



January 18, 2022
Resent: March 10, 2022

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2022 MAR 18 P 1:29

FEDERAL ENERGY
REGULATORY COMMISSION

Kimberly D. Bose
Federal Energy Regulatory Commission
888 First Street N.E. Room 1A
Washington, D.C. 20426

Re: Project 2105, Lake Almanor ecosystem

Dear Commissioners,

My name is Mary McMillan. My husband, Dan, and I own a home in Lake Almanor, California. We were drawn to the Lake Almanor Basin for its beauty and recreation activities. My husband is an avid fisherman and Lake Almanor is known for being one of the best fishing locations in California. I love the lake activities and abundance of hiking trails the area has to offer.

My simplistic understanding/goal of the thermal curtain project is to decrease/maintain lower Feather River water temperature at 20 degrees C for downstream fish health in the hatchery/river. And if I understand it correctly, they have, and continue to think that cold-water releases out of the base of Canyon Dam at 250 cfs to 600 scf would make a significant difference **45 miles** downstream. Please note that river flows and depths are at a minimum in the summer months of July, August and September when they are proposing the releases. Given my past professional career as a chemical engineer for 30 years I think this theory is extremely hard to believe based on the following 3 simple factors -

- Constant water to air surface area
- Seasonal hot ambient air temperatures with transfer rates
- Time allotment for travel

I would have hoped there would be concrete proof to illustrate a thermal curtain installation would work given the known huge **negative** magnitude of this project on this community.

I copied the following paragraph from a PG & E report entitled "North Fork Feather River Study Data and Informational Report on Water Temperature Monitoring and Additional Reasonable Water Temperature Control Measures" Amended September 2005. This report represents the results of PG&E's evaluation of water temperature monitoring, modeling and control options, reflects only PG&E's views and is being submitted to the Rock Creek - Cresta Ecological Resources Committee (ERC) so that the ERC may review the report and begin working towards recommendations concerning flow and Project operations and, if

feasible, making any affirmative determinations concerning water temperature control actions.

Taken from Page 2 in the Executive Summary:

“Licensee’s (PG&E) analysis of each of the twenty-four potential water temperature control alternatives indicates that some of the first and second category alternatives (thermal curtain and increased magnitude water releases) have the **best potential** to reduce water temperatures in the Rock Creek and Cresta reaches. **Sophisticated computer modeling** indicates that some of these alternatives have the **potential** to reduce water temperatures from 1 to 3°C in July and August. **However, such reductions in water temperature would only increase the cold-water trout habitat in the Rock Creek Reach by about 3 to 8 percent and in the Cresta Reach by about 0.5 to 2 percent in July and August of Normal water years. The overall benefits of such modest gains in cold water trout habitat are very limited and likely not measurable given natural fish population variability. Also, these alternatives would likely have a corresponding potential effect of reducing cold-water fish habitat in Lake Almanor and reducing fish production in Butt Valley Reservoir, resulting in a decrease of the aquatic resources and recreational value at each of these reservoirs.**

There are too many “potentials” and not enough facts....

The report goes on to touch on the 24 potential water temperature control alternatives. **I firmly believe that if you want temperature reduction, you need to address it at the site.** I see in Category 3, noted below, they have attempted to do this. I’ve only included Alternate 15 as viable and worth further investigation. As stated, I understand that there is definitely a “cost” for the electric power to operate these chillers but the power is there and what we’re talking about is less power available to sell or lost opportunity. Then there is the cost to purchase and operate the capital equipment and space requirement. All noted but at what cost and is it really “cheaper” given the other alternatives and impact on the Lake Almanor Basin.

Category 3 -Obtain Cold Water from Sources Other than Lake Almanor

Alternative 15 – Construct Mechanical Water Chillers at Belden, Rock Creek, Cresta and Poe Dams. This alternative consists of constructing and operating mechanical water chillers at each of the four dams to cool incoming river water approximately 1°C and deliver it back to the NFFR below each dam. Even to achieve a modest 1°C water temperature reduction would require six very large water chillers and three large cooling towers at each dam. Adequate space to site the chillers and cooling towers does not exist at or in the immediate vicinity of each dam, leading to extremely challenging and costly construction. This alternative would also require a substantial amount of electric power to operate the water chillers and the cooling towers. The modest level of water temperature benefits for this alternative is not commensurate with the corresponding adverse effects and costs, leading to the

Furthermore, we know our fish population will be challenged this summer based on the events of last summer. I am sure you have heard that last summer we experienced the second largest wildfire in California history – the Dixie Fire. – burning just under one million acres. We have learned that the fire debris deposited an incalculable amount of nitrogen into the lake. Fire retardant, which is a mix of fertilizer and water, will do the same this spring when the snowmelt washes it into the lake. Upon our return to the lake after the fire was extinguished, we noticed the growth of large blooms of toxic blue-green algae, *which we believe*, are harmful and disruptive to our healthy fish habitat. The majority of the fish population in Lake Almanor is made up of trout, both Rainbow and German Brown. These fish require cold water to survive. In the summer, when the surface temperature of the water approaches seventy degrees, these fish will only be found at the bottom of the deepest portions of the lake, the same areas where the proposed cold water pumping would occur.

In conclusion, we are OPPOSED to either the installation of a thermal curtain or any cold-water release from Lake Almanor. We believe the DEIR has discounted how negatively such an installation will affect our community. Major public concerns, as noted in the report were classified as “insignificant” and “no impact” and “no significant impact” Those reckless and irresponsible replies beg me to ask “who is making the judgment call here?” Because they are definitely a concern to those of us living in this beautiful area.... **I strongly urge you to reject any proposal that would require the release of cold water from Lake Almanor. This lake, this fish habitat, and this community, cannot afford another disaster.**

Sincerely,

Sincerely,



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