flows nor a responsibility to protect the public interest—Commission Staff would purport to delegate the Commission’s authority. Such a delegation is impermissible. It also cannot be termed harmless. It is not NMFS’ *trust* responsibility that should be allowed to prevail

in the DEIS evaluation, but the Commission’s *public interest* responsibility, a markedly different standard.²⁸ See discussion in Section VIII, *infra*.

III. THE DEIS FAILS TO ADEQUATELY CONSIDER THE ADVERSE IMPACTS OF HABITAT LOSS ON AMPHIBIANS

The Proposed Action would destroy known current habitat for the foothill yellow-legged frog, a California State Species of Concern. DEIS at 123. The DEIS claims that while decommissioning the South Cow Creek facilities “may adversely affect northwestern pond turtles, foothill yellow-legged frogs, and the potential summer habitat for California red-legged frogs” due to “[r]educed flows in Hooten Gulch,” DEIS at 128, “[o]ver the long-term, foothill yellow-legged frogs would benefit from the expected increase in summer flows to South Cow Creek which would result in increased breeding habitat for the species.” *Id.* at 129. The statement that foothill yellow-legged frogs will suffer a long-term adverse impact from the loss of the habitat in Hooten Gulch is supported by evidence in the record. See, e.g., Comments of Department of the Interior at 22-23, eLibrary No. 20090710-5033. The assertion that increased summer flows in South Cow Creek would be beneficial to foothill yellow-legged frogs, however, is not based on anything other than PG&E’s unsupported assertion in the LSA. Whether or not it is the case that increased summer flows would benefit the foothill yellow-legged frog, Commission Staff must provide evidence and analysis to support the assertion.

²⁸ In this regard, see NMFS May 7, 2010 letter to Mr. Steve Tetrick, noting that NMFS’s perspective has been “consistent” in evaluating benefits from the perspective of its trust responsibility and that that perspective differs from FERC’s, which “applies a broad public interest standard.” Additional Comments of the National Marine Fisheries Service in response to Evergreen Shasta’s Offer of Settlement (May 10, 2010), eLibrary No. 20100510-5079.

IV. STAFF'S RECOMMENDATION FAILS TO GIVE ADEQUATE WEIGHT TO THE ADVERSE SOCIOECONOMIC IMPACTS OF DECOMMISSIONING THE PROJECT

A. *The DEIS Gives Insufficient Weight to the Impacts on Tetrick Ranch and the ADU of Decommissioning the Project*

The DEIS correctly describes the effect of the proposed decommissioning of the Cow Creek Development on Tetrick Ranch and the ADU as “a major long-term adverse effect.” DEIS at 206. This follows naturally from the fact that both Tetrick Ranch and the ADU rely on flows from the Cow Creek Development tailrace for consumptive water uses. Despite this, the DEIS then attempts to minimize the importance of this finding by suggesting that perhaps it would not be too expensive to build a new diversion. *Id.* at 207.²⁹ Although acknowledging that a new replacement diversion feature “could run into the millions of dollars,” the DEIS conjectures that “costs could be much less.” DEIS at 207. However, the DEIS fails to support its assumptions that the screened pipe intakes it contemplates would be either adequate or feasible. This is a seriously flawed assumption. In the current regulatory climate, the likelihood that an adequate new replacement diversion for the current Hooten Gulch/ADU water delivery system could be sited, acquired, permitted, and constructed at all, much less in a reasonable timeframe, is simply unknown. Substantial effort and expenditures will almost certainly be required before a new diversion could be operating. In addition, a new diversion that does not water the full length of Hooten Gulch would also fail to mitigate the proposed decommissioning’s adverse impacts on the consumptive water use of Tetrick Ranch. The

²⁹ In support of that proposition, the DEIS cites a paper by International Rivers. *See, e.g.*, <http://www.internationalrivers.org/en/node/339>. The paper presents non-dam water supply alternatives as feasible, but its relevance to the particular situation at hand was not explored by Staff. As such, it is merely an idea that may or may not be germane; this record simply lacks any guidance as to its usefulness and it may be viewed as mere background information without more.

new diversion location suggested by the resource agencies (DEIS at 206), for example, will *not* provide Tetric Ranch with the riparian access it currently has, and will require pumping the water back uphill, using significant electric energy rather than producing it.

Nor has it been established whether the “screened pipe intake” will actually work satisfactorily at South Cow Creek for its intended purposes. The DEIS itself acknowledges the speculative nature of its proposal, concluding that “[i]f an alternative means for water diversion were accomplished, outside the scope of this proceeding, the Proposed Action would have minimal adverse impacts to agriculture.” *Id.* In short, it is clear to all parties that there is no plan at present for ensuring that an alternative diversion is created, and the DEIS utterly fails to grapple with the implications of that fact.³⁰

The vast weight of the evidence shows that if Tetric Ranch and the ADU are prevented from taking their water from the existing water delivery system, their ability to earn a living, their property values, and their quality of life will decline precipitously. They cannot farm, ranch, or even inhabit their homes without access to water and without the ability to utilize water rights that have been in their families for over one hundred years. *See Letter 7, dated Oct. 29, 2008, from the Abbott Ditch Water Users to Ms. Stacy Evans, LSA, Vol. 4, Appendix O, and Letter 8, dated Nov. 4, 2008, from Steve Tetric to Ms. Stacy Evans, LSA, Vol. 4, Appendix O.* The DEIS attempts to sugar-coat this fact, glossing over the unlikelihood that a new diversion will be permitted and the probability that the cost of one would be prohibitive. The DEIS should be revised to accurately

³⁰ The LSA did not address this issue, noting only that consultation with the affected landowners was ongoing. LSA Executive Summary at ES-13. In any event, there appears to have been *no* attempt to evaluate the environmental impacts of an alternative diversion to serve the ADU, which should have been considered if that is the mitigation needed to keep the decommissioning impact to the ADU at a minimum.

describe the devastating impacts on Tetrick Ranch and the ADU of loss of their current water supply.³¹ It should also be supplemented to include the impacts on the environment of supplying an alternative diversion for the ADU, which PG&E acknowledges is necessary to supply the ADU. LSA Executive Summary at ES-13.

B. The DEIS Is Incomplete Because its Description of the Impacts of the Reduction in Shasta County Tax Revenue Associated With the Decommissioning Is Incorrect

The DEIS describes Shasta County's loss of approximately \$79,000 per year in property tax revenues for the two developments as "minor . . . given the relatively low property tax currently being paid."³² DEIS at 203, 207. \$79,000 may be an insignificant sum in the federal or state budget, but as the DEIS acknowledges, it represents 0.14 percent of Shasta County's 2009 tax revenues. Contrary to the implication in the DEIS, that is a significant percentage. Russ Mull, the Director of the Department of Resource Management for Shasta County, stated it succinctly when he noted that

\$80,000 is a sheriff's deputy serving the community of Shingletown, Whitmore, Oak Run, Millville.³³ So what you're saying that it isn't significant if this area doesn't have fire protection or police protection.³⁴ That's what you're saying, \$80,000 isn't significant. That's wrong.

Tr. at 66-67.

³¹ The DEIS should also give more weight to the Shasta County General Plan (2004) and Shasta County Zoning Plan (2003), which specifically seek to encourage the use of lands within the County for agricultural purposes. The DEIS fails to acknowledge that these plans are the result of much effort by the County, and its decision to recommend decommissioning in spite of the major long-term adverse impact on land use in the County (DEIS at 261) is inconsistent with the public interest.

³² The total amount of taxes currently paid by PG&E is irrelevant to the absolute significance of the loss to Shasta County of \$79,000.

³³ Shingletown, Whitmore, Oak Run, and Millville are all communities within Shasta County.

³⁴ \$80,000 is also approximately the yearly salary of two clerical workers or entry-level law enforcement officials. See <http://agency.governmentjobs.com/shasta/default.cfm>, last visited August 17, 2010.

In addition, the DEIS minimized the effects of the decommissioning on local businesses. It found that “[t]here are no recreation industries that would be affected by the Proposed Action.”³⁵ DEIS at 207. As Mr. Mull has noted, however, the assertion that visitors “may continue to patronize local businesses regardless whether they visit, fish, or picnic [at Kilarc Lake],” is nonsensical. Tr. at 67-68. The alternative recreation locations that the DEIS suggests would attract visitors to local businesses are so far away, as discussed in Section IV, *infra*, as to make it unlikely that those kinds of detours to Whitmore (near Kilarc) would be made. Tr. at 67-68. At the July 14 public meeting, Mr. Mull discussed an example of a local business that would likely suffer significantly as a result of the decommissioning and demonstrates the types of effects utterly ignored by the DEIS. The Lavender Gardens is a commercial establishment whose costs are affected by its proximity to the timberlands that surround Kilarc. Due to the high risk of fire in the area, discussed further in Section VI, *infra*, there is but one insurer willing to provide commercial insurance to the Gardens because of the risk of fire losses. Tr. at 75. The cost and availability of that insurance after decommissioning is unknown, but at a minimum, the premiums are likely to be higher. Other local home and business owners will be similarly affected.

Additionally, the Staff was also made aware at the July 14 meeting of the adverse impact on property values caused by the potential loss of wellwater for those homes

³⁵ This is itself rather inconsistent as, in its analysis of AA1, the DEIS noted that

The Kilarc forebay would remain accessible to the public for recreation enabling visitors and recreationists to use the facility, and *retaining visitor and recreation user spending at local business.*

DEIS at 208 (emphasis added). This rather implies a recognition that elimination of the Kilarc forebay would, indeed, have an impact on local businesses as, in fact, it likely would.

located downgradient of Kilarc, in the Whitmore area. Tr. at 13. The DEIS concluded that “[t]he Proposed Action is not expected to affect property values related to demand or supply for lands in the project area.” DEIS at 203. This is a gross understatement of the potential impacts. Due to the fractured rock system that is prevalent in eastern Shasta County, including in the community of Whitmore, and the fact that the Kilarc reservoir is upgradient and is not lined, it is very possible that there is hydraulic connectivity between Kilarc reservoir and the many residential wells and springs downgradient. Thus, Kilarc forebay may be the source of well water for each of the homes in Whitmore, all or nearly all of which have been constructed since Kilarc was built. The only practical way to verify this possibility is through studies using isotope hydrology, which has not been done.

Thus, there is a possibility that post decommissioning, Whitmore homeowners may find themselves without water and would need to dig new wells at great expense. Nor is there any guarantee that this drilling would work when the main source of water recharge is no longer available. Not only is the loss of water for residential housing a County public health concern, but the value of these homes will be seriously adversely affected. Furthermore, it should be obvious that the loss of agricultural value and property values if the ADU do not receive water to conduct their business and to remain in their homes will further erode the County’s property tax base. In other words, any characterization of business and property losses that would result from the decommissioning of the Project No. 606 facilities as “minor” is erroneous. Losses are not limited to the direct loss in property taxes from the Project itself. Instead, the loss would be additive because of the consequences of the removal of the Kilarc forebay and

also the dewatering of Hooten Gulch and cessation of its delivery of water to Abbott Ditch.

The DEIS should be revised to acknowledge that the financial impact of decommissioning on Shasta County is significant. An accurate analysis could not support Commission Staff's recommendation that the Commission allow decommissioning of Project No. 606, especially in light of the FPA's broad objectives regarding community impacts, irrigation needs, recreation, and waterway planning and conservation.

C. *The DEIS Is Incomplete Because Its Conclusions Regarding Project Economics and Alternative Sources of Renewable Power Is Inadequate, Unsupported, and Erroneous*

The DEIS's conclusion that destruction of the Project will reduce consumer energy costs, which the DEIS characterizes as a "moderate long-term benefit," is inadequately supported. DEIS at 201. Two analyses are needed to draw that conclusion: (1) an analysis of the projected cost of continuing to operate the Kilarc and Cow Creek Developments; and (2) an analysis projecting the cost of other California Renewable Portfolio Standard ("RPS")-eligible generation. Neither is included within the DEIS.

Instead, the DEIS appears to base its conclusion solely on PG&E's statement that "[l]ower-cost, emissions-free, California RPS-eligible renewable energy is forecast to be available to replace [Kilarc-Cow Creek output]." *Id.* The DEIS does not cite any evidence to support that statement. Nor does PG&E's License Surrender Application provide any details, projections, or supporting evidence on the issue. LSA Ex. B at ES-7 (stating that "lower cost, emissions-free, and RPS-eligible renewable energy is forecast to be available to replace [the Kilarc-Cow Creek output]").

The DEIS cannot rely on PG&E’s unsubstantiated statement in the LSA that the costs of electricity from the Kilarc and Cow Creek Developments are greater than the costs of any other available renewable generation resources. In the first place, PG&E refused to disclose any of its underlying analyses of the project’s economics, responding to the Commission Staff’s Additional Information Requests with the statement that “[t]he methods, calculations, and results of the economic analysis are proprietary to PG&E.” PG&E AIR Response at 7 (Dec. 23, 2009). The fundamental purposes of NEPA—accurate disclosure of impacts to decisionmakers and the public and transparent government decisionmaking—are eviscerated if the Commission’s environmental documentation relies on secret studies that neither the Commission nor the public can see.

Publicly available evidence also directly contradicts the DEIS’s conclusion. For example, the California Public Utilities Commission (“CPUC”) annually publishes its Market Price Referent (“MPR”), which is an estimate of the long-term market price of electricity for baseload and peaking power products and is used to evaluate bid products received during California Renewable Portfolio Standard power solicitations. As illustrated by the financial information included in the Community Alternative submitted on January 22, 2010, the generators at the Kilarc and Cow Creek Developments can operate at a profit and provide substantial public and environmental benefits, if reasonable terms and conditions are imposed and if they are paid the standard Market Price Referent.³⁶

³⁶ The DEIS correctly did not rely upon the 2004 letter of the California Energy Commission (“CEC”) Staff, which stated that the benefits of power generation from the Kilarc-Cow Creek Project were outweighed by the environmental benefits of decommissioning. Letter from Terrence O’Brien, Deputy Dir., Sys. Assessments & Facilities Siting, CEC, to Donald B. Koch, N. Cal. Reg’l Manager, Cal. Dep’t of Fish & Game at 2-3 (Dec. 21, 2004) (regarding CDFG request to the CEC to review the energy issues

The Commission itself—not PG&E—must conduct the analysis of project economics in this case. According to PG&E, its internal decision to surrender the Kilarc-Cow Creek Project license was based on “the company’s prior relicensing experience.” PG&E AIR Response at 7. In other words, PG&E’s decision was based in large part on what PG&E thought the Commission would likely require in any new license for the project. The DEIS, by relying on PG&E’s economic evaluation of project economics, therefore puts the Commission in the bizarre position of deciding on the future of the Kilarc and Cow Creek Developments, based on what someone else thought the Commission itself might decide in a hypothetical relicensing situation. This DEIS cannot rely on this absurd, circular reasoning—which has the effect of improperly delegating the Commission’s decisionmaking authority to PG&E—to avoid the Commission’s obligation to independently evaluate project economics, based on: (1) a full understanding of the project flows and other environmental requirements that the Commission would order; and (2) a detailed understanding of the cost of other renewable generation alternatives available in California.

In making these determinations, the Commission cannot simply adopt the recommendations of the resource agencies as to environmental conditions, and

associated with the proposal to decommission the Kilarc-Cow Creek Hydroelectric Project (“2004 CEC Letter”), available at eLibrary No. 20050107-0037. The basis for that staff letter was the fact that resource agencies “view PG&E’s decommissioning proposal as an important restoration opportunity for salmonid habitat in the Cow Creek watershed and northern Sacramento River valley.” *Id.* at 4. Those assumed benefits to salmonid habitat however, have not been demonstrated to exist in this record. (The CEC Staff described the dispute on potential habitat benefits, but relied only on a general assertion based on claimed benefits from much larger, non-comparable projects located in other watersheds.)

Moreover, the CEC Staff letter pre-dates the state’s decisions both to accelerate its renewable portfolio requirement to 20% by the end of 2010 instead of the end of 2017 (S.B. 107, 2005-06 Reg. Sess. (Cal. 2006) (enacted)), and to increase that requirement to 33% by 2020 (Cal. Exec. Order No. S-14-08 (2008)). Instead, the CEC Staff’s views at that time were limited to the contributions of the Kilarc-Cow Creek Project to meet the state’s peak energy demands and to reduce air emissions. 2004 CEC Letter at 4-5.

particularly minimum instream flows, that would be required if the Project were to continue to operate. The DEIS's evaluation of the only alternative it considered that included power generation fails to meet this basic standard. Specifically, the DEIS rejects the No-Action Alternative on the grounds that:

[O]ver the long-term it is not practical that the existing project operation would be sustained without repairing and replacing units, nor could the licensee continue to operate over the long-term under its existing annual license. An annual license is not intended to allow a licensee to continue project operation indefinitely. Therefore, the No-Action Alternative defined throughout this DEIS was selected for the purpose of an environmental baseline. We must emphasize that over the long-term, the No-Action Alternative, for purposes of economic analysis, would actually be the equivalent of PG&E going through relicensing. The No-Action Alternative (today's annual license) serves as our baseline for evaluating the effects of the Proposed Action, AA1 and AA2.

DEIS at 252. Based on that characterization, the DEIS then concludes that the No-Action Alternative is not economically viable because "Staff estimates that increasing minimum flows by 20 cfs, as described under the analysis sections of the action alternatives ... could also eventually be required under relicensing." *Id.* at 253.

This conclusion, however, is built on a house of cards. The record shows that the agencies steadfastly refused to disclose the minimum flows that they would request in any relicensing proceeding, or any scientific analysis to support any specific minimum flow level for the developments.³⁷ PG&E independently concluded in 2004, for whatever

³⁷ PG&E AIR Response at 6-7 (Dec. 22, 2009). In response to comments filed by CDFG, Tetric Ranch also requested that the Commission direct the resource agencies to come forward with the minimum instream flows they would request in any relicensing proceeding, and to provide the basis for those amounts. Response of Tetric Ranch to Comments of California Department of Fish and Game (Dec. 30, 2009), eLibrary No. 20091230-5103. To date, none of the resource agencies has come forward with even this basic information.

reason, that it was not worth pursuing the relicensing of the project; but as discussed above, it refused to disclose its underlying analysis for the decision on the grounds that it was proprietary.³⁸

Even if the resource agencies and PG&E had provided that information, the Commission would be obligated to conduct its own independent analysis to determine the benefits of the recommended or assumed minimum instream flow levels, as one element to be weighed against many other factors. The DEIS, however, fails to provide any analysis at all. Instead, the DEIS appears to have pulled an assumed minimum flow requirement for the Kilarc and Cow Creek Developments out of thin air. It states:

For the purpose of this assessment we have assumed that increased flows to the bypassed reach are a priority. Therefore, for this analysis we assume a minimum flow to the bypassed reach of 20 cfs.

DEIS at 62; *see also id.* at 64. The DEIS provides no explanation for the derivation of this assumed minimum flow level, and no explanation of the specific environmental benefits, if any, that would result from this assumed level of minimum flow as opposed to other flow levels.³⁹ Finally, there is no discussion of the feasibility of any minimum flow

³⁸ PG&E response to November 13, 2009 Additional Information Request, response to Item 4 at 6-7 (December 23, 2009).

³⁹ Moreover, CDFG's suggestion that the minimum instream flow requirements of the Kilarc and Cow Creek Developments should be patterned on the Olsen Power Project, FERC No. 8361 (CDFG DEIS Comments at 2), should be disregarded. In the first place, in that case the licensee itself proposed the minimum instream flow requirement of 30 cfs; it was not imposed on the licensee over the licensee's objection. *Olsen Power Project, Inc.*, 39 FERC ¶ 62,025, 63,040 (1987).

In addition, the Olsen Power Project's 30 cfs flow requirement is largely driven by the superior consumptive water rights held by entities that divert water from the bypass reach of Project No. 8361. As shown by the 1969 Cow Creek Adjudication Decree, approximately 15.5 cfs are diverted by irrigation and domestic water users from the bypass reach just downstream from the Olsen Power Project diversion. *Cow Creek Adjudication, Decree of the Superior Court for Shasta County, Cal., Cow Creek Adjudication decree of the Superior Court for Shasta County, California in the matter of the determination of the rights of various claimants to the water of Cow Creek stream system excepting Clover Creek, Oak Run Creek and North Cow Creek in Shasta County, California*, No. 38577 at 153 (entered Aug. 25, 1969, in Book 89 of

proposals when the existing water rights are accommodated. The proposed decommissioning will not make any new water, and the DEIS recognizes that natural flows in the Cow Creek system can be very low in some years. DEIS at 54-55 (Table 8), 59 (Table 11). Indeed, the adjudicated water rights of consumptive users in the relevant part of South Cow Creek *exceed* the natural minimum monthly flows in six of the seven months between May and November. *Id.* at 259 (Table 11); Comments of Erik Poole re Kilarc-Cow Creek License Surrender Proceedings at 9 (unnumbered pdf) (Jan. 19, 2010), eLibrary No. 20100119-0033; Explanatory Statement to the Community Alternative at 3 (Jan. 22, 2010), eLibrary No. 20100122-5126.

The DEIS should be modified to correct this basic defect in the Commission Staff's project economics analysis; and the DEIS should be re-issued, so that the public has the opportunity to fully comment upon the Commission Staff's new findings with respect to minimum instream flows.

V. THE DEIS FAILS TO ADEQUATELY ADDRESS THE IMPACTS ON RECREATION OF DECOMMISSIONING THE PROJECT

The DEIS's discussion of Recreational Resources contains many errors and gives insufficient weight to the impacts that it does recognize.

A. *Absence of Alternative Recreation Sites*

One serious flaw is that the DEIS at times describes distance to other alleged alternative recreation sites in terms of miles as the crow flies, rather than the actual

Judgments, 484) (Diversions No. 28 through 28g). In other words, the majority of the water left in Old Cow Creek by the Olsen Power Project is for consumptive use within the bypass reach, and only 14.5 cfs actually stays in Old Cow Creek.

The Olsen Power Project license is therefore not comparable, and it cannot be relied upon by either the resource agencies or the Commission to justify assuming high minimum instream flows would be required or necessary for the Kilarc and Cow Creek Developments.

distance and time by road. For example, while Lake Nora and Lake Grace may be “within 14 miles (direct radial measurement) of the Kilarc forebay,” DEIS at 149, both are 25-45 miles one way by car (depending on whether one takes the highway or the more direct back roads) and an hour or more away. *See, e.g.,* Tr. at 68; *see also* Comments of M. Trevelyan at 3 (Aug. 17, 2010), eLibrary No. 20100817-5008. “Direct radial” distance might be a reasonable proxy for the distance people have to travel in the Great Plains; this Project, however, is in the mountains, and direct radial distance is therefore irrelevant and misleading. Furthermore, as pointed out by Ms. Trevelyan in her August 17, 2010 comments, many roads in the region are impassable for part of the year, or are passable only by a vehicle with four-wheel drive. In Mr. Mull’s words, at the July 14 public meeting, Tr. at 68:

You say that these other lakes are close enough that it’s no significant issue to just drive to one of these other ones.
Well, it is, because it isn’t 14 miles straight. You got to drive back to town, across to the other highway, up the other highway.

In addition, Mr. Mull noted that the DEIS considered recreational alternatives some 60 miles away as alternatives to Kilarc Lake, but traveling to those places would require that local residents drive 120 miles round-trip. Tr. at 65. He also noted that the DEIS was inadequate because it failed to evaluate the environmental impacts of using carbon fuels to make that 120-mile trip. *Id.* The DEIS totally misses the point in defining alternatives: a local recreation site with convenient, easy, year-round access is very different from a distant recreation destination. It is unreasonable to assume that local citizens have the time and the money to replace a five-mile drive with a 120-mile drive, plus an admission fee and the added cost of gas for the trip. *See, e.g., id.* at 12. In short,

the recreation facilities identified by the DEIS are not genuine alternatives, as any parent with small children would comprehend immediately.

Apart from the mechanics of ascertaining mileage and impacts of driving considerably further to recreate, the DEIS fails to recognize the special significance that Kilarc Lake has in the lives of the local population. At the July 14 public meeting, for example, numerous individuals told of fishing there, along with their children and grandchildren. Tr. at 57-61. Other individuals told of the benefits of the solitude they found in the walkways, and the ease of access that allowed them to take friends and children to the site. Tr. at 27, 58, 60. While not quantifiable, there was ample testimony on the value to the quality of their lives that the availability of the Lake gave to the residents as well as out of town visitors. It also serves as a resource for wildlife observation and other recreation activities. Tr. at 59, 60.

In short, the recreation analysis included in the DEIS failed to adequately and correctly identify and evaluate the range and magnitude of the adverse impacts of the proposed decommissioning, particularly the impacts to the Whitmore community and the individuals in it. It thus fails to meet the basic NEPA goal of fully disclosing the impacts of the Proposed Action to the public and the Commission. The Recreational Resources assessment must be redone and at minimum it should disclose and analyze the actual driving distances and approximate driving times to all of the alternative recreation sites that are asserted to be available, and the times of year that the recreation sites are accessible to ordinary road vehicles. For each of those identified alternative recreation sites, the Commission should model the likelihood that current users of Kilarc Lake would travel to the alternate location. This analysis should also include a breakdown of

the results by income, so that any differential effects on the population are fully identified and disclosed.

If there are no comparable recreation alternatives available or if the burden falls too harshly on lower income citizens, then Staff should rethink its recommendation to the Commission after taking into account what losing Kilarc Lake would mean to the residents of the community, and evaluating whether the benefits to non-anadromous fishery resources (properly offset by the loss of resident fish habitat in Kilarc Lake and other Project waterways) outweigh these recreation losses. In light of the evidence that the proposed decommissioning will have minimal or no benefits for anadromous fish, and without any close comparable recreation alternatives, it is hard to fathom how the destruction of a recreational resource of such high value to the community could possibly be in the public interest.

B. Disabled Access

Both scoping comments and comments filed in response to the DEIS demonstrate the importance of Kilarc Lake as a recreation site that is accessible to the disabled. *See* Comments of M. Trevelyan at 2-3; DEIS at 158 (“several individuals comment that the Kilarc forebay is the only place in Shasta County that a disabled person could catch fish.”). The DEIS ignores this information, characterizing the long-term adverse impacts to disabled access as “minor” and asserting, contrary to the evidence, that “other recreational facilities providing access to the disabled exist within driving distance of the Kilarc forebay.” *Id.*

In assessing Staff’s reference to “other recreational facilities” to serve the disabled, Mr. Mull, the Director of the County’s Department of Resource Management, had a quite different assessment (Tr. at 68):

And then if you want to talk about wheelchair access, which you clearly do. You seem to understand that Grace Lake has just the same handicap access, but what you don't mention is that it's only 12 inches deep where you could get a wheelchair to. And there is not a lot of trout that like to hang out in 12 inches of water. You got to go clear to the other end of this lake that is pretty much filled in with sediment if you want to actually catch a fish.

That's where research comes in. That's where actually looking at the issue, doing the research, and then writing the document comes in.

The DEIS must be revised to disclose the full benefit of Kilarc Lake to people with disabilities, the loss to these individuals if Kilarc Lake disappears as proposed, and the absence and cost of alternatives. Staff's recommendation to the Commission that the Project should be decommissioned must be reconsidered in light of these issues and the broad public interest standard under which the Commission decides license surrender applications.

VI. FIRE SUPPRESSION

The DEIS acknowledges both the risk of fire in the Project area—it has been characterized as a “Very High” fire risk area by the California Department of Forestry and Fire Protection (“Cal FIRE”)—and the effect that decommissioning could have on that risk. It notes that not only could PG&E’s surrender activities themselves create a fire risk, but Kilarc forebay is a source of water for both Cal FIRE and the Whitmore Volunteer Community Fire Company (“WVCFC”). The DEIS, however, fails to take into account the full extent of that risk, and it also seriously understates the dangers created by eliminating the Kilarc forebay as a source of water for fire suppression. In fact, it concludes:

The loss of the forebay for fire suppression would have *no effect* on Cal FIRE’s ability to fight fires in the area

because there are several lakes of similar size or larger within 15 miles of the Kilarc forebay that may serve as alternative water sources. In addition, certain wider points along Old Cow Creek have been successfully used in the past for water collection via helicopter. Old Cow Creek as well as several other creeks in the area would continue to be available for WVCFC to use as substitute water resources for fire suppression.

DEIS at 176 (emphasis added).

The DEIS's conclusion, however, is based on a woefully inadequate understanding of the sources it lists as "alternatives" to the Kilarc forebay. Other local sources of water are not sufficient to meet fire fighting needs, either by ground or by air. Many of the smaller creeks are dry during the late summer months (when fire risk is highest). SPI Motion to Intervene, Baldwin Aff. ¶ 6. Further, the DEIS fails to take into account the remoteness of the area and the particular considerations faced by firefighters in such areas. The other water sources referred to in FERC's DEIS for decommissioning the Kilarc-Cow Creek Project have limited access for both aerial and ground fire fighters. *Id.* Fire fighters who wish to use them must depend on slow, low standard dirt roads. *Id.* This is why, two years ago, it was water from the Kilarc forebay, rather than from the Old Cow Creek, or from the distant Blue Lake, Silver Lake, or Buckhorn Lake, that was used to fight lightning-sparked fires and to keep them from growing to unmanageable size. *Id.*

Fire fighting helicopters are similarly limited in the sources from which they can draw water. Much of the Old Cow Creek Channel and the Old Cow Creek Canyon are too narrow for adequate water, or for safe operation of helicopters. *Id.* ¶ 7. And if helicopters must fly the many miles to Shasta Lake to get water, they will return to a fire that has grown much bigger than it was when they left. *Id.*

The DEIS also fails to accurately state the true cost of large wildfires in the region. For instance, SPI owns a quarter million acres of timberland in Shasta County, 45,000 of which are in the vicinity of the Kilarc-Cow Creek Project. *Id.* ¶ 2. The company grows and harvests trees on those timberlands primarily as a source of logs for the three saw mills in Shasta County. *Id.* Trees grown for commercial purposes often take 60 to 80 (or even more) years to grow large enough to harvest. This means that a large fire occurring in SPI's forests can set back productive use of those lands significantly. *Id.* ¶ 4. This would constitute a serious setback to the local economy, which depends heavily on the logging industry. Currently, about 750 families in Shasta County look to the company as a direct source of living wages. *Id.* ¶ 3. Further, for each of Sierra Pacific's Shasta County employees, SPI also generates six other jobs by purchasing services directly related to the company's business—jobs, for instance, for equipment and parts suppliers, logging contractors, truck drivers, and tree planters. *Id.* A large fire could seriously jeopardize many of those jobs and the local livelihood, a risk that the DEIS did not adequately encapsulate. As mentioned above, the DEIS also ignores the likely increase in insurance costs for local homeowners and businesses that might result from the loss of the reservoir, a non-trivial increase. Similarly, some owners might find themselves unable to obtain insurance at all.

A large fire could also be devastating to the community of Whitmore itself, and to other nearby homes and businesses, and enormously expensive for the state as a whole. The Project Area's status as a "Very High" fire risk area is easily demonstrable. Even as recently as August 15 of this year, 460 lightning strikes sparked three fires in the

region.⁴⁰ Extremely large fires are not uncommon. In 2004, for instance, a 10,000-acre wildfire in Shasta County only about 20 miles from Whitmore destroyed more than 60 homes.⁴¹ Nor are fires large enough to destroy the entire community of Whitmore unprecedented in the region's history. The 1992 Fountain Fire, also in central Shasta County, burned some 300 homes and 64,000 acres of forest and brush.⁴² It is also worth noting that when fires reach this stage, the cost of containment can rise enormously as well. In June, 2008, 158 lightning-struck fires burned over 50,000 acres; by early July, the state had spent nearly \$20 million on its fire fighting efforts alone.⁴³ By eliminating a local reservoir, the DEIS seriously heightens the risk that fires will grow to catastrophic sizes.

The evidence demonstrates that the alternatives referenced by the DEIS are inadequate to help mitigate the high risk of devastating fire in the vicinity of the Kilarc forebay. Given the critical importance to the community of a large water supply adequate for firefighting, the DEIS's evaluation must be modified to match what the evidence shows: there is no comparable, equivalent source of water for the Project community for fire fighting purposes and the true risk to the local community that results from removing that source is enormous.

⁴⁰ *At Least Three Lightning Fires Reported*, The Redding Record Searchlight, Aug. 15, 2010 (*available at* <http://www.redding.com/news/2010/aug/15/firefighters-looking-lightning-smokes-morning/>).

⁴¹ *Bear Fire razes 60 homes*, San Francisco Chronicle, Aug. 13, 2004 (*available at* http://articles.sfgate.com/2004-08-13/bay-area/17440526_1_bear-fire-red-cross-shasta-county).

⁴² *Fountain Fire recovery holds valuable lessons*, The Redding Record Searchlight, Aug. 19, 2007 (*available at* <http://www.redding.com/news/2007/aug/19/fountain-fire-recovery-holds-valuable-lessons/>).

⁴³ *Motion Fire burnouts delayed to secure lines*, The Redding Record Searchlight, July 6, 2008 (*available at* <http://www.redding.com/news/2008/jul/06/motion-fire-burnouts-delayed-to-secure-lines>).

VII. WATER QUANTITY AND QUALITY

While decommissioning of the Kilarc and Cow Creek Developments will somewhat increase water quantities in the bypass reaches of Old Cow Creek and South Cow Creek, the impacts of those increases must be accurately and adequately identified and evaluated in the final EIS. The DEIS fails to provide this basic information, which is required by NEPA and needed by the Commission to meet its FPA obligations. As discussed in Part II, *supra*, the assumed increase from the proposed decommissioning will provide minimal or no benefits to the fishery resources of the Cow Creek system. Natural barriers to the migration of anadromous salmonids in Old Cow Creek will continue to prevent their access to the Project area, even if the Kilarc Development is decommissioned; because the Cow Creek Development does not currently prevent anadromous fish passage on South Cow Creek, decommissioning of the Cow Creek Development will not increase the habitat currently accessible to anadromous fish. With respect to resident fish, the proposed decommissioning destroys far more habitat than it could possibly create.

Stripped of the asserted, but factually non-existent fishery benefits, the DEIS's conclusion that the Proposed Action would have a long-term beneficial impact in Old Cow Creek and South Cow Creek (DEIS at 58, 61) is both erroneous and inadequately supported. It amounts to the contention that *any* increased flows in the bypass reaches inherently constitute a long term significant beneficial environmental impact—a position that constitutes prohibited pre-judgment and would arguably appear to justify the immediate dismantling of all hydroelectric projects in the United States.

The crucial issue is not whether the proposed decommissioning would increase flows; it is whether and what impacts will result from any increased flows caused by the

decommissioning. Indeed, the whole purpose of NEPA is to identify and evaluate those impacts on the human environment in detail, so that the Commission has the information it needs to proceed. The DEIS fails to accurately identify or evaluate any sufficient beneficial environmental impacts to support its conclusions regarding decommissioning; to the contrary, the evidence shows there are none. This fundamental error in the DEIS must be corrected in the subsequent environmental documentation for this Proposed Action.

The DEIS's evaluation of Water Quantity also includes other fundamental errors: (1) it incorrectly assumes water flows that are not achievable in light of existing adjudicated pre-1914 consumptive water rights and erroneously assumes that the decommissioning will prevent nonconsumptive use and diversion of instream flows in the future; and (2) it improperly discounts serious, significant negative impacts on consumptive water users within the Project area. These are discussed below.

A. *Projected Increases in Water Flows in the Bypass Reach of South Cow Creek Will Not Occur*

In Table 12, the DEIS incorrectly projects that water flows in the bypass reach of South Cow Creek will be increased by the full amount of PG&E's current non-consumptive water right associated with the Cow Creek Development. DEIS at 60. That analysis, however, incorrectly ignores the existing consumptive water rights held by the Abbott Ditch Users and Tetric Ranch. When those consumptive water rights are properly taken into account, the average total flows projected for the South Cow Creek bypass reach decrease by over 35% for July and October. In August and September, those totals decrease by over 50%. In low flow years, the effects are even more pronounced. According to Table 11 of the DEIS, the adjudicated rights of these

consumptive water users *exceed* the natural minimum monthly flows in six of the seven months between May and November. DEIS at 59.

The DEIS also incorrectly assumes that the nonconsumptive water rights that PG&E would relinquish will necessarily remain within the bypass reach of South Cow Creek over the long-term. In fact, if PG&E chooses not to exercise those rights, they will become available for others to acquire. Particularly since there are already two groups interested in power generation in this portion of the Cow Creek system, it is likely that other hydro developers will seek to develop these water rights for new generation if the decommissioning is approved by this Commission.

The DEIS should be corrected to reflect the reduced instream flow expectations associated with both existing consumptive water rights and the likelihood that PG&E's relinquished non-consumptive water rights will be acquired by a different entity.

B. The DEIS Fails to Adequately Consider Detrimental Impacts of the Proposed Action on Groundwater

The DEIS fails to adequately consider the impacts of the proposed decommissioning on groundwater resources. Kilarc Lake has existed for a century; and given its size and the soils and geology of the area,⁴⁴ draining the reservoir will affect

⁴⁴ According to the DEIS (at 38):

The project is in the Cascade Range geomorphic province, which occupies the eastern half of the Cow Creek watershed, including the headwaters of South Cow Creek and Old Cow Creek. The most widespread rock type in the Cascade Range province is the Tuscan Formation. This volcanic formation is exposed near the Cow Creek powerhouse and forebay, as well as marine sedimentary rocks of the Chico Formation. The Tuscan Formation consists of resistant andesitic, dacitic, and basaltic volcanic breccia, tuff breccia, and interlayered flows, sand, gravel, and tuff (Bailey, 1966 as cited in PG&E, 2009a).

In general, the soils in the vicinity of project facilities are stony and rocky loam. These soils are typically composed of weathered volcanic or sedimentary rock, with low to moderately high hydraulic conductivity, and moderate available water capacity. The thickness of soil over the upper bedrock surface varies, but in general is less than 5 ft.

existing groundwater levels and the wells on which the Whitmore community relies. The DEIS concedes that the Proposed Action “[has] the potential to indirectly affect water supply wells located in proximity to the forebay” (DEIS at 58), but fails to accurately quantify or evaluate those impacts.

Before the Commission orders the destruction of all or part of the existing consumptive water supply of the Whitmore community, it must have an accurate and complete understanding of the magnitude and location of the groundwater impacts that will result from the Commission’s action. PG&E’s blithe statement that “owners” of “groundwater wells in the vicinity of Kilarc Forebay do not have water rights to any artificial recharge water that may occur as a result of Project operations” (LSA Section E-3 at ES-13)) neither eliminates nor reduces the Commission’s obligation to fully document the impacts of the Proposed Action on this crucial resource.

The DEIS’s uncritical acceptance of and reliance on information provided by PG&E in its License Surrender Application, and flawed extrapolation from that information, fail to meet the minimum standards required by NEPA. PG&E, for example, stated that it surveyed owners of 11 wells identified as being located down-gradient of the Kilarc Forebay. *Id.* PG&E obtained virtually no information in response to its questionnaire. *Id.* From these statements, the DEIS jumps to the conclusion that the 11 wells surveyed are the only affected wells in the vicinity of Kilarc Lake. This conclusion is not supported by the plain language of PG&E’s LSA; and given the population of the Whitmore community, it makes sense only if each of those 11 wells serves many families and businesses. The DEIS nevertheless goes on to assume that each of those 11 wells is a “domestic well” (DEIS at 255)—a term that is used in California to

mean “[a] water well used to supply water for the domestic needs of an individual residence or systems of four or fewer service connections.”⁴⁵ In a nutshell, the numbers don’t add up.

The DEIS then compounds the error by concluding that the disruption to the Whitmore community’s water supply could be fully mitigated in any event by spending \$50,000-\$100,000 to drill new wells. DEIS at 255. In the first place, this conclusion is based on the questionable assumptions that each of the wells in question is a “domestic well” (*id.*), and that only 11 wells will be affected in total. The DEIS’s estimated mitigation expense also appears to rely entirely on a single sentence from the introductory paragraph of a newsletter article on a different topic (*i.e.*, well design and operating efficiency)⁴⁶ — and that introductory sentence is followed by the statement that “[t]he actual cost will depend upon the depth to groundwater, the desired well capacity, and choices among a variety of well drilling, well design, well construction, and well development considerations.”⁴⁷ None of the factors identified by the article as driving the cost of well drilling appear to have been considered by the DEIS. And there is no reason to assume that the numbers included in the introductory sentences of that article reflect the cost of drilling wells in the higher-elevation Whitmore area, rather than the Sacramento Valley floor where the bulk of the agricultural activities of Tehama, Glenn, Colusa, and Shasta counties—the primary audience for the newsletter—are located.

⁴⁵ Groundwater Glossary, available at http://www.water.ca.gov/groundwater/groundwater_glossary.cfm.

⁴⁶ Allan Fulton et al., *Water Well Design, Construction, and Development: Important Considerations Before Making the Investment*, available at <http://ucce.ucdavis.edu/files/filelibrary/2280/14342.pdf>.

⁴⁷ *Id.*

The DEIS also does not grapple with the fact that if Kilarc Lake is removed and existing wells dry up, it may be impossible at any cost for residents to dig new, successful wells; the water may simply not be there. Tr. at 49-50.

C. *The DEIS Must Adequately Address Impacts on Consumptive Water Rights Users*

The DEIS likewise fails to adequately identify or evaluate the effects of the proposed decommissioning on the Abbott Ditch Users, who currently use flows from the tailrace of the Cow Creek Development for consumptive agricultural and domestic uses and are filing separate comments on this issue.

The DEIS's evaluation of the effects on Tetrick Ranch are also deficient. The DEIS states that:

Should the natural flows in Hooten Gulch be augmented by the construction of a new water diversion as a means to provide a perennial source of water to Abbott Ditch, or the Abbott Diversion is replaced by a new diversion, as stakeholders suggest, Tetrick Ranch and ADU's agricultural farming and ranching operations on the 312 acres irrigated by Abbott Ditch and use of domestic water would continue throughout the year uninterrupted by seasonal and cyclic hydrological conditions that prevail under natural stream flows in Hooten Gulch.

DEIS at 206. Although this text is ambiguous, it appears to assert that construction of a new water diversion for the ADU would fully address Tetrick Ranch's loss of consumptive water caused by the proposed decommissioning. Water, however, does not flow uphill. Therefore, any new diversion constructed at a significantly lower elevation—or indeed, even a new diversion from an elevation comparable to the existing PG&E diversion, if it does not water a substantial part of the length of Hooten Gulch—will fail to provide Tetrick Ranch with the year-round riparian access that it currently has.

This loss of access to continuous flows at Hooten Gulch would impose significant costs on Tetrick Ranch. For example, Tetrick Ranch could be forced to convert its current year-round cattle operations to a seasonal business; ranch water delivery infrastructure and fencing would have to be reconfigured; and cattle moved closer to the main stem of South Cow Creek. The costs of the proposed decommissioning's effects on the ranching operations of Tetrick Ranch could easily run into the millions.

VIII. THE DEIS IS INCOMPLETE BECAUSE ITS TREATMENT OF ALTERNATIVES TO THE PROPOSED ACTION IS FUNDAMENTALLY FLAWED.

The DEIS rejects at the outset all but two alternatives to the Proposed Action and No Action Alternative: (1) partial preservation of the Kilarc Development, with no power generation and destruction of the Cow Creek Development (“Action Alternative 1” or “AA1”); and (2) partial preservation of the Cow Creek Development, with no power generation and destruction of the Kilarc Development (“Action Alternative 2” or “AA2”). DEIS at 31-34. The proffered alternatives do little to provide the full depth of analysis required by NEPA and instead appear to be merely gerrymandered proposals to demonstrate the perceived benefits of the Commission’s chosen course. The DEIS altogether omits consideration of other reasonable alternatives in the record and is thus critically flawed.

A. *The DEIS Improperly Considered Only Strawmen Crafted to Eliminate Potential Sources of Revenue to Support Maintenance of the Project Facilities.*

It is notable that even the worst-of-all-possible-worlds alternatives that the DEIS cobbled together avoid many of the Proposed Action’s pitfalls, while providing expected benefits similar or identical to it. Staff nevertheless recommends the Proposed Action over Action Alternatives 1 or 2, because “there are no proponents in place for long-term

maintenance of facilities upgraded and left in place under AA1 or AA2” and “neither AA1 nor AA2 would provide suitable flows for aquatic habitat in Old Cow Creek and South Cow Creek.” DEIS at 262. The fact is that there *is* a proponent in place to maintain the Kilarc and Cow Creek Developments, so long as it has the authority to generate power from the project facilities under reasonable terms.

As discussed in Part II, above, the DEIS fails to provide *any* evidence to support Commission Staff’s assertion that Action Alternatives 1 and 2 would not provide “suitable flows for aquatic habitat.” DEIS at 262. To the contrary, the evidentiary record of the proceeding shows that there would be virtually no fishery benefits resulting from PG&E’s proposed decommissioning plan, so the anticipated flows from AA1 and AA2 provide almost exactly the same fishery benefits as breaching the diversions. Furthermore, the question of what flows are “suitable” is for the Commission to decide in this proceeding or in any subsequent licensing proceeding, based on substantial evidence. Commission Staff should not reject alternatives based on an unsupported assertion that only decommissioning will provide “suitable flows”; because it does so, the DEIS’s logic is circular and flawed.

The only other criterion supporting Commission Staff’s recommendation of the Proposed Decommissioning Plan is economic. The financial defects of AA1 and AA2, however, result entirely from Commission Staff’s improper refusal to evaluate *any* alternative that would allow power operation to continue at either of the existing project developments under reasonable terms supported by the record. There are at least two groups already interested in maintaining power operations at the Kilarc and/or Cow Creek Developments, so it is very likely that power generation would be promptly

proposed at any non-decommissioned facilities under either AA1 or AA2. By erroneously excluding reasonable power generation from its analysis of those alternatives, the DEIS improperly stacks the deck and creates the very economic problem that it then uses to justify rejection of those alternatives. As framed by Commission Staff, AA1 and AA2 are viable only if a charitable benefactor or governmental entity were willing to assume the total financial burden of maintaining the Project diversions and canal systems in the future, without any Project-related source of revenue to fund those ongoing obligations. In the current economic climate, it is hardly surprising that no one has come forward to assume these costs.

The purpose of the EIS is to develop evidence and fully disclose the impacts of Proposed Actions and alternatives, so that the Commission can decide which alternative is best. That obligation cannot be avoided by gerrymandering action alternatives that by definition cannot pass muster under the FPA's economic criteria, absent unrealistic conditions.⁴⁸

B. *The DEIS Is Incomplete Because It Fails to Address Reasonable Alternatives.*

NEPA requires agencies to:

study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves *unresolved conflicts* concerning alternative uses of available resources.

42 U.S.C. § 4332(E) (emphasis added). The alternatives analysis is the “heart of the environmental impact statement.” 40 C.F.R. § 1502.14. So seriously do courts take the requirement to consider alternatives that “[t]he existence of a viable but unexamined

⁴⁸ The existence of a fairy godmother is not a realistic or reasonable condition to require.

alternative renders an environmental impact statement inadequate.” *Citizens for a Better Henderson v. Hodel*, 768 F.2d 1051, 1057 (9th Cir. 1985) (citing *Brooks v. Coleman*, 518 F.2d 17, 18 (9th Cir. 1975)). As such, an agency need not consider “every possible alternative,” but it must consider “every reasonable alternative.” *Id.* AA1 and AA2 are not the only reasonable alternatives present in this case, nor do they adequately represent the scope of reasonable alternatives. Indeed, the record itself refutes the DEIS’s limitation.

Several governmental and non-governmental entities including Shasta County, Tetrick Ranch, Sierra Pacific Industries, Evergreen Shasta Power, and others, have supported a Community Alternative that would maintain and improve the Project facilities, so long as power generation revenues from the developments are available to support those costs. They have also proposed to use project power generation revenues to fund substantial public benefits and environmental enhancements. The proposal should have been fully evaluated in the DEIS as an alternative to PG&E’s proposed decommissioning plan, especially as the Community Alternative would resolve conflicts rather than creating them, as the PG&E decommissioning proposal would do.

The DEIS dismisses the Community Alternative, proposed by a variety of local entities, describing it as “a settlement agreement in name only” (DEIS at 34 n.14), and emphasizing that “[a]ll of the resource agencies, with the exception of California SWRCB, which neither opposes nor advocates the community recommendations, have objected to the community recommendations because they would not provide the increased instream flows considered necessary for the enhancement of aquatic resources.” *Id.* at 34. This is a far cry from a determination that the Community

Alternative is economically infeasible or otherwise unreasonable as contemplated by NEPA precedent. Indeed, the Draft EIS utterly fails to engage with the Community Alternative—a detailed, 50-page proposal presented by local landowners, a major corporation, and the government of the County in which the project is located. Furthermore, the Community Alternative has received wide support from the citizens impacted. Tr. at 56.

Further, the grounds under which the Draft EIS does attempt to characterize, in a roundabout way, the Community Alternative as unreasonable are impermissible. The nomenclature of a “settlement agreement” is irrelevant in considering the reasonableness and materiality of an alternative under NEPA. The position of other agencies on the Community Alternative is similarly irrelevant. Whether the flows resulting from the Community Alternative are appropriate is part of the core balancing decision that the Commission itself is required to make under the Federal Power Act. Although technical and biological information from the resource agencies could assist the Commission’s evaluation of all alternatives, it is the *Commission* that is responsible for performing the environmental assessment and deciding whether decommissioning should be allowed. Eliminating the Community Alternative before doing that analysis, based on the objections of resource agencies that have neither conducted evidentiary proceedings, nor made formal findings of fact, nor provided any substantial evidence to support their contentions, constitutes pre-judgment that is prohibited by the Federal Power Act and by NEPA.

The DEIS’s assertion that the Community Alternative “fall[s] within the range of alternatives analyzed within this DEIS (No-Action Alternative, AA1, and AA2)” is also

erroneous. DEIS at 34. Under NEPA, an agency must consider alternatives that sufficiently demonstrate the range of possibilities, and the trade-offs at issue. *Cal. v. Block*, 690 F.2d 753, 767 (9th Cir. 1982). The Draft EIS does not present sufficient evidence to demonstrate the full range of alternatives or to allow the decisionmaker to properly analyze the trade-off between increased river flows and clean power generation and the other environmental benefits of the Community Alternative, such as preservation of functional, century-old aquatic habitat in the Project's water conveyance canals and reservoirs. Carey Aff. ¶ 13.⁴⁹

In particular, only one of the analyzed alternatives—the No-Action Alternative— included any power generation, and the Community Alternative includes environmental measures absent from the No-Action Alternative, including commitments for increased instream flows, fish passage improvements, and significant funds for water quality improvements. Further, it applies an active management plan that identifies and provides funds to specifically address existing limiting factors for salmonids. This approach offers a much better chance of success in benefiting listed anadromous salmonid populations than the more passive approach apparently contemplated by the 2005 Agreement and the Proposed Action. Carey Aff. ¶ 14. An active management program would be especially beneficial to the extent that anadromous salmonids are considered to be immediately threatened: while it could take decades for suitable habitat to develop after dam removal (or, indeed, such habitat might never develop), an active management plan could, for

⁴⁹ As just one example, northwestern pond turtles (*Clemmys marmorata marmorata*) are known to occur in this vicinity and have been observed using the PG&E facilities (B. Carey, personal observation). The California Department of Fish and Game considers northwestern pond turtles to be a species of special concern. This species of concern requires open water and will be adversely affected by the removal of the canals and reservoirs associated with the Kilarc - Cow Creek facilities. Carey Aff. ¶ 13.

example, immediately distribute gravel where it would be most beneficial as spawning habitat. Carey Aff. ¶ 15. This constitutes a sharp, substantive departure from the Proposed Action and alternatives that simply rely on increased flows in the bypass reaches to restore fisheries resources that are located almost entirely outside the bypass reaches. Particularly in light of record evidence that the fishery benefits from the Proposed Action are likely to be minimal or non-existent, the Community Alternative's commitment to fund water quality improvements, especially best-management practices for agricultural activities in the watershed, is a substantial difference and improvement over the Proposed Action and *all* of the alternatives analyzed in the DEIS.

By ruling out the Community Alternative at the outset, failing to assess its impacts, and eliminating any potential power generation benefits that might offset environmental benefits claimed from the dismantling of the Kilarc and Cow Creek Developments, the DEIS improperly skews the analyses required by NEPA and the FPA. It does not provide an accurate or complete picture. A Commission faced with a decision involving one economically viable option (decommissioning) and two economically non-viable options (no power revenues) is not presented with a real choice. Particularly because the DEIS also does not identify and quantify *any* additional negative impacts from continued power operations at the Kilarc Development versus AA1, or from continued power operations at the Cow Creek Development versus AA2, Commission Staff's selection of alternatives improperly biases the DEIS when the lack of power generation revenues is a major reason why Staff rejects those alternatives. The result—a DEIS that artificially defines and evaluates only alternatives that have been carefully culled to eliminate key benefits that might otherwise require the Commission to

acknowledge the deficiencies of the Proposed Action—fails to meet the Commission’s basic statutory obligations. Worse, it inflicts great harm on individuals, with little or no prospect of benefits even to its sole intended target, the fish.

IX. THE DEIS FAILS TO MEET THE LEGAL REQUIREMENTS OF NEPA AND THE FPA

Both NEPA and the FPA govern the Commission’s review of the decommissioning contemplated in the DEIS. NEPA requires the Commission to undertake a searching, thorough analysis of the proposed action. The FPA then requires it to make a specific, supported determination that the action proposed is in the public interest. The fact that NEPA does not mandate that the Commission reach a particular substantive decision and that the FPA gives the Commission broad latitude in terms of the considerations that may be taken into account in the public interest determination does not limit its duties or responsibility. Rather, they are broadened; both NEPA and the FPA require thoroughness and comprehensiveness, and they prohibit the Commission from relying on a few, narrow factors until it has taken into account considerations far beyond that.

A. NEPA Requires a Thorough, Detailed Analysis.

NEPA directs that all federal agencies must include in all “major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on . . . the environmental impact of the proposed action . . .” 42 U.S.C. § 4332(C)(i). NEPA requires federal agencies to take a “hard look” at the impacts of their decisions, *Sierra Club v. U.S. Army Corps of Eng’rs*, 446 F.3d 808, 815 (8th Cir. 2006); and it is well settled that the socioeconomic effects of a federal action must be considered where that action’s primary impact is on the natural or physical

environment.⁵⁰ NEPA “must be construed to include protection of the quality of life for [local] residents.” *Hanly v. Mitchell*, 460 F.2d 640, 647 (2d Cir. 1972). The Commission has affirmed that NEPA requires it to consider the socioeconomic impact of a federal action on local communities. *Elkem Metals Co.*, 52 FERC ¶ 61,073, at 61,289 (1990) (“NEPA’s aims include protection of the quality of life for residents in the area of the project. Agencies administering that act accordingly should consider the full range of the project’s effects on the affected community.” (footnotes omitted)).

While NEPA does not require a particular substantive result, the Act’s procedural requirements “establish a strict standard of compliance.” *Calvert Cliffs’ Coord. Comm. v. U.S. Atomic Energy Comm’n*, 449 F.2d 1109, 1112 (D.C. Cir. 1971). Section 102 of the Act requires agencies to, among other things:

- (A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man’s environment;
- (B) identify and develop methods and procedures . . . which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;

42 U.S.C. § 4332. Agencies must also include in their analysis “the relationship between local short-term uses of man’s environment and the maintenance and enhancement of long-term productivity.” *Id.* § 4332(C)(iv). The agency is required to do each of these things “to the fullest extent possible.” *Id.* § 4332. That requirement “sets a high standard

⁵⁰ *Metro. Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766 (1983); *Tongass Conservation Soc’y v. Cheney*, 924 F.2d 1137 (D.C. Cir. 1991).

for the agencies, a standard which must be rigorously enforced by the reviewing courts.” 449 F.2d at 1114.

Thus, agencies cannot comply with NEPA’s mandates through a cramped, confined analysis, one that fails to be systematic in its inquiry and investigation, or one that fails to carefully and accurately weigh the benefits and detriments of its proposed action. As discussed in Section VII(B), *supra*, NEPA requires agencies to do a careful balancing of the trade-offs inherent in any federal action affecting the environment.

NEPA:

seeks to ensure that each agency decision maker has before him and takes into proper account all possible approaches to a particular project . . . which would alter the environmental impact and the cost-benefit balance. Only in that fashion is it likely that the most intelligent, optimally beneficial decision will ultimately be made.

Id. at 1114.

B. *The FPA Requires the Commission to Comprehensively Assess the “Public Interest.”*

The DEIS also contains Staff’s recommendation for the Commission’s action in this case, which is governed by the Federal Power Act, which imposes separate obligations, including substantive standards, on the Commission. FPA Section 6 provides that “[l]icenses . . . may be altered or surrendered only upon mutual agreement between the licensee and the Commission after thirty days’ public notice.” 16 U.S.C. § 799. In authorizing the decommissioning or the removal of project works associated with a license surrender, the Commission applies as its criterion for decision whether the plan proposed is in the public interest. *See, e.g. Ariz. Pub. Serv. Co.*, 109 FERC ¶ 61,036, P 1 (2004); *PacifiCorp*, 108 FERC ¶ 61,130, P 20 (2004). The Commission has stated that this “broad ‘public interest’ standard . . . is not the same as the public

interest/comprehensive development standards applied to licensing proceedings by FPA Sections 4(e) and 10(a)(1).” 109 FERC ¶ 61,036, P 34. However, the Commission has listed factors to consider in determining whether or not to authorize decommissioning, including (but not limited to): costs of removal of the project works, burdens on the State of continued supervision of the project works, alternative approaches available, and environmental consequences of removal. Project Decommissioning at Relicensing; Policy Statement, 60 Fed. Reg. 339, FERC Stats. & Regs. ¶ 31,011, at 31,232 (1994). Thus, the process can look much like a section 4(e) and 10(a)(1) analysis, where the Commission “has the obligation to balance environmental concerns with the need for power development.” *State ex rel. State Water Res. Control Bd. v. FERC*, 966 F.2d 1541, 1550 (9th Cir. 1992) (“SWRCB”); *see also, United States Dep’t of Interior v. FERC*, 952 F.2d 538, 545 (D.C. Cir. 1992).

Environmental and recreational considerations can weigh against or prevail in a proposed project decommissioning. *Niagara Mohawk Power Corp.*, 83 FERC ¶ 61,226, at 62,008 (1998). In fact, the DEIS itself acknowledges that “[i]n addition to power and development, under the FPA the Commission must give equal consideration to the purposes of energy conservation; the protection, mitigation of damage to, and enhancement of fish and wildlife (including related spawning grounds and habitat); the protection of recreational opportunities; and the preservation of other aspects of environmental quality.” DEIS at 4-5. As the Ninth Circuit has found:

‘Equal consideration’ is not the same as ‘equal treatment,’ and equal consideration does not dictate FERC’s acceptance of the result proposed by the fish and wildlife agencies. FERC must balance the public interest in all of its stated dimensions, give equal consideration to conflicting interests, and reach a reasoned factual decision.

SWRCB, 966 F.2d at 1550. Under the FPA, the Commission has a different role to play than do the resource agencies, which are operating under much more limited mandates. The importance of the balancing required in the Commission’s public interest determination should not be understated.

The Commission cannot properly perform its function, however, if the Staff documents on which its decisions rely are fundamentally flawed. And as discussed in Sections II-VII, *supra*, the DEIS is analytically and informationally deficient in a number of critical ways. It grossly overestimates the environmental benefits of the proposed decommissioning, contrary to all of the scientific evidence, and improperly relies on the claimed results of outdated, secret PG&E economic analyses and on resource agency position statements supported by neither empirical data nor scientific theory.

The DEIS also grossly and summarily underestimates the adverse effects on existing riparian ecosystems, socioeconomics, recreation, consumptive water users, and firefighting, again without proper evidentiary support and based on incorrect assumptions and flawed analyses. As discussed above in Parts IV and V, its estimates of the costs of socioeconomic and recreation impacts are simply incorrect. And the DEIS categorically classifies—improperly—all adverse impacts on existing wetlands and riparian ecosystems as either “short-term” or “minor,” without evaluating whether the post-decommissioning outcome is more or less desirable or valuable than the existing conditions. DEIS at 109, 112-13. Nor does it engage with or analyze the true fire risk created by the decommissioning. Based on these skewed conclusions, the Staff then blithely concludes that the decision to authorize the proposed decommissioning is a no-brainer. The record shows otherwise.

The DEIS is a document that does not meet NEPA's procedural standards and upon which the Commission cannot rationally base its public interest determination. To rule on PG&E's License Surrender Application and Proposed Decommissioning Plan, the Commission must have a full record on the community impacts, fisheries, and other issues in this proceeding that is adequate to allow the Commission to make informed decisions. *See, e.g., Sierra Club v. Froehlke*, 486 F.2d 946, 950 (7th Cir. 1973). The DEIS should be modified and corrected and informed by the FPA responsibilities of the Commission, in order to provide the Commission with accurate, independent, and scientifically-based evaluations of the whole range of impacts of the proposed decommissioning. In its current form and substance, the DEIS cannot provide the basis for an assessment by the Commission of the public interest.

X. AGAINST THE KNOWN IMPACTS AND COSTS OF DECOMMISSIONING, THE BURDEN OF THE DEIS TO DEMONSTRATE CLEAR GAINS IN THE PUBLIC INTEREST IS HIGH.

When the known impacts and costs of PG&E's proposed decommissioning of Project No. 606 are considered in their entirety, it is plain that the adverse impacts upon the Whitmore community and segments of the population within the Project community are very high and in some cases, will be disastrous. The lack of water for any individual household, the potential loss of commercial timber lands that would support a person's job, or the inability for a disabled person to fish and enjoy the beauties of a lake are serious harms. While it is not easy to quantify these values, we have developed a table (Attach. B hereto) that attempts to identify the loss to individuals and the community if PG&E's decommissioning of Project No. 606 proceeds, and a rough estimate of the dollar impact. The table is not the product of a sophisticated methodology or analysis,

but is an attempt by those living in and most familiar with the Project community—*i.e.*, those most directly affected by the proposed decommissioning—to illustrate why impacts and costs that are described as modest by the Commission Staff are not modest at all and perhaps to explain why the sentiment in the community is so overwhelmingly opposed to the action that PG&E would have the Commission approve and authorize. What the table illustrates is a community fighting for its quality of life and perhaps its survival.

What the table cannot demonstrate is the sheer frustration of the community to understand why the Commission Staff cannot and will not seriously consider the Community Alternative. DEIS at 33-34. Community-based action is necessarily slow; it requires talking to individuals in order to ascertain what they believe are the pros and cons of a proposed plan of action and then finding out, on a collective basis, what the merits are, both individually and for the community. In its search for a consensus and agreement on what is best for the community, the government of Shasta County and others have concluded that leaving Project No. 606 in place would allow them to continue to enjoy the benefits that their individual and community efforts have created over a century or more of development and changes.

In this instance, that community consensus also produced a solution that eluded the Commission's own process in 2005. After PG&E failed to file an application to relicense the Kilarc-Cow Creek Project, the Commission issued a public notice on April 7, 2005, soliciting competing applications for the Project from other interested entities within 90 days.⁵¹ That public notice did not mention or discuss any possibility that the Project would be decommissioned if no one responded. When the sole entity that

⁵¹ eLibrary No. 20050407-3064.

timely responded to the public notice did not complete and submit its license application within the 18 months required, the Commission denied it an extension of time.⁵² Shortly after that point, the process towards decommissioning the Project facilities re-started. As the details of PG&E's decommissioning plan became clearer, affected individuals had to focus on the direct and indirect impacts upon their lives. It gradually became evident, as more details on decommissioning impacts surfaced, that this matter could not be left to a decision-making process that ignored the interests of the local community.

At bottom, the public interest involves many factors, and the Shasta County and Project community's interests are and should be a part of any Commission consideration of what the public interest is and requires. In addition, this case requires proper treatment of the water rights adjudicated under the State's water law, which individuals have relied upon and based on which they have invested their efforts and funds, for over 100 years in some instances. *See* Section 27 of the Federal Power Act.⁵³ Finally, Shasta County has continued to attract new residents and businesses, and to these people as well as the existing residents and businesses, stability of their water supply is critical. Issues about the geology and the sustainability of current water supplies is a real issue if Kilarc Lake is to be removed.

⁵² Letter from J. Mark Robinson, Director, Energy Projects, FERC, to Wayne Rogers, President, Synergic Energy Services, LLC (Jan. 8, 2007), eLibrary No. 20070108-3002. It should be noted that 18 months is a very short time period to complete the Commission's requirements for filing an acceptable license application. A preliminary permit allows three years to prepare a license application.

⁵³ Section 27 provides “[t]hat nothing herein contained [in the FPA] shall be construed as affecting or intending to affect or in any way to interfere with the laws of the respective States relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein.” 16 U.S.C. § 821.

Listing the costs and explaining the community's concerns do not capture another important dimension: the impact of time in reaching certainty. Regulated corporations like PG&E and governments may find delay and uncertainty annoying, but not necessarily unduly burdensome—especially where, as in this case, the burdens mostly fall on others. However, people have limited time to enjoy life. Prolonging these proceedings without adequately addressing the need to resolve the water rights problem is simply not right. Nor should a community's peace of mind be disturbed by unending and sequential litigation and uncertainty. Nor should people's ability to take business risks, make improvements to their property, or stay in a location be unfairly prejudiced by the risk of not having water, or not having the quality of life they hoped for, because of unnecessary rigidities in the way that agency regulations are being applied, especially when the underlying laws themselves were never intended to produce such results. We cannot put a price or cost on that, but the Commission should consider that cost to each individual in the Project community and on the community as a whole in its assessment and determination of what the public interest in this decision involves.

XI. THE DEIS IS INADEQUATE BECAUSE IT DOES NOT EVALUATE THE IMPACTS OF MEASURES RECOMMENDED AND NECESSARY TO MITIGATE THE SEVERE ADVERSE IMPACTS OF THE PROPOSED ACTION

The DEIS is inadequate because Commission Staff erroneously limits itself to the PG&E License Surrender Application and Proposed Decommissioning Plan, and fails to adequately consider measures necessary to mitigate the severe adverse impacts of major elements of PG&E's Proposal. Specifically, the PG&E LSA and Proposed Decommissioning Plan assume—correctly—that the ADU would have to have a new

diversion to replace their existing diversion from Hooten Gulch.⁵⁴ The DEIS even makes some suggestions about the nature of the new diversion, albeit not necessarily sound. DEIS at 207. That there must be a replacement to supply the ADU with water to which they are entitled is a fact. Accordingly, the DEIS cannot be complete unless it also evaluates the “reasonably foreseeable future” impacts of replacing the current South Cow Creek diversion and Hooten Gulch with a replacement diversion. DEIS at 36, citing NEPA. The current DEIS does not do so.

Similarly, the DEIS recommends the decommissioning of the Kilarc Development, but it does not identify, evaluate, or recommend any specific measures to mitigate the adverse impacts of the PG&E decommissioning proposal on the local community, other than by concluding that there were equivalent alternatives, such as equivalent parks and equivalent water sources for fire fighting. These comments, as well as other record evidence, demonstrate that the DEIS “equivalents” are anything but that. See Parts V, VI, above. Because these alternatives are *not* equivalent, Staff has an obligation to consider what mitigation measures would offset, at minimum, the Proposed Action’s negative impacts on recreation, fire protection, and groundwater recharge and to evaluate their environmental impacts.

Under these circumstance, the DEIS should be revised to identify, fully evaluate, and recommend those separate mitigation measures for the County that: (1) acquire or create a water source nearby that will be sufficient to provide an equivalent water supply for firefighting in the community; (2) acquire, create, and maintain a new park to replace

⁵⁴ See LSA Executive Summary at ES-13, which states, after explaining the impacts on the landowners of the removal of Hooten Gulch: “These water users would have to develop alternate points of diversion.”

Kilarc Lake in a convenient location with comparable facilities accessible to the disabled near the Whitmore area; and (3) maintain the groundwater effects of Kilarc Lake throughout Whitmore. Workable mitigation measures, as well as the environmental impacts of implementing each of these separate mitigation measures, should be fully explored in the DEIS. Absent this evaluation, the Commission would simply not know: (1) what the full impact of its decision is, as the County and others strive to replace the benefits that were lost when Kilarc Lake was decommissioned; or (2) what its options are to mitigate adverse impacts that would otherwise result from the Commission's decision.

The public interest requires that if the Commission grants PG&E's request to decommission the entirety of Project No. 606, then replacements must be found to prevent or mitigate the harmful impacts that would arise from the decommissioning. Just as the Commission expects PG&E to mitigate the impacts of the deconstruction activities to be performed as part of the decommissioning, so as not to do more damage to the land, water, and wildlife, it is equally incumbent upon PG&E to demonstrate its plan to mitigate the adverse impacts of its proposed decommissioning on the human residents of the Project area. As things now stand, the DEIS recommends a decision that may destroy an entire community and wreck lives. This outcome cannot be and is not in the public interest.

Since the current DEIS lacks that complete assessment and evaluation of necessary mitigation measures, it gives an incomplete and inadequate picture to the Commission of the actual impacts of its recommended action and the Commission's options for mitigating those impacts. Without this information, the DEIS fails both the

NEPA purpose of informing the Commission and the public and the FPA purpose of assisting the Commission in its determination of what is in the public interest.

XII. THE DEIS SHOULD RECOMMEND ADDITIONAL CONDITIONS IF IT RETAINS ITS RECOMMENDATION THAT THE COMMISSION APPROVE PG&E'S SURRENDER BY OF ITS PROJECT NO. 606 LICENSE.

The Commission Staff recommended surprisingly modest and insufficient conditions to be attached to any Commission Order authorizing the surrender of PG&E's Project No. 606 license and decommissioning. In order to properly protect the interests of the community if PG&E is authorized to proceed, Tetrick Ranch and Evergreen Shasta Power, LLC, recommend that the Staff revise its conditions and augment them, in the public interest as shown in the record, as follows:

If the FEIS authorizes the decommissioning of the Cow Creek Development by PG&E, the Staff should recommend that the Commission's Order be conditioned upon the following:

- Condition 1. PG&E shall maintain the present diversion up to and including Hooten Gulch and its connection with the Abbott Ditch until a new replacement diversion has been authorized and is operating to deliver to ADU their adjudicated water rights;
- Condition 2. PG&E shall maintain the present diversion to Hooten Gulch until such time as Tetrick Ranch has been authorized and installs a new replacement diversion to allow its uninterrupted operation of the Poulton Project, or other resolution acceptable to the owner of the Poulton Project is reached; and
- Condition 3. Whenever the later of the above two conditions is satisfied, PG&E shall cease power operations and commence and complete the decommissioning of such unutilized portions of the South Cow Creek diversion and Cow Creek Development as required by the Commission, after a mutually agreed upon plan of decommissioning is reached among the affected landowners.

Upon satisfactory completion of the decommissioning of the Cow Creek Development, PG&E shall be relieved of any further obligations under the Project No. 606 license as to the Cow Creek Development.

As to the Kilarc Development, it is evident that PG&E's concern is that it no longer be burdened with the operation and maintenance of the Project. *See, e.g.* LSA Executive Summary at ES-1. Nevertheless, the harms to the public of PG&E's proposal are so manifest, that the Commission should make any approval of the decommissioning of the Kilarc Development contingent upon the following conditions:

- Condition 1. PG&E shall not be required to decommission Kilarc Lake, provided that it establish a Fund, not to exceed \$10.5 million, and further provided that it transfer such Fund to Shasta County, so that all interest and income earned by the Fund shall be used to maintain and improve Kilarc Lake for recreation, fire fighting, water table stabilization, and other public purposes. Upon receipt of such Fund, the County shall receive title to all the Kilarc Development lands and rights, and shall thereafter assume all responsibility for the maintenance, care, and regulatory requirements necessary for the safe operation of Kilarc Lake. The County may use moneys in the Fund for necessary repairs and other dam safety measures at Kilarc, and otherwise be subject to reasonable accountability practices during the time that there is any balance in the Fund. If the County ceases to own Kilarc Lake for any reason, or if it starts power operations or causes power operations to commence at the site, it shall return any balance remaining in the Fund to PG&E or its successor, for return to the PG&E consumers.
- Condition 2. In the alternative, PG&E may agree to transfer the Kilarc Development, including its power operations, lands, and all project features, to the County for transfer to a qualified buyer in the event that such buyer expresses an interest within 60 days of any Commission Order authorizing the license surrender. PG&E shall cooperate with such Buyer to acquire a license, exemption, or other authorization to operate the power facilities at Kilarc Lake, within 4 years of issuance of a final Order authorizing the PG&E Surrender and its election of this Condition 2. If such Buyer is authorized to operate the power facilities within that four year period, the County shall require as a condition of the transfer of Kilarc Lake to the Buyer, that the Buyer shall operate Kilarc Lake in a manner that promotes its public uses, consistent with any authorizing Order. If no qualified buyer is able to secure authorization to maintain power operations within four years, this Condition 2 shall cease to be a condition, PG&E shall cease power operations and its surrender of Project No. 606 shall become final upon fulfillment of Condition 1.

These additional conditions would allow a limited time for the parties to resolve other issues, but still prescribe the conditions allowing PG&E to take action that will allow it to surrender its license. After a period of no more than four years in the case of Kilarc, the Commission and PG&E would have certainty. As to the South Cow Creek

diversion and facilities, the speed with which that is resolved is left to PG&E and the affected parties in other forums.

XIII. UNDER THE UNUSUAL CIRCUMSTANCES PRESENTED, FERC STAFF SHOULD COMPLETE THE RECORD TO REFLECT THE COMMENTS RECEIVED, AND THEN REFER THE RECORD TO THE COMMISSION FOR DECISION.

Determining what the public interest is in this case should not be a difficult matter for the Commission. As demonstrated above, the claimed environmental benefits from decommissioning are likely minimal or non-existent and are not supported by sound science or technical analysis. Even if decommissioning were successfully achieved, which is another matter in doubt since PG&E's Proposed Decommissioning Plan leaves many issues unclear and the company can claim no deep experience in this regard,⁵⁵ the benefits claimed are at most limited in scope and uncertain and may not occur for another half century or more, at best.

In contrast, there is no doubt that there will be significant immediate short-term and long-term adverse impacts on the Project community if Kilarc Lake is drained and Hooten Gulch dries up during the agricultural growing season. To add insult to injury, the people adversely affected will also be required to pay PG&E, through their electricity rates, to inflict those harms. And they are being required to take costly legal actions—legal actions that benefit PG&E financially by allowing it to continue to operate the Kilarc-Cow Creek Project under its old license terms and conditions—in order to halt the decommissioning and loss of water that affects their livelihoods and homes, the loss of

⁵⁵ See statement of Matt Fogelson, Counsel to PG&E: "PG&E is not in the business of decommissioning projects. This, we've never done it. This is the first time we've ever done it." Public Hearing Tr. at 51:15-17 (Oct. 19, 2009), eLibrary No. 20091019-4010.

tax revenues to the County, destruction of the area's primary water source for fire fighting, the net loss of wildlife habitat for both aquatic and terrestrial species, and the loss of important recreation facilities.

Despite the large and overwhelmingly negative impacts upon human beings and their environment, the DEIS recommends decommissioning. This recommendation is wrong. It is hard to imagine how the minimal fishery benefits realistically expected from the proposed decommissioning could possibly outweigh the large adverse impacts on the local community—loss of water for drinking water, for irrigation, for fighting fires in the summer, and swimming and fishing—the resident fishery, and on riparian ecosystems that have developed over the past century based on the flows produced by the Kilarc-Cow Creek Project. Moreover, not only do these adverse impacts dwarf any potential environmental benefits, any potential environmental benefits are distant and uncertain. Any application of basic present value and expected value concepts would result in valuing those potential benefits as virtually zero.

The public has had opportunities to file written comments and to attend public meetings; but in the end, it is difficult to reconcile the Staff recommendation with the evidence, unless it was always inevitable that Staff would not refuse the licensee's request to surrender its license and decommission the Project, whatever the consequences for the community. In these kinds of situations—where the evidence appears to be overwhelmingly in favor of not decommissioning, where there is a viable alternative, and where the history is awkward at best—it may be best for the Staff to refrain from making any recommendation, and to instead transmit the entire record to the Commission with a clear, accurate, and complete identification and evaluation of the impacts of the proposed

decommissioning, so that the Commission can weigh the benefits and burdens for itself and make the decision as to what action would be in the public interest.

Tetrick Ranch and Evergreen Shasta Power, LLC, have made it plain through their filings with the Commission that they are prepared to operate the existing Project and will promptly file for such authorization as is required to permit them to do so. The most satisfactory resolution would be a cooperative effort among all the principal parties, including the community, the resource agencies, and PG&E, and the prompt moving forward of the Project operations under a more modern license or exemption that would enable the Project to be viable. The current license is over 30 years old and lacks many of the more environmentally sensitive terms and conditions of licenses issued today. PG&E, which is statutorily barred from re-filing for a new license, and its consumers would not lose from the transfer of the Project to another qualified operator; indeed, PG&E would gain the transfer price, and PG&E's ratepayers would save the \$14.5 million or more that PG&E currently proposes to spend (and charge its customers) to tear down the Project facilities.

The community has been repeatedly told that even though there is a plain solution in sight, the Commission's rules do not allow such a solution to even be considered. Public Hearing Tr. at 45-48 (Oct. 19, 2009), exchange among Ms. Rachel Price and Ms. CarLisa Linton-Peters of Commission Staff and Mr. Wroe, esp. Tr. at 46 lines 8-9. In one instance, FERC Staff suggested that the Commission regulations might require the Commission to oversee the completion of decommissioning of Project No. 606 before considering whether to authorize hydro operations in the Cow Creek System. Comments of Ms. Linton-Peters and Ms. Alvey of Commission Staff, esp. Tr. at 10, lines 18-19.

The Commission's rules, however, certainly do not require foolish and wasteful results, or the wanton destruction of viable hydropower facilities; to interpret them in that way is to put form above substance and would be just plain ridiculous. The Commission clearly has the authority to approve the PG&E surrender without ordering the decommissioning of the Project facilities, so that the proper disposition of the Project facilities must be addressed head-on by all affected parties; and it would be better to do so now.⁵⁶ The Federal Power Act did not intend to leave the Commission powerless to fulfill its statutory obligations, or require it to order the destruction of viable hydropower projects. Notably, the Commission, among other options, has the authority to convene a settlement conference of all affected parties, including the public, and to supervise a settlement negotiation. Tetrick Ranch and others requested such a supervised proceeding, and there has been no FERC action to date on that request. Motion Requesting Settlement Process of Tetrick Ranch, Evergreen Shasta Power LLC, Shasta County, Sierra Pacific Industries Inc., and the Abbot Ditch Users (Jan. 22, 2010), eLibrary No. 20100122-5124.

There are good grounds for the Commission to authorize another operator under the circumstances in this case, and the Commission has ample authority to set in process the steps to do so. When Tetrick Ranch and Abbott Ditch Users met with PG&E prior to the filing of the LSA, they had good reason to assume that steps would be taken by PG&E to address the continuity of their water supplies, but that never happened.⁵⁷ While

⁵⁶ See, e.g., *Traverse City Bd. of Light & Power*, 114 FERC ¶ 62,274 (2006).

⁵⁷ See Letter from Matthew A. Fogelson, PG&E, to Gary Stacey, CDFG, stating (at 2) that PG&E's license surrender "must be tailored so that the goals are achievable with minimum impact to the local community of water users, another goal of the Project Agreement," citing Attach. A of the 2005 Agreement as making "clear that the parties wished to preserve the rights of other water rights holders" (at 2 n.1), (Dec. 10, 2007), eLibrary No. 20071213-0206.

the community has raised its concerns, no meaningful or adequate mitigation measures have been offered by PG&E.

Commission Staff's primary task is to assure that there is a proper record for the Commission to determine how best to proceed. It is Tetric Ranch and Evergreen Shasta's suggestion that Staff correct the DEIS to accurately identify and evaluate the impacts of the proposed decommissioning, including the minimal or non-existent fishery benefits of that Proposed Action. If at that point Staff still feels that for any reason it is still somehow limited in its ability to make a recommendation in favor of the Community Alternative and denying PG&E's proposal to decommission the Project, Commission Staff should simply refer the EIS and the rest of the record to the Commission, and ask that the Commission itself make a decision weighing the benefit and burdens of the Proposed Action, without an express Staff recommendation. To the extent that Commission Staff is unable to accurately identify and evaluate impacts in the EIS due to lack of information, Staff should provide the Commission with a detailed explanation of those holes in the record, so that the Commissioners fully understand the extent to which they are being asked to decide without scientific support.

In addition to placing the value judgments necessary to weigh disparate types of impacts firmly in the hands of the Commission, there are two additional elements that the Commission itself would be better suited to evaluate than Staff. The first is the conflict between the proposed decommissioning and the emphasis in recent national policies to encourage and promote a reduction in the carbon footprint in all our activities. Indeed, Secretary Chu has been outspoken in his desire to promote the development of

hydropower.⁵⁸ He also led the effort to engage the federal agencies in a historic agreement to coordinate their efforts in that direction in 2009.⁵⁹ In short, the passage of time has made the decommissioning of Project No. 606 a bad idea. The record demonstrates it is a bad idea. And the Commission has no obligation to blindly accept, strain to rationalize, and preside over the implementation of that bad idea—particularly when that bad idea is inconsistent with the FPA’s primary statutory goal of promoting hydropower consistent with the public interest and other national policies.

The second element that the Commission should consider also concerns timing. There is no doubt that decommissioning will halt the supply of water to the Abbott Ditch Users and Tetric Ranch. PG&E has claimed that it is solely the ADU’s responsibility to find a replacement diversion from which to obtain their adjudicated, pre-1914 water right. LSA App. O at O-11. As the DEIS recognizes, DEIS at 207, the replacement for water delivery to Hooten Gulch if decommissioned could cost the ADU millions of dollars, and there is no certainty that it would ever be approved by the agencies or that it could be replaced.

There is currently a proceeding before the State Water Resources Control Board as to the Clean Water Act Section 401 certification required before the decommissioning can be authorized and commenced.⁶⁰ There will likely be another proceeding on the ability of PG&E to interfere with the adjudicated water rights on South Cow Creek.

⁵⁸ *Chu pledges to push hydropower*, HydroWorld.com, http://www.hydroworld.com/index/display/article-display/6337973254/articles/hydro-review/volume-28/issue-8/departments/breaking-news_hydro.html.

⁵⁹ Memorandum of Understanding for Hydropower Among the Dep’t of Energy, the Dep’t of the Interior, and the Dep’t of the Army, available at <http://www.usbr.gov/power/Signed%20Hydropower%20MOU.pdf>; see also Press Release, U.S. Dep’t of Energy, DOE, DOI and Army Corps of Engineers Sign Memorandum of Understanding on Hydropower (Mar. 24, 2010), available at <http://www.energy.gov/news/8793.htm>.

⁶⁰ Tr. at 108-109.

There are clearly many years of litigation and regulatory proceedings ahead before there is any certainty as to the outcome, if Commission Staff ignores the rights of the water users and the alternatives proposed by the community, and views the DEIS issuance as but one task on the road to pre-ordained decommissioning. In the meantime, PG&E, who brought this misfortune upon the community, continues to enjoy the hydropower generated from the Project under an antiquated license that is doing nothing much to improve the fishery stocks and conditions in the Cow Creek System, and will continue to do so indefinitely under its annual license.

Under these unhappy circumstances for everyone but PG&E, it appears that PG&E should be required to take some responsibility for at least cooperating with the Project community, which supports the continued operation of the Kilarc and Cow Creek Developments.

Accordingly, it seems altogether reasonable for Commission Staff to defer the determination of the public interest to the Commission, to refrain from recommendations that are unsupported, and to request that the Commission exercise the authority it has under the Act to call a settlement conference under the supervision of a settlement judge, to resolve the entirety of the problem before it, including consideration of the issue of the water rights which, while they must be resolved consistent with state law, must be fully evaluated as part of the Commission's NEPA analysis, the Federal Power Act, and the public interest determination required by the FPA.

XIV. CONCLUSION

As discussed above, Staff should significantly revise the DEIS to fully disclose the negative impacts of decommissioning, and to properly analyze a full range of reasonable alternatives, including the Community Alternative. It should also identify and

evaluate the impacts of the mitigation measures. In its present state, the DEIS is too flawed to be the basis for Commission decision-making. Staff should also revise its recommendation that the Commission allow decommissioning, as inconsistent with the public interest. If Staff feels that for any reason it is still somehow limited in its ability to make a recommendation in favor of the Community Alternative and denying PG&E's Proposed Decommissioning Plan, Staff should instead simply: (1) present all of the information to the Commission with no recommendation as to whether the decommissioning should proceed, so that the Commission can examine the evidence, perform the balancing necessary, and reach its own decision; and (2) recommend that the Commission take steps to facilitate a settlement in this matter that meets the legitimate needs of all parties. If Staff continues to recommend the surrender of the Project No. 606 license, it should condition the surrender so the result is in the public interest, as suggested herein. Finally, because the transcript of the August 17 DEIS public meeting is not available at this time, and NMFS has not yet responded to Shasta County's pending FOIA request on issues related to this proceeding, Tetrick Ranch and Evergreen Shasta Power, LLC, reserve the right to supplement these comments after these materials are made available to the public.

Respectfully submitted,

/s/ Frances E. Francis

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August 25, 2010

ATTACHMENT A

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Pacific Gas and Electric Company

Project No. 606-027
Kilarc – Cow Creek
Hydroelectric Project

AFFIDAVIT OF ROBERT L. CAREY

- 1 1. My name is Robert Carey. I am a Certified Wildlife Biologist with more than 17
- 2 years of experience working in northeastern California. I have been involved in
- 3 issues related to fisheries in the Cow Creek drainage since 1993. A statement of my
- 4 educational and professional qualifications and experience is attached as Exhibit 1. I
- 5 am currently employed as the Senior Biologist by VESTRA Resources, Inc. located at
- 6 5300 Aviation Drive, Redding, CA 96002.

- 7 2. I am very familiar with the Old Cow Creek and South Cow Creek drainages and the
- 8 surrounding landscapes. The focus of my professional experience in this region has
- 9 been the ecology of both terrestrial and aquatic habitats, the wide variety of species
- 10 that occupy these habitats, and how management activities can affect them.

- 11 Specifically regarding Chinook salmon (*Oncorhynchus tshawytscha*) and steelhead
- 12 (*O. mykiss*) (an anadromous form of rainbow trout), between 2002 and 2004, I
- 13 conducted a series of 11 snorkel surveys in Old Cow Creek and South Cow Creek
- 14 with the California Department of Fish and Game (CDFG) in an effort to verify the
- 15 presence of anadromous salmonids in reaches upstream from the PG&E diversion
- 16 dams and to evaluate the habitat quality within these reaches with respect to
- 17 anadromous fish.

- 1 3. It is accepted by CDFG that salmon are primarily restricted to lower reaches in the
2 Cow Creek drainage and the primary concern with respect to the Kilarc and Cow
3 Creek hydropower facilities is steelhead trout. The DEIS refers to salmon observed
4 in the bypass reach on South Cow Creek (page 84) but does not cite any details
5 regarding this statement. To the best of my knowledge there are no substantiated
6 records of salmon above the base of Wagoner Canyon although there was an alleged
7 salmon carcass reported from Mill Creek near the PG&E diversion several years ago.
8 This report was never verified and is not contained in any State databases or reports
9 and has not been considered valid by local biologists.
- 10 4. It must be noted here that steelhead have been extensively stocked in the Cow Creek
11 drainage as recently as 2000 as stated in the Draft Environmental Impact Statement
12 (DEIS) prepared by the Federal Energy Regulatory Commission (FERC) for the
13 Kilarc-Cow Creek Hydroelectric Project. If native (wild) steelhead ever occurred in
14 this watershed, they have likely interbred with introduced hatchery steelhead. As
15 such, the lineage of any fish in this watershed is uncertain. Note also that anadromy
16 can skip generations and the progeny of anadromous adults may migrate to the ocean
17 or may remain in freshwater their entire lives. Thus, differentiating between
18 anadromous and resident rainbow trout is difficult, if not impossible at most life
19 stages, and particularly with juveniles.
- 20 5. In addition to snorkel surveys, I have traversed numerous segments of Old Cow
21 Creek, South Cow Creek, and several tributaries on foot and measured physical
22 parameters and assessed migration barriers. In general, the habitat quality above the

1 PG&E facilities on both Old Cow Creek and South Cow Creek lacks deep holding
2 pools for adult fish but does provide some rearing habitat for juvenile fish. The
3 substrate in Old Cow Creek is less suitable than that of South Cow Creek because the
4 geology of the Old Cow Creek drainage is comprised of finer material that limits
5 gravel within the stream channel. The hydrology of this region is driven by climate
6 and both Old Cow Creek and South Cow Creek are fed by seasonal precipitation
7 (winter rains) and snow melt in the spring and early summer. Compared to coastal
8 zones where flows are fairly constant in streams year-round, both of these channels
9 fluctuate widely with high winter and spring flows and very low late summer and fall
10 flows.

11 Fish within this region have adapted to these seasonal fluctuations. Steelhead
12 in the Sacramento River are believed to migrate upstream to spawn with the onset of
13 winter rains and may reach the upper watershed elevations in the late winter and early
14 spring (March and April) when water temperatures and relatively higher flows
15 provide suitable conditions. Adults spawn and then many die. However, roughly
16 11% of adults in some studied systems had spawned more than once.¹ Adults that do
17 survive after spawning must return downstream within a short time while high flows
18 still provide passage or become stranded in the upper watershed where limited food
19 resources and lack of deep water habitats reduce their chance for survival. Eggs are
20 laid in redds (depressions that adult female fish excavate in the gravel substrate) and

¹ Leo Shapovalov & Alan C. Taft, The Life Histories of the Steelhead Rainbow Trout (*Salmo gairdneri* gairdneri) and Silver Salmon (*Oncorhynchus kisutch*) with Special Reference to Waddell Creek, California, and Recommendations Regarding Their Management (1954) 98:1-375.

1 incubate for several weeks depending on water temperature. Once juveniles emerge
2 from the gravel, they rear in their natal stream for one or two seasons before
3 migrating to the ocean to mature. This out-migration typically coincides with the
4 onset of winter rains that increase flows and enable fish to move freely. These fish
5 generally spend one to four years in the ocean before returning to the spawning
6 grounds as reproductive adults. In order to spawn in these tributaries, fish must
7 migrate long distances and bypass natural and man-made obstacles.

8 6. *Old Cow Creek and Whitmore Falls:* Currently the Kilarc Diversion structure does
9 not pose an obstacle to fish passage because it does not completely obstruct the
10 channel. There are 2 natural obstacles downstream; one is a 14 foot high waterfall
11 referred to as OC-11 that is accepted by all parties to be a complete barrier to
12 upstream fish migration. OC-11 is 1.5 miles downstream from the Kilarc Diversion.
13 The other barrier is Whitmore Falls, a natural waterfall with a vertical drop of roughly
14 9.5 feet (DFG 2002). Please note here that the DEIS states the height of Whitmore
15 Falls as 12-14 feet on page 80. Whitmore Falls is a significant natural obstacle to fish
16 migrating upstream in Old Cow Creek and is located 8.8 river miles downstream from
17 the Kilarc Powerhouse, 11.4 river miles downstream from OC-11, and 12.9 river
18 miles downstream from the Kilarc Diversion (Exhibit 3, VESTRA, GIS analysis,
19 2010). Anadromous fish have never been observed above Whitmore Falls and there
20 is no evidence that fish are able to ascend above this naturally occurring waterfall.
21 Thus, it is unlikely that the removal of the Kilarc facilities on Old Cow Creek will
22 benefit anadromous salmonids upstream of Whitmore Falls. The waterfall was
23 considered to be a complete barrier to upstream migration until 2002 when the CDFG

1 visually assessed this site and concluded that it might be possible for fish to ascend
2 this waterfall at some flows.

3 7. To justify their opinion CDFG cites a study conducted by Powers and Orsborn (1985)
4 that used a combination of variables to predict the potential for fish passage. Powers
5 and Orsborn used observational studies and mathematical equations for predicting the
6 leaping ability of salmon and steelhead.² Their methods estimated the maximum
7 vertical height that a steelhead in peak physical condition could leap as just under 11
8 feet.

9 The vertical leaping capabilities are, however, in part determined by the
10 physical condition of the fish. In order to take that physical condition into account,
11 Powers and Orsborn calculate the maximum distance a fish can leap with an equation
12 that includes an assigned coefficient of fish condition (C_{fc}) value, based on the
13 amount of time the fish has been in fresh water, the distance the fish has migrated,
14 how close the fish is to spawning condition, and distance to the spawning grounds.
15 As anadromous fish proceed upstream, their condition deteriorates because they stop
16 feeding and must spend large amounts of energy migrating upstream.

17 Whitmore Falls is located more than 250 miles upstream from the ocean, and
18 migrating fish at this elevation have been in fresh water for an extended time. It is
19 clear in the case of Whitmore Falls, that fish at this location would likely have a C_{fc}
20 value of significantly less than 1.00 (“Bright; fresh out of salt water or still a long

² Patrick R. Powers & John Orsborn, *New Concepts in Fish Ladder Design: Analysis of Barriers to Upstream Fish Migration, Volume IV or IV; Investigation of the Physical and Biological Conditions*

1 distance from spawning grounds; spawning colors not yet developed”), and probably
2 less than 0.75 (“Good; in the river for a short time; spawning colors apparent but not
3 fully developed; still migrating upstream” (Powers and Orsborn at 12)). Powers and
4 Orsborn describe the condition of fish with a C_{fc} of 0.50 as “Poor; in the river for a
5 long time; full spawning colors developed and fully mature; very close to spawning
6 grounds,” which best describes the circumstance for fish at the base of Whitmore
7 Falls.

8 The maximum leaping height for steelhead with a C_{fc} of 0.75 approaches 6
9 feet as determined by Powers and Orsborn. The maximum height a steelhead with a
10 C_{fc} of 0.50 can leap approaches only 3 feet. In evaluating the Oroville Project, a
11 state-owned hydropower project (FERC Project 2100), the California Department of
12 Water Resources reported 6.1 feet as a maximum leap height for steelhead at that
13 location, another Central Valley tributary (the Feather River) over 100 miles
14 downstream from Whitmore Falls.³ Whitmore Falls exceeds 9.5 feet in height and as
15 such, it is unlikely that steelhead could clear this natural barrier in part because the
16 fish that have traveled this far from the ocean are in relatively poor condition. It
17 would be a challenge even if the steelhead were fresh out of salt water.

18 In addition to vertical height and C_{fc} , there are other issues raised by Powers
19 and Orsborn’s 1985 study that provide additional evidence that steelhead are not able

Affecting Fish Passage Success at Culverts and Waterfalls, Project No. 198201400 (1985).

³ *Matrix of Life History and Habitat Requirements for Feather River Fish Species*, at 41-5 (2004). FERC Project No. 2100. Available at http://www.water.ca.gov/orovillerelicensing/docs/wg_study_reports_and_docs/EWG/040528a/04-28-04_fish_stellhead.pdf.

1 to pass Whitmore Falls. Turbulence and whitewater both reduce a fish's ability to
2 leap. Turbulence tends to disorient fish and causes them to leap in directions that are
3 not the easiest route. Whitewater entrains bubbles, reducing the water's density and
4 thus the fishes' ability to propel themselves through a less viscous medium. The
5 Powers and Orsborn study considers this phenomenon and acknowledges that a fish's
6 maximum potential swimming and leaping ability is reduced in turbulent whitewater.
7 As such, because higher flows at Whitmore Falls create more turbulence and
8 whitewater, even if the vertical elevation of the Falls were reduced due to a greater
9 volume of water, the hydraulic forces (turbulence, whitewater, and velocity) act to
10 keep fish from migrating above Whitmore Falls.

11 8. To the best of my knowledge, the only basis for the assumption that steelhead can
12 migrate past Whitmore Falls can be found in a 2002 Memo that I found in the public
13 CDFG files for Old Cow Creek, which is attached to my Affidavit as Exhibit 2. In
14 discussions with other CDFG staff, the 2002 Memo was referred to as the only source
15 of information as to the ability of steelhead to migrate past Whitmore Falls. That
16 memo does not indicate a visual sighting or other evidence of steelhead successfully
17 ascending Whitmore Falls. Instead, it expresses an opinion, based on a visit to the
18 Falls and an application of Powers' and Orsborn's study results that I have explained
19 does not appear correct, that a migrating steelhead at Whitmore Falls might
20 successfully migrate past this natural obstacle or make the jump required at some
21 theoretical high flow.

1 It should be noted here that Old Cow Creek and Whitmore Falls are not
2 isolated in a remote area where observing fish would be difficult. In fact, Old Cow
3 Creek passes beneath Whitmore Road, a heavily traveled public road just upstream
4 from Whitmore Falls (see Exhibit 3). Whitmore Falls is visible from Whitmore
5 Road, and although it is on private property, it is used extensively as a recreation site
6 by local residents. There are numerous residences adjacent to Old Cow Creek
7 between Whitmore Falls and the Kilarc Powerhouse as well, and these landowners
8 have repeatedly expressed themselves during the FERC proceedings related to
9 Project 606 by stating that they have never observed anadromous fish (or spawned
10 out carcasses) in this segment of Old Cow Creek. For the portions of Old Cow Creek
11 that are bordered by commercial timberland, the California Forest Practice Rules
12 require Registered Professional Foresters preparing Timber Harvesting Plans to
13 physically inspect all watercourses within their proposed area of operations (14 CCR
14 § 936.4(a)). These licensed professional foresters must, by law, determine whether
15 their proposed operations could potentially adversely affect fish; their examinations
16 are therefore thorough and often conducted with assistance from professional
17 biologists. Prior to approval, Timber Harvesting Plans are formally reviewed by
18 several state agencies including CDFG and would certainly have documented any
19 observations of anadromous fish in this portion of Old Cow Creek if any had
20 occurred.

21 Had the opinion expressed in the 2002 CDFG memo been supported by actual
22 sightings from the many anglers, recreationists, foresters, biologists, or residents who
23 fish, visit, work, or reside in the area or other witnesses over the last 100 years, or by

1 other evidence, such as post-spawning adult carcasses (which are very easy to see
2 since they turn white), there might be reason to give the opinion more credence.
3 However, in the absence of actual sightings or any other evidence, it seems far more
4 likely that Whitmore Falls indeed presents a complete barrier to steelhead migrating
5 up Old Cow Creek, as CDFG believed until 2002, and as application of the Powers &
6 Orsborn methodology suggests.

7 9. If migrating salmonids cannot pass above Whitmore Falls, there are no real benefits
8 to anadromous fish in Old Cow Creek that will result from the decommissioning. At
9 best, 2.6 miles of Old Cow Creek would receive more water in an area that is not
10 even accessible to anadromous fish. Even in the unlikely event that steelhead could
11 get past Whitmore Falls, only the 2.6 mile bypass reach between OC-11 and the
12 Kilarc Powerhouse (where all water re-enters Old Cow Creek) receives additional
13 flow if the diversion is removed. It is important here to emphasize that at least one
14 male and one female steelhead would need to ascend Whitmore Falls in order to
15 spawn, and the actual contribution to the overall Central Valley steelhead population
16 would be minimal since only 3.7 to 6.7 adult offspring result from an individual
17 steelhead's spawning efforts.⁴ Even assuming anadromous fish could leap over
18 Whitmore Falls, virtually no habitat that is not currently accessible to anadromous
19 fish is "opened up" by the removal of the Kilarc Diversion.

⁴ Jennifer McLean, . Reproductive success of hatchery and wild steelhead, *Oncorhynchus mykiss* (2003). Available at <http://water.washington.edu/Theses/mclean.html>.

1 10. *South Cow Creek*: There is a fish ladder at the existing PG&E diversion dam, and the
2 portions of South Cow Creek above the diversion are currently accessible to
3 migrating fish. While this ladder could be improved, the diversion as it currently
4 exists does not exclude fish above this point. During the 11 surveys conducted
5 between 2002 and 2004, we observed only 2 large rainbow trout (approximately 14 to
6 20 inches long, assumed to be steelhead) in South Cow Creek above the PG&E
7 diversion and 3 redds (nest sites in gravel) that were consistent with the size of redds
8 constructed by steelhead. All of these observations occurred downstream from
9 Ponderosa Way (see Exhibit 3). Above Ponderosa Way the shallow depth of the
10 water and lack of pools reduces the habitat for steelhead in this portion of South Cow
11 Creek

12 While the small numbers of fish and redds and infrequent observations during
13 surveys indicate that steelhead abundance in South Cow Creek is low, they also
14 provide evidence that fish can and do migrate above the existing PG&E facilities in
15 South Cow Creek. Thus, removing these facilities does not “open up habitat” that is
16 currently inaccessible to steelhead.

17 11. In addition to my direct examination of these streams, I have reviewed virtually all of
18 the available scientific and technical information concerning fish presence and
19 abundance, habitat suitability, hydrology, limiting factors for fish populations,
20 temperature data, and land use as it relates to watershed conditions within the Cow
21 Creek watershed. In summary, very little is known about Central Valley steelhead
22 particularly in Cow Creek. They are assumed to use this drainage because it joins the

1 Sacramento River, but historical abundance, distribution, and specific habitat
2 requirements are not known. What is known is that hatchery steelhead have been
3 introduced to this watershed as recently as 2000, and fish that currently occur there
4 may be of hatchery origin.

5 12. The primary public interest that is cited in the DEIS is a benefit to salmon and
6 steelhead. Preventing the extinction, or contributing to the recovery of listed
7 anadromous salmonids is of the utmost importance and a significant societal benefit.
8 However, the proposed decommissioning of the existing Kilarc and South Cow Creek
9 hydro facilities does not accomplish this goal. The upstream migration of
10 anadromous fish is not currently limited by the PG&E facilities. Increased flow in
11 the bypass reaches might provide some benefit to fish within these stream segments,
12 but the distance involved is short (roughly 6 miles in total) and the overall increase in
13 reproduction would be slight. A better approach would be to use the limited
14 resources available for recovery efforts in areas where tangible benefits will occur,
15 are predictable, and will occur at a faster rate.

16 There is no evidence in the Draft Environmental Impact Statement or in any
17 other document that the decommissioning of the PG&E Kilarc-Cow Creek facilities
18 will benefit anadromous salmonids at the population level, or contribute to the
19 recovery of Central Valley steelhead (listed as Threatened under the Endangered
20 Species Act).

21 13. There are other adverse impacts to wildlife that will result from the decommissioning
22 of the Kilarc-Cow Creek facilities. The water conveyance canals and reservoirs have

1 been in place for over 100 years and have developed functional riparian and aquatic
2 habitat characteristics that support an array of both terrestrial and aquatic species. As
3 just one example, northwestern pond turtles (*Clemmys marmorata marmorata*) are
4 known to occur in this vicinity and have been observed using the PG&E facilities
5 (B. Carey, personal observation). The California Department of Fish and Game
6 considers northwestern pond turtles to be a species of special concern. This species
7 of concern requires still, open water and will be adversely affected by the removal of
8 the canals and reservoirs associated with the Kilarc-Cow Creek facilities. Similarly,
9 while removing the dams might improve non-anadromous rainbow trout and brown
10 trout habitat in the bypass reaches, it would destroy roughly 5 acres of open water and
11 more than 7 miles of currently occupied trout habitat by removing the canals and
12 forebays and dewatering Hooten Gulch. In addition to the loss of aquatic habitat that
13 will result from filling the reservoirs and canals, numerous terrestrial species that use
14 these water sources will be impacted. A common wildlife management practice,
15 particularly in the arid west, is to construct water sources in otherwise dry areas.
16 Wildlife managers have long recognized the value of readily available water to
17 wildlife species (aquatic and terrestrial, vertebrates and invertebrates) and the
18 contribution to biodiversity that results from artificially provided water sources. The
19 fact that the decommissioning of the Project 606 facilities involves removing these
20 well-established water sources should be further addressed in the DEIS prepared by
21 the FERC and recognized as a significant adverse impact to the environment.

22 14. There is no evidence that there will be any significant benefit to fishery resources if
23 the PG&E facilities are removed, nor any information on the expected timing or

1 extent of any alleged fishery benefits. An alternative that applies an active
2 management plan, with specific tasks and timeframes, and that identifies existing
3 limiting factors for salmonids, applies remedies in an active rather than passive way,
4 and monitors the results of habitat improvement projects, offers a much better chance
5 of success in benefiting listed anadromous salmonid populations in the Cow Creek
6 watershed than the Proposed Action recommended by the DEIS. As such, an
7 alternative that includes an active restoration program must be considered and
8 compared to the proposed dam removal that simply relies on increased flows in the
9 bypass reaches to restore fisheries resources.

10 15. An active management program would be especially beneficial to the extent that
11 anadromous salmonids are considered to be immediately threatened. The DEIS, for
12 example, suggests that the gradual movement of gravel currently trapped behind
13 PG&E's diversion dams could contribute to the creation of beneficial spawning
14 habitat in the Cow Creek watershed. *See, e.g.,* DEIS at 140-41. However, even
15 assuming that would occur, it could take many years for suitable habitat to develop
16 after dam removal. It is also assumed in the DEIS that lack of spawning gravel is
17 limiting fish production and an increase in gravel will benefit fish. Without further
18 analysis, the validity of this assumption is unknown. In contrast, an active
19 management plan could distribute gravel to locations where it would be most
20 beneficial to spawning habitat.

21 16. I affirm that the facts stated herein are true to the best of my knowledge, information
22 and belief.

Daffh. Goy
[name]

Subscribed and sworn to before me, the undersigned notary public, this 23^d day
of August, 2010.

J. H. Bunn
Notary Public

MY COMMISSION EXPIRES: 1-26-2014

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Shasta

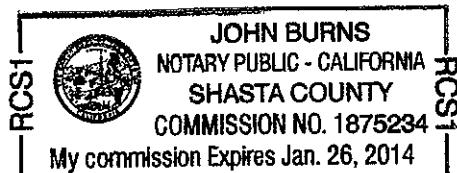
On Aug. 24, 2010 before me,

personally appeared Robert Lance Carey

} John Burns, Notary Public
My Commission Expires 1-26-14

Here Insert Name and Title of the Officer

Name(s) of Signer(s)



Place Notary Seal Above

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature John Burns

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Affidavit

Document Date: 8-23-10

Number of Pages: 1

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

Individual

Corporate Officer — Title(s): _____

Partner — Limited General

Attorney in Fact

Trustee

Guardian or Conservator

Other: _____



Signer's Name: _____

Individual

Corporate Officer — Title(s): _____

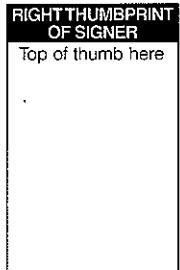
Partner — Limited General

Attorney in Fact

Trustee

Guardian or Conservator

Other: _____



Signer Is Representing: _____

Signer Is Representing: _____

ATTACHMENT A, EXHIBIT 1

Mr. Carey is a Certified Wildlife Biologist (CWB) with more than 17 years of experience working in the private sector. His background includes work with the Ohio Department of Natural Resources, Division of Wildlife, academic research, and private land management. He is designated as a Private Consulting Biologist by the California Department of Fish and Game and holds a Scientific Collector's Permit in California. His professional background includes work with threatened and endangered species of fish and wildlife, waterfowl, small mammals, pesticide toxicology, landscape ecology, sustainable forest management, and regulatory compliance. Immediately before joining VESTRA in 2009, Mr. Carey served as the sole biologist on an interdisciplinary team of resource professionals managing large tracts (several hundred thousand acres) of private forestland in Northern California.

SPECIFIC QUALIFICATIONS

Collecting and analyzing project-specific information is an essential part of conducting biological and natural resources evaluations. Mr. Carey is an expert in conducting surveys for various species using approved protocols, analyzing survey results, and summarizing the findings in technical reports. Since 1993, surveys for northern spotted owls, willow flycatchers, northern goshawks, sandhill cranes, anadromous fish, Modoc suckers, Shasta crayfish, various amphibians and invertebrates, and numerous other species of plants and animals have been conducted by Mr. Carey or under his direct supervision. He has served since 2003 as a member of The Wildlife Society's Certification Review Board, the body that reviews and approves applicants seeking to become Certified Wildlife Biologists.

RELATED EXPERIENCE

Senior Biologist, VESTRA Resources Inc. Mr. Carey is involved in a variety of projects that assist clients with regulatory compliance and permit needs. Projects involving water delivery systems, hydropower facilities, habitat restoration, and resource management have been conducted under Mr. Carey's direction.

Staff Wildlife Biologist, W.M. Beaty & Associates Inc. Between 1993 and 2007, Mr. Carey worked with a team of resource professionals to manage approximately 290,000 acres of private timberland in Northeastern California. He was responsible for all wildlife-related activities including designing and conducting surveys for a variety of plant and animal species, collecting and analyzing field data, and generating reports. Mr. Carey frequently presented findings and results to a variety of audiences. Compliance with state and federal regulation was required prior to and during all land management activities. Both project-specific and long-term programmatic approaches were implemented.

Oregon State University Department of Fisheries and Wildlife. Mr. Carey conducted research focusing on the effects of agricultural pesticides on non-target organisms. The work was funded cooperatively by the U.S. EPA and was designed to validate ecological risk assessment

methodologies. Duties included experimental design, data collection and analysis, and the preparation of manuscripts.

The Ohio Department of Natural Resources, Division of Wildlife. Mr. Carey worked on a public wildlife area where he manipulated habitats to promote the production of waterfowl and other game species. Other duties included collecting data and trapping waterfowl as part of a radio telemetry project.

EDUCATION

B.S., Natural Resources, Wildlife Management
The Ohio State University
M.S., Wildlife Science, Oregon State University

CERTIFICATIONS

Certified Wildlife Biologist – The Wildlife Society
Member, The Wildlife Society, Certification Review Board, Chair, 2007 & 2008
Designated as Private Consulting Biologist, CDFG 1996
Scientific Collectors Permit No. 000377, CDFG
Spotted Owl Expert, CA Department of Forestry and Fire Protection (per 14CCR § 895.1)
Member, Ohio State University Chapter *Gamma Sigma Delta* Agriculture Honor Society
President, Sacramento – Shasta Chapter of The Wildlife Society (1999, 2000)
Member, The Wildlife Society (parent society since 1989, Western Section since 1993)
Member, American Society of Mammalogists, 1995
Associate Member, California Licensed Foresters Association, 1994

ATTACHMENT A, EXHIBIT 2

State of California

Memorandum



To: Files

Date: February 27, 2002

From: Curt Babcock *CJB*
Northern California-North Coast Region
Department of Fish and Game

Subject: Old Cow Creek, Shasta County

On January 16, 2002, Fisheries Biologist Teri Moore, Environmental Scientist Jennifer Bull, and Staff Environmental Scientist Curt Babcock visited upper Whitmore Falls on Old Cow Creek in Shasta County to assess whether the falls are a barrier to upstream migration of steelhead (*Oncorhynchus mykiss*). On February 21, 2002, Teri Moore and Curt Babcock visited lower Whitmore Falls and revisited upper Whitmore Falls for the same purpose. Upper and lower Whitmore Falls are located in Section 21, Township 32 North, Range 01 West, approximately 1,000 feet and 2,500 feet downstream from the Whitmore Road crossing of Old Cow Creek, respectively.

The flows on January 16 were low (approximately 50 cubic feet/second) and the water temperature was measured at 38 degrees Fahrenheit at 1100. The upper falls consist of a main falls to the left of center where the majority of water flows. The upper falls height was measured in the center from the falls crest to plunge pool water elevation at 9.5 feet. The plunge pool was not measured for depth. The plunge pool and habitat downstream for approximately 300 feet were snorkeled. No fish were observed, which is not uncommon at that water temperature. On February 21 the flows were approximately 2,900 cubic feet/second (U.S. Geographic Survey Millville stream gage data). The water flow at this and higher levels may provide other routes for passage.

The lower falls consist of a clear fall on river left that was approximately 7 to 8 feet in height and a chute/falls on river right that was approximately 6 feet total drop in water elevation and would provide the easiest route for passage. The landowner stated that the plunge pool depth was approximately 10 to 20 feet.

The lower falls are probably not a barrier to steelhead at most flows as the falls height is well within a steelheads vertical leaping capability and the chute/falls to the river right may be an easier route. The upper falls approach a steelheads leaping capability of 11 to 14 vertical feet (Powers and Orsborne 1985). At higher flows, the plunge pool elevation would rise and the falls height consequently decrease, decreasing the effort needed for passage. We concluded that steelhead may be able to ascend the upper falls.

Attachments

CB:sh

iles

February 27, 2002

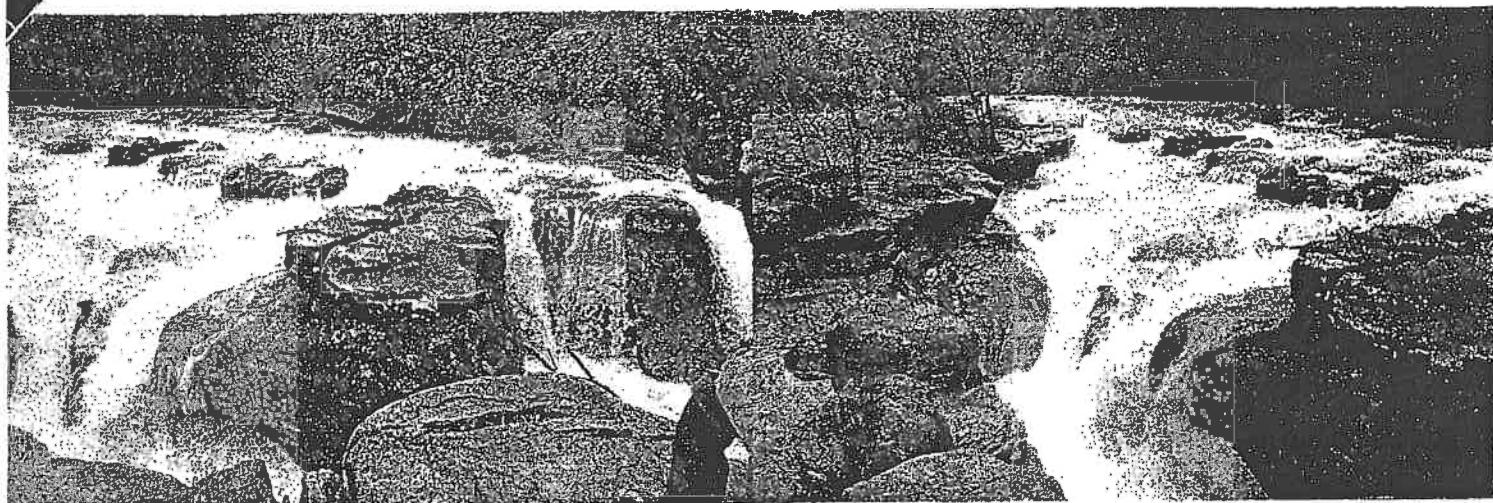
Page Two

cc: R. Benthin, M. Berry, and A. Manji
Northern California-North Coast Region, Redding

References:

Powers, P.D., and J.F. Orsborne. 1985. Analysis of barriers to upstream fish migration; an investigation of the physical and biological conditions affecting fish passage success at culverts and waterfalls. Albrook Hydraulics Laboratory, Washington State University, Pullman Washington, submitted to: Bonneville Power Administration, Project No. 82-14.

Fitmore Falls - rd Cow Creek

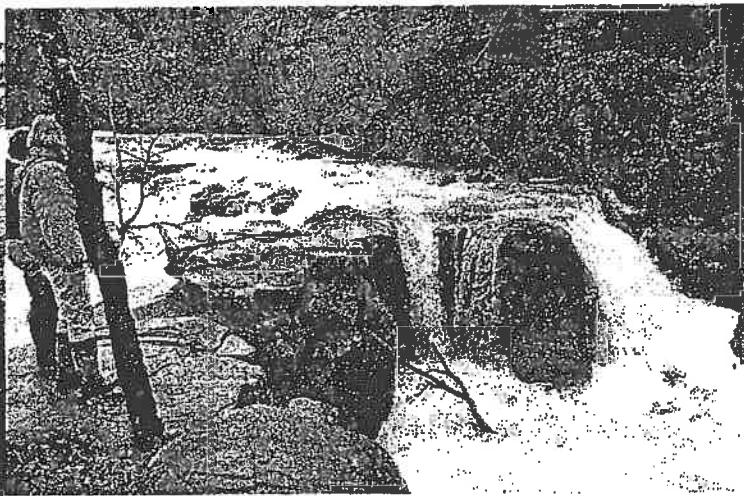


lower falls

lower falls - chute on river right



lower falls - chute on river right



lower falls - river left

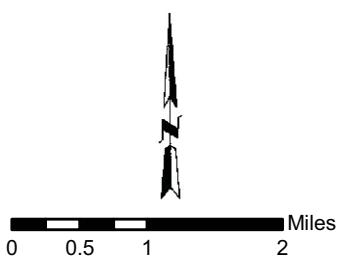
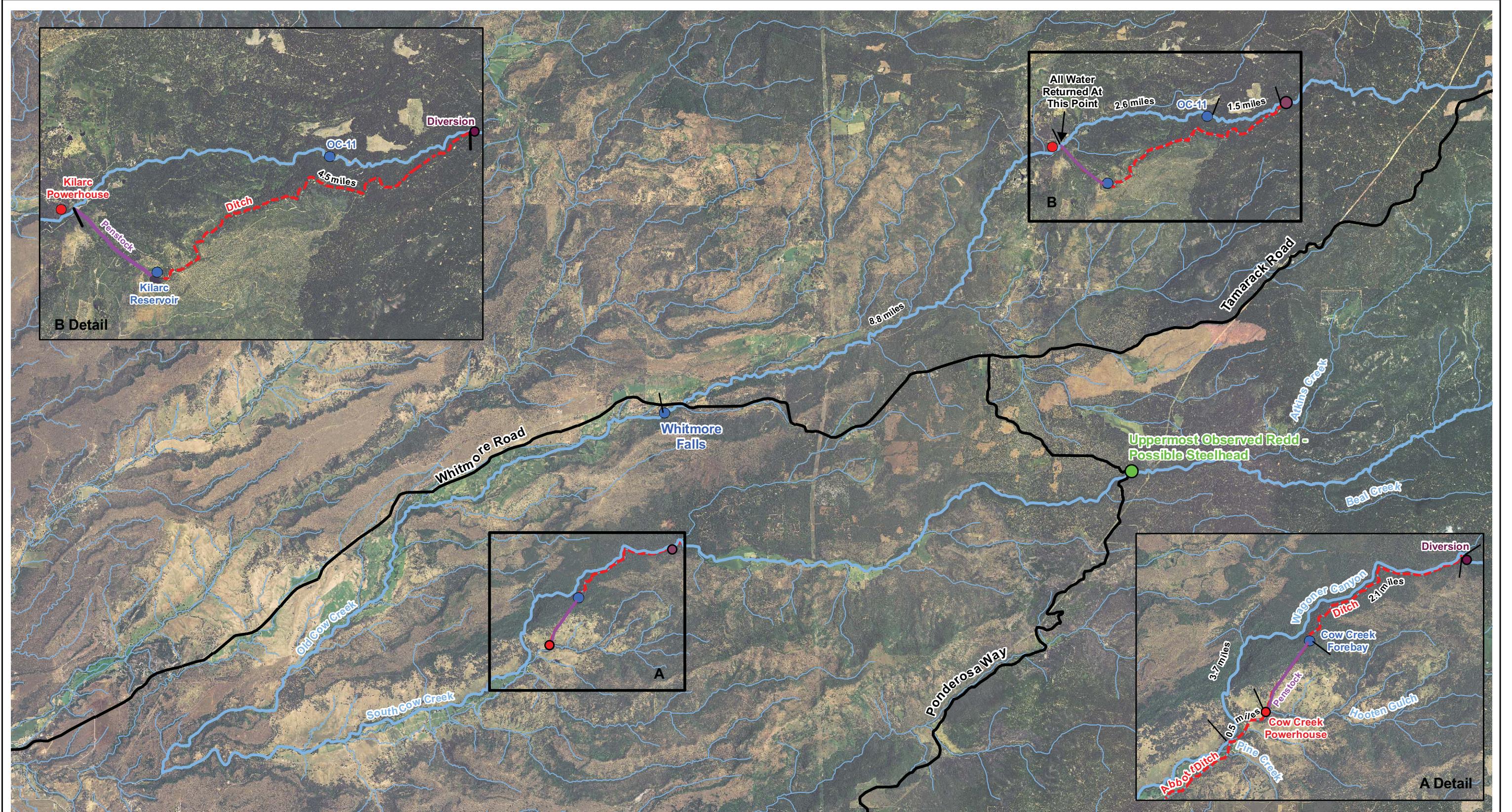


upper falls



upper falls

ATTACHMENT A, EXHIBIT 3



ATTACHMENT B

PACIFIC GAS AND ELECTRIC CO., PROJECT NO. 606-027
MAJOR DETERIMENTS OF DECOMMISSIONING

	<i>Description</i>	<i>Estimated Value of Potential Negative Impacts (\$)</i>
1	Loss of county and community recreation that has been in place for 105 years. There are no comparable lake recreation areas in Shasta County. If it were possible to replace, the cost to acquire, develop, and maintain a new reservoir lake recreation area with handicap access would be significant. <i>See Ex. 1</i> , a budgetary assessment developed by Shasta County on this topic.	4,000,000 - 6,000,000
2	Loss of water delivery system used by pre-1914 adjudicated water right holders for over 140 years. If the current diversion is removed, a new diversion and replacement water delivery system will need to be constructed to provide drinking and irrigation water to family farmers along the South Cow Creek valley. Based on an estimate from local engineers, the cost of siting, environmental studies, reports, architectural and engineering work, fees, permits, and construction (to include utilities, roadway, diversion ,fish screening, ladders, etc.) will be significant.	2,000,000 - 3,000,000
3	Loss of important local reservoir for fire suppression in the Whitmore Community and surrounding National Forest. The fire hazard in this densely forested area is Very High. Kilarc Lake is actively used during the fire season to control the spread of wildfires; its removal increases the risk of uncontrolled spread of those fires. The National Forest, valuable timberland, and Whitmore Community would be at risk of destruction. This risk includes approximately 50,000 acres of marketable timber and 350 homes in Whitmore, averaging \$300,000 each.	3,000,000 - 200,000,000 or more

	<i>Description</i>	<i>Estimated Value of Potential Negative Impacts (\$)</i>
4	Significant negative fiscal impact to Shasta County due to loss of substantial tax revenue from PG&E, loss of tax revenues from property devaluations and reduction of taxable values, loss of various county revenues from decline of businesses and job opportunities in Whitmore and the Redding area. Based on a discount rate of 5% (higher than the Commission's current annual interest rate of 3.25%), the net present value of the expected annual loss of \$79,000 in PG&E property tax revenues equals \$1.2 million. Because other local property will decrease in value if the project facilities are decommissioned (<i>see Item 7</i>), and recreation-related jobs will likely be lost, the estimated cost to Shasta County will be even higher.	2,000,000 - 5,000,000
5	Loss of 5 MW of reliable green energy. California's Renewable Portfolio Standard ("RPS") requires 33% of all energy output to be from renewable sources by 2020. In order to comply, PG&E will be required to replace the energy lost by destroying this 5 MW RPS-Eligible resource. To produce comparable quantities of energy from a wind or solar resource, would cost between \$21.2M and \$52M. ¹	21,200,000 - 52,000,000

¹ U.S. DOE, 2009 Wind Technologies Market Report 45 (Aug. 2010), available at http://www.windpoweringamerica.gov/pdfs/2009_annual_wind_market_report.pdf (average installed capacity cost used to estimate cost of producing equivalent amounts of energy from wind); Ryan Wiser et al, *Tracking the Sun II: The Installed Cost of Photovoltaics in the U.S. from 1998-2008* at 1, Lawrence Berkeley National Laboratory (Oct. 2009), available at <http://eetd.lbl.gov/ea/emp/reports/lbnl-2674e.pdf> (average installed capacity cost used to estimate cost of producing equivalent amounts of energy from solar).

	<i>Description</i>	<i>Estimated Value of Potential Negative Impacts (\$)</i>
6	<p>Loss of additional 100 kW of green energy and Hooten Gulch riparian habitat. Decommissioning would force the shutdown of the Poulton hydroelectric project (FERC Project No. 6594, conduit exemption), which uses the flow from the tailrace of PG&E's South Cow Creek plant. The Poulton Project produces 545,580 kWh/year on average, and the output is sold by Tetric Ranch to PG&E. At 11 cents/kWh, the current published Market Price Referent rate for a 20-year contract, and a capitalization rate of 7.5%, the project would have an estimated value of \$700,000. The cost to purchase and develop a comparable project would be in excess of \$1M. Dewatering Hooten Gulch would also diminish Tetric Ranch's property value and riparian water and property rights used over 100 years and provided for by the recorded 1907 Deed between Wagoner and Northern California Power, for livestock watering, fish and wildlife protection and enhancement, and aesthetic "use and enjoyment of the lands."</p> <p>WRA, an environmental consulting firm located in San Rafael, California, and familiar with Hooten Gulch, Kilarc, and Cow Creek, has determined that the environmental mitigation value for the ~2.4 acres of Hooten Gulch wetlands that will be destroyed by the decommissioning will be in the range of \$110K/acre to over 390K/acre. This corresponds to a value of \$300,000 - \$1,000,000.</p> <p><i>Note that the estimate in this entry does <u>not</u> include the financial value of the loss to Tetric Ranch of Hooten Gulch's year-round creek flow for livestock watering, property value, and aesthetics.</i></p>	1,000,000 - 2,000,000
7	<p>Loss of property values to the many stakeholders and small businesses that will be negatively affected from the loss of tourism and the amenity Kilarc reservoir provides. (Cost estimated for 350 business/homeowners * \$300,000 average property value * 1-5% estimated reduction)</p>	1,050,000 - 5,250,000

	<i>Description</i>	<i>Estimated Value of Potential Negative Impacts (\$)</i>
8	Unknown loss of groundwater recharging for residences and ranches as a result of dewatering reservoirs. As discussed in Section IV(A) of the comments, digging new wells will be costly and, ultimately, could be futile, leading to a near-total decline in property values. Based on information from local well drilling companies, the minimum cost for new wells is \$15,000/well.	2,625,000 - 100,000,000
9	High potential of reduced water quality as a result of removing diversions that have been in place for over 120 years from historical mining, ranching, and logging operations. Allowing accumulated silt and other potential toxins to flow downstream could damage the fish, livestock, and residences downstream for years to come. Estimated initial cost for 350 homeowners in Whitmore area at \$3,000/water filtration system, as estimated by local contractors, plus additional costs to homeowners along the South Cow Creek valley, and possibly the entire Cow Creek watershed. Impacts may include unknown future costs.	1,050,000 - 3,000,000
10	Loss of riparian habitat at Kilarc Reservoir, South Cow Reservoir, Hooten Gulch, and the ditches. The loss of wetlands include 4.6 acres of ditches (49,848 LF * 4' = 4.6 acres), plus 4.6 acres of forebays, a total of 9.2 acres of wetland loss. Mitigation Value for 9.2 acres of riparian habitat and wetlands (not including Hooten Gulch) is estimated at \$110,000-\$390,000/acre. See Item 6.	1,012,000 - 3,588,000
11	Cost of decommissioning that will be passed through to PG&E electricity customers. PG&E has not provided a cost breakdown of their \$14.5 million dollar estimate so this cost may be considerably higher.	14,500,000 - 20,000,000
	Estimated Value of Negative Impacts of Decommissioning (TOTAL)	53,437,000 - 399,838,000 or more

ATTACHMENT B, EXHIBIT 1

**COUNTY
OF
SHASTA**

DEPARTMENT OF PUBLIC WORKS

Pat Minturn, Director

MEMORANDUM

DATE July 29, 2010

TO Russ Mull, Director
Department of Resource Management

FROM Pat Minturn, Director
Department of Public Works

SUBJECT Kilarc Powerplant and Afterbay
Equivalent Recreational Facility



This report is a budgetary and scoping document for the development of a water-oriented recreational park facility. We understand that the Facility would be located near the existing Kilarc Powerplant. The proposed park would be intended to replicate and replace the existing recreational amenities provided by the Kilarc Powerplant site.

Shasta County has developed and managed several waterfront parks throughout the County (Hat Creek Park, French Gulch Park, Balls Ferry Boat Ramp, Battle Creek Fishing Access). These facilities are modest and distant from Kilarc, but they share some similarities. They adjoin major watercourses, with parking, picnic, fishing, and restroom facilities. These facilities have received substantial investments to become major assets to the community.

Background and Need

Shasta County's semi-arid climate creates a public need for recreational water access. Any premier recreational park in the Northstate should incorporate water features. These may be manmade water features (examples: Waterworks Park, Kids Kingdom, Redding Aquatic Facility). Such engineered facilities are typically located in urban areas, with access to municipal water and sewer systems. They offer exercise and entertainment, but they do not offer a nature experience.

Rural water recreation park facilities provide a natural visitor experience, separate and distinct from urban parks. Site selection is critical. These facilities require premier natural settings. Appurtenant amenities are utilitarian, serving to facilitate public access and use of the site's natural water features. They must be developed from scratch and can require substantial investments.

Dispersed public recreation used to be widespread. Private landowners were often receptive to incidental recreational uses. Legal and social considerations have gradually constrained access. Even public lands are increasingly closed to certain recreational pursuits. These limitations have exacerbated the need for formal and proper public facilities.

Site Selection and Acquisition

A prospective site requires a premier waterfront attraction, appurtenant water rights, road access, several acres of usable land, and compatible adjoining land uses. Such sites are few and far between in Shasta County. In recent years, many prospective sites have been encroached by development and/or developed for residential uses. Remaining sites tend to be relatively inaccessible and/or contained within large landholdings.

Environmental review of the site should be initiated before the site is acquired. Wetlands and endangered species tend to be found near watercourses. Careful review may eliminate many otherwise viable sites from further consideration.

Direct paved access to a public roadway is a prerequisite. Many park users are dissuaded by unpaved roads. Signage and route-finding can be problematic for remote sites. Any significant separation between the site and the nearest public highway typically necessitates secondary access for emergency purposes. Road maintenance is a significant operational expense.

Compatible land uses greatly enhance the viability and utility of a site. Residential neighbors will often oppose the establishment of a new park in an existing residential area. A parks' very success may lead to its demise, as neighbors oppose continued and expanded use of the facility.

A portion of a large property holding may be acquired. This may alleviate the problem of multiple incompatible neighbors. However, it may impose significant damages upon the remainder parcel. The property owner would be entitled to compensation for damages, and may resist sale.

Environmental Review and Permitting

The very attributes which make a potential waterfront park site viable, also make it very difficult to secure the necessary entitlements. Human uses require supporting development and indirectly compete with the natural environment. Established parks don't impose new burdens upon the environment, but new parks do. These impacts must be analyzed and mitigated in compliance with the California Environmental Quality Act (CEQA). Numerous state and federal agencies have jurisdiction over such watercourse development.

Water Rights

In a semi-arid climate, water is a scarce commodity. California has an elaborate legal framework to manage the diversion and use of water. New uses cannot displace existing uses, which enjoy prior right. This may be partially alleviated by acquiring property with the appropriate appurtenant water rights already in place. This would reduce the potential field of candidate sites, and increase the associated cost of acquisition. Potential recreational uses of water may entail a change in the permitted use, necessitating action to amend the existing water rights.

Utilities

Park users may vary in their infrastructure needs. Shasta County parks seek to serve the broadest possible cross section of the community. This requires electricity, potable water, and wastewater disposal facilities. Onsite systems can generally be developed to provide these amenities. Costs may be relatively high. Vandalism and theft may pose significant problems at remote sites. Access to the electrical grid greatly simplifies security lighting and the provision of potable water.

Summary and Cost Estimate

Public facilities can be difficult to site in this day and age. Parks especially so. Few available sites meet all of the prerequisites for a premier rural water-oriented park. Administrative, environmental, and public policy considerations are at least as significant as cost. With these caveats in mind, the following cost estimate is set forth for the establishment of a Kilarc-class recreational facility:

Site selection planning	\$100,000
Appraisal and acquisition	\$ 50,000
<u>Property Purchase Price</u>	<u>\$600,000</u>
Land Purchase Subtotal	\$750,000
Environmental documents	\$300,000
Supporting env studies	\$100,000
Landside permits	\$ 20,000
Waterside permits	\$ 40,000
Wetlands mitigation	\$ 50,000
Entitlement Subtotal	\$510,000
Road and utility development	\$300,000
Parking lot grading and paving	\$200,000
Picnic area development	\$150,000
Restroom facilities	\$ 50,000
Potable water supply	\$ 20,000
Landscaping	\$100,000
Fencing/Security	\$ 80,000
Signage	\$ 50,000
Landside Subtotal	\$950,000
Watercourse modifications	\$500,000
Waterfront improvements	\$300,000
Erosion control	\$ 50,000
Waterside Subtotal	\$850,000
Total Hard Costs	3,060,000
Architectural Design (10%)	\$300,000
Engineering Design (5%)	\$150,000
Project Admin (5%)	\$150,000
Construction Admin (5%)	\$150,000
Soft Cost Subtotal	\$750,000
GRAND TOTAL	\$3,810,000

SAY \$4,000,000

CERTIFICATE OF SERVICE

CERTIFICATE OF SERVICE

I hereby certify that I have this day caused the foregoing document to be served upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated on this 25th day of August, 2010.

/s/ Rebecca J. Baldwin

Rebecca J. Baldwin

Law Offices of:

Spiegel & McDiarmid LLP
1333 New Hampshire Avenue, NW
Washington, DC 20036
(202) 879-4000