

flow variance until Lake Pillsbury storage exceeds 27,000 acre feet following October 1, 2016.

The Tribes agree with the factual premise of the Licensee's request that low storage levels in Lake Pillsbury threaten to harm salmonid species in the Eel River by depriving them of water needed for migration, spawning and incubation; by increasing turbidity downstream; and by modifying water temperatures. The Tribes' concern about inadequate management of Lake Pillsbury levels is part of a more significant interest in finding ways to ameliorate the effects of the Potter Valley Project as a whole on salmonids in the Eel River. The Round Valley Indian Tribes are a sovereign Indian nation whose reservation lands extend eastward from the main stem along the Middle Fork of the Eel River, and as far north as the North Fork of that river. For millennia, the Tribes have depended on the Eel River and its fishery for sustenance, cultural signification and spiritual meaning. The Tribes also have federal reserved water and fishing rights derived from these purposes for which the Reservation was created.

For more than a century, the Potter Valley Project has diverted water from the Eel River into the East Branch of the Russian River before that water could reach the Reservation. The reduction of stream flows downstream of the Project has deprived the Eel River fishery, and the Tribes that depend on it, of the water necessary for a healthy, sustainable riverine habitat. From the broadest perspective, then, the Tribes continue to oppose any diversions of water from the Eel River to the Russian River.

The Tribes nonetheless recognize that as long as the Potter Valley Project diverts Eel River water, the Project needs to be managed as nearly as practicable for the goal of providing a healthy riverine habitat for threatened salmonids. The Tribes' comments on

the Licensee's proposal to deviate from the minimum flow requirement are designed to promote that goal. The Tribes' comments set forth their understanding of the following issues: 1) the scope of the Commission's July 15 Order; 2) the scope of notice regarding adverse impacts to aquatic resources from the flow variance; 3) the particular analyses that the Licensee should carry out to evaluate ways to enhance flexibility of gate closure timing at Lake Pillsbury; and 4) the particular analyses that the Licensee should carry out to assess the structural and ecological risks if the storage level in Lake Pillsbury drops below 10,000 acre-feet.

1. Scope of the Order of July 15, 2016

The Round Valley Indian Tribes share the concern of the Commission that flow variance requests have become too frequent in recent years. Although 2016 was classified as a Wet water year, the Licensee yet again sought a drought variance. The Tribes are concerned that increasing water demands, climate change, drought resiliency, and other factors will bring yet more drought variance requests in future water years. The Tribes are committed to working with the Drought Variance Group to find effective ways to reduce the likelihood of such requests over the long term.

In its Discussion and Conclusions, the Commission noted several variables that contributed to the low reservoir storage levels this year, and the Order in Part (B) requires the Licensee to conduct an analysis of such factors. Order at pps. 3 and 5. The articulation of the variables in the narrative discussion does not coincide precisely with the Order's enumeration of factors to be analyzed. In particular, the Order in Part (B) refers to "supplemental flow releases" whereas the Discussion identifies "block water releases" and "additional releases to reinitiate powerhouse operations." The Tribes

assume that this difference in language was inadvertent, and that the Licensee’s analysis will evaluate both block water releases and releases to resume powerhouse operations under the rubric of “supplemental flow releases” as ordered.

2. Notice of Adverse Impacts

The Commission’s Order underscores the importance of prompt and adequate notice to stakeholders of any adverse effects on aquatic species and their habitats caused by the adjustment of minimum flows in the Eel River. Order at page 4. The Commission directed the Licensee to “alert the resource agencies and the Commission of any adverse impacts observed or reported to the licensee.” *Id.* Depending on the definition of “resource agencies,” the Tribes may not be among the entities to be notified. They presume, however, that as an important stakeholder with sovereign rights, they will in fact be notified of such impacts, particularly in light of their historic and contemporary use and reliance on the Eel River fishery and their federally-protected water and fishing rights.

3. Spring Storage in Lake Pillsbury and Gage Operations

The 2016 drought variance request was partially driven by constraints on gate closure dates set by the California Division of Safety of Dams (DSOD), and additional infrastructure risk associated with reservoir drawdown to 10,000 acre-feet of storage or less. To reduce the likelihood of future drought variance requests, the Tribes intend to ask the Licensee to conduct an analysis that would evaluate whether additional flexibility of gate closure timing could and should be implemented to increase the volume of the maximum late winter/early spring storage in Lake Pillsbury. This request falls within the

scope of the Order's requirement that the Licensee conduct an analysis on "current dam safety operational protocols. . . ." Order at page 5.

The California DSOD requires that maximum storage levels in Lake Pillsbury be limited until April 1, at which point the pool level may be increased by closing a series of gates along the crest of Scott Dam. This rule is currently enforced without taking into account meteorological forecasting and climate change, which arguably results in the loss of significant amounts of water that could be captured and used for beneficial uses during the dry season. This loss of storage indeed occurred in 2016. As the stability and volume of future snowmelt runoff above Lake Pillsbury decreases with climate change, the reliability of the reservoir filling with an April 1 gate closure will continue to decrease, which will increase the likelihood of future drought variance requests even in normal or wet water years. Furthermore, flow release requirements are currently indexed to total runoff rather than available storage, which also contributes to summer and fall water demands that cannot be met with available storage after April 1 if that runoff wasn't fully utilized as storage, as occurred in 2016.

This problem is not unique to Lake Pillsbury. A consortium of government and private agencies, including the U.S. Army Corps of Engineers, NOAA, Sonoma County Water Agency, Center for Western Water and Weather Extremes, Russian River Flood Control, California Department of Water Resources, the Bureau of Reclamation, and others has been formed to develop forecast-informed reservoir operations (FIRO) at neighboring Coyote Valley Dam, which forms Lake Mendocino. That effort seeks to use improved long-term precipitation forecasting and improved understanding of watershed processes achieved through modeling and field data collection to enable Coyote Valley

Dam operators to adjust reservoir operations throughout the year, especially at the end of the typical wet season. Procedures and data developed by that interagency effort at Lake Mendocino may be useful in developing a better, adaptive reservoir storage management plan for Lake Pillsbury. As an initial step, members of the Drought Working Group could meet with the Lake Mendocino FIRO group to discuss application on Lake Pillsbury, and develop an initial approach for a FIRO study plan for Lake Pillsbury.

4. End of Season Infrastructure Safety Factor

The Tribes also intend to ask the Licensee to analyze potential geotechnical and structural approaches that would reduce the risk of late season (November/December) low reservoir storage levels causing damage to outlet works infrastructure. This action has also been discussed during Drought Work Group calls. The investigation should be scoped and implemented as soon as possible to determine if an additional safety factor could be added in the event that reservoir storage drops below 10,000 ac-ft in November/December. The potential benefits of the additional safety factor is that a less conservative runoff forecast could be used to guide total water released during the dry season for beneficial uses in future years that have similar hydrologic conditions as 2014-2016.

During the dry season, the Lake Pillsbury pool volume is kept above 10,000 acre-feet to reduce the risk of geotechnical instability and debris loading into the outlet works. Although the Tribes are not necessarily advocating for active management below the 10,000 acre-foot minimum pool, this operational dead-pool elevation could potentially be lowered slightly under a 90% exceedance runoff forecast, which would increase the available water for beneficial uses under less conservative runoff forecasts (e.g., 75% and

50% exceedance could be used). As a first step, a geotechnical investigation should be performed to quantify the risk associated with going below the 10,000 acre-foot storage level. If necessary, the geotechnical investigation should then evaluate and recommend measures to stabilize the slopes and reduce risk of failure. In addition, debris control measures, such as removable trash racks and floating booms could be designed to reduce the risk of damage to outlet works from large wood and vortices at lower reservoir storage levels.

Finally, flow releases to the Eel River when reservoir storage falls below 10,000 acre-feet could increase water turbidity of instream releases, which could be detrimental to aquatic species in the river. Therefore, as part of the evaluation, the Tribes intend to ask PG&E to install a continuous turbidity sensor at the E-2 gage as soon as possible to document Eel River turbidity if Lake Pillsbury reservoir storage nears 10,000 acre-feet this fall. The Tribes also intend to request the development of a study plan for conducting this geotechnical/structural/biological evaluation for review by the Drought Working Group.

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Respectfully submitted,

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