



TUOLUMNE UTILITIES DISTRICT
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June 6, 2012

Jeff Parks, WQ Cert. WRCE
Division of Water Rights
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

Dear Jeff,

Thank you for taking the time to meet with me to discuss our variance request for the elevation of Pinecrest Lake as contained within the Water Quality Certification Condition for PG&E's Spring Gap Stanislaus Hydroelectric Project. As you know, condition #5 of the Certification allows consultation with the Deputy Director to provide justification to allow a one year (season) modification of the lake level until the State Board issues a decision on PG&E's formal request for a modified Pinecrest Lake elevation, dated December 16, 2011. The purpose of this letter is to provide the information necessary for you to develop your recommendation to the Deputy Director for approval of the variance.

This variance is being requested as an urgent matter to maintain basic water supply requirements for potable water supplies, sanitation, fire protection and other beneficial uses for over 44,000 people within Tuolumne County and served by the Tuolumne Utilities District (TUD). By any reasonable standard these basic needs for people should rise above alleged needs for recreation and discretionary tourism at Pinecrest Lake (CWC §106)

In order to clearly articulate the types and amounts of water uses the TUD has in our system, one must have a basic understanding of the system and how it operates. **Attachment 1** contains a schematic of our historic raw water conveyance system which reveals that this system, which winds around and through 55 miles of our community, serves not only treated water to a population of 44,000, but also from the same system untreated water to agriculture, residences and wholesale customers.

This system also provides direct (out-of-ditch) raw water supplies for wild-land and structural fire suppression, as well as pressurized treated (hydrant) access supplies for structural and wild-land suppression. Absent these necessary supplies, much of the TUD service area, which is classified by the CalFire as very high¹ will be without a readily accessible water supply to protect public life and property. In short, the people, property and natural resources of the County within the TUD service area will be put at grave risk absent a water supply. It should also be noted that the TUD is the supplier of water for the CalFire Air Attack Base at Columbia Airport.

It should be noted that the TUD system, although similar to some others in our State, is truly unique and dissimilar to most conventional water supply, treatment and distribution systems with which you may be familiar. All of the TUD customers are served by the same, raw water conveyance system and the same supply source (Pinecrest Lake). The District has no alternative water supply, except for poorly performing and highly mineralized groundwater sources comprising just 5% of our total demand.

TUD potable water customers receive treated water from one or more of 14 water treatment plants dispersed along the raw water conveyance system throughout the District's service area. **Attachment 1**

¹ See CalFire Fire Hazard Severity Zone Maps for State Responsibility Area, adopted November 7, 2007 for Tuolumne County

also shows the location of our water treatment plants throughout the community and their relative location to the raw water conveyance system. Portions of the conveyance system cannot be turned off, for example to discontinue water to agriculture, due to the fact that these treatment plants, and others, draw their source water from the same ditch segment.

A comprehensive study of this raw water conveyance system, completed in 2012², has thoroughly evaluated and documented all of the system's important community attributes including cultural, historic, biological, aesthetic, recreational and many more. The study also documents the various other beneficial uses of water in addition to those uses for municipal and industrial consumptive uses. The study details optimal system operational strategies and necessary improvements over the next two decades to improve these values and increase efficiencies. As a result of the findings of the Study the TUD raw water conveyance system has been determined to be eligible for listing on the National Register of Historic Places.

Following are specific responses to your email dated May 23, 2012:

Breakdown of Water Users

Tuolumne Utilities District's (TUD) State approved 2010 Urban Water Management Plan (UWMP) states that for the entire year in 2010 TUD provided:

- **4,197 acre-feet of Treated Water Sales.** This water originates from Pinecrest Lake, is transmitted through the raw water conveyance system, treated at the 14 water treatment plants (**Attachment 1**) and distributed to commercial, residential, industrial and institutional customers. This amount includes treated water used for landscape irrigation.
- **208 acre-feet Treated Wholesale Deliveries.** This water originates at Pinecrest Lake, is transmitted through the raw water conveyance system, treated at one or more of the 14 water treatment plants and distributed through master meters to mutual water companies and a private water company.
- **2,366 acre-feet Agriculture Irrigation as raw water.** This water originates at Pinecrest Lake, is transmitted through the raw water conveyance to its terminus at the West end of the service area and far reaches of the conveyance system, where it is delivered through irrigation metering systems to irrigate crops, orchards, vineyards and pasture.
- **501 acre-feet Raw Wholesale Deliveries.** This water originates in Pinecrest Lake, is transmitted through the raw water conveyance system and is delivered as untreated water to several customers who then treat and distribute their own potable water.

The majority of the water delivered, 67%, is dedicated to drinking water, sanitation and other potable water uses. Of this treated water consumption, less than 2% is for landscape (irrigation meters). Other than the irrigation meters stated above, all other potable water used for irrigation is delivered through meters which also serve businesses, residences, schools, etc.

Included in the classification of "agriculture irrigation" are 208 customers, that show on the maps as "domestic", see **Attachment 2**, that only have direct connections to the raw water conveyance system as the sole water supply to their homes. Although it is not intended for drinking, it is used for sanitation purposes. These properties are connected to the raw water conveyance due to the fact that there are no potable water mains in the area. Discontinuing water flow to any segment of raw water conveyance would eliminate sanitation water supply to these 208 homes. **Attachment 2** shows a portion of the distribution system in the Columbia area. This points out the intermingling of the customer types that occurs along the all of the TUD conveyance systems except for one, the Algerine ditch system.

Customer Types

TUD has three raw water customer types: Contract, Wholesale and Supplemental. The majority of District's raw water customers (approximately 96%), are under contract with TUD for a defined amount of water. The District also has Wholesale customers that purchase raw water which they then treat and distribute to their customers. Both the Contract and Wholesale customers have paid connection fees for a

² Ditch System Sustainability Project, Case Study, TUD, February 2012

specified amount of water and have put their contract water to constant beneficial use. Much of this agriculture use of water is for agricultural purposes for apple orchards, vineyards or non-annual crops that must be maintained on an ongoing basis for many years and will be lost if irrigation is halted or significantly reduced to a level that will not sustain the specific agricultural crop.

About 3 % of TUD customers are classified as Supplemental water users. Although, they have not paid for a permanent water contract volume, these customers enter into an annual contract with the District and put the water to beneficial use within the County. Supplemental customers range from a large employer in the forest industry that uses its supplemental water in addition to its contract water to operate a lumber mill. Other uses of Supplemental water vary from a long established golf course to organic gardens and other similar agricultural uses.

Water Conservation

Included, as **Attachment 3** is a portion of our Water Rules and Regulations that addresses conservation. On February 14, 2012 the District Board of Directors passed a motion declaring that Phase II conservation be put in place on March 1, 2012. All measures have been implemented and an implementation timeline has also been included in this attachment.

Ditch Sustainability

In your fourth bullet you asked for a copy of The Ditch Sustainability Project (Ditch System Sustainability Project, Case Study, TUD, February 2012). The report and documents are complete but it is too large to attach to this email. Please feel free to download the relevant sections of the document are available online where you can download it at: http://www.tudwater.com/project_development/tud_projects.html.

Due to the size and complexity of this document and the urgent need for approval of this variance request, it may be advantageous to arrange a meeting with TUD Engineering staff to focus your reviewing efforts on relevant information.

TUD and PGE Contract

A copy of the contract is attached, as **Attachment 4** as requested.

Additional Information on Water Conservation

The Table shown below lists the water treatment plant data and diversions for 2001, 2007 and 2010. The years 2001 to 2010 are listed to demonstrate the improvements TUD and its customers have made in water use in the last ten years. 2007 is listed because it was a similar water year with low rain fall and previously had the earliest end of spill. End of spill occurs when the inflow into a reservoir cannot keep up with the outflow and the water level in the reservoir begins to lower. 2012 is the earliest end of spill on record. The 2012 numbers are what TUD has planned in our request of the 5,606' lake level.

The production and ditch flow data is for the irrigation season, demonstrating that TUD is conserving water and has improved the efficiency of the raw water conveyance infrastructure significantly since 2001.

| June 1 to Sept. 5 (year) | 2001 | 2007 | 2010 | 2012 | 2012 % reduction over 2001 |
|--------------------------|-------|-------|-------|-------|----------------------------|
| Total WTP production | 2,351 | 2,242 | 2,145 | 2,100 | 10.7 |
| Section IV, ditch | 1,371 | 1,282 | 1,126 | 1,200 | 12.5 |
| Columbia, ditch | 982 | 902 | 938 | 890 | 9.4 |

The total of all TUD Water Treatment Plant Production (14 Water Treatment Plants for June 1st through September 5th) was 2,351 acre-feet in 2001, and 2,145 acre-feet in 2010. This is a reduction of over eight percent, despite adding an additional 1,500 connections from growth and from the impact of acquiring a number of old and failing water systems since 2001. TUD is anticipating the demand in 2012 to be in the range of 2007 (please note that 2010 was a wet water year). The District's target this year (assuming a Pinecrest Lake level of 5,606 feet in elevation at Labor Day) is just 2,100 acre-feet. The targeted 2,100 acre feet of water use can only be achieved through significant water conservation efforts by the District and the people, communities, businesses and farms of Tuolumne County, as well as what we hope will be a light wildfire season.

The Section IV Ditch diverted 1,371 acre-feet 2001 and 1,126 acre-feet in 2010, delivering water to five water treatment plants. This is a reduction of over 17 percent.

The Columbia Ditch diverted 982 acre-feet in 2001 and 902 acre-feet in 2010, delivering water to two water treatment plants. This is a reduction of over four percent.

TUD is planning a target of 1,200 acre-feet of diversions in the Section IV Ditch and 890 acre-feet of diversion in the Columbia Ditch this year. These amounts represent reductions from year 2001 of 12.5% and 9.4% respectively. The total diversions and total planned water treatment production for 2012 is a lower amount of use than the use in 2007 which was a very dry, hot year.

These reductions are the result of constant improvements to the efficiency of the District's raw and treated water systems, customer conservation efforts and water wise irrigation practices by agricultural customers. Between 1992 and 2000 TUD placed nearly seven miles of gunite on its ditch system at a cost of over \$527,000. Between 2000 and present, TUD has placed an additional nine miles plus of gunite at nearly \$1,000,000 in costs. Many other enhancements including replacement of spill and control gates and general control infrastructure have been put in place since 1992 and have contributed directly to improving the efficiency of the District's raw water conveyance infrastructure.

As outlined in the 2010 update to the TUD Urban Water Management Plan³ (UWMP), The District has reduced its' GPCD from 198 in 2001 to 173 GPCD (a 13% reduction for the five-year period from 2006-2010).⁴

In accordance with SBX 7-7 and as outlined by the Department of Water Resources' Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use, The TUD's GPCD target (using DWR Compliance Method 3) is set at 95% of the Regional Urban Water Use Target which was established for the San Joaquin Region at 174 GPCD⁵. Thus, the District's Compliance Target for year 2020 would be 165 GPCD (174 GPCD x 95% = 165 GPCD). TUD's per capita use in year 2010 was just 158 GPCD and well below the District's 2020 Compliance Target of 165 GPCD⁶. TUD and its customers are on track to achieve the 2020 Compliance Target of 165 GPCD by the year 2020.

It is estimated that the water conservation required to meet the 5,606 level restrictions imposed by the Pinecrest Lake Level at Labor Day would force the District's customers beyond what is required by SBX 7-7. To meet the 5,606 Pinecrest Lake level requirement the District and its 44,000 customers would have to use even less water this year than they are required to use under SBX 7-7 in the year 2020.

In summation, we believe we have shown a legitimate and necessary basis for our variance request. The vast majority of our water deliveries are treated water deliveries necessary for human health and sanitation, additionally some deliveries are of raw water for treatment by others for the same purposes. Of the irrigation deliveries, most are to permanent crops for which water is essential. Despite the increased customer base, TUD has reduced water use in the county by over 8%. With Phase II water conservation already in effect, we expect to save even more water this year.

Past Pinecrest operational data shows that in 2007, a slightly better water year from the perspective of end of spill, the lake elevation at Labor Day was 5,605. The District's extensive conservation efforts to date for this year are already such that the lake level may be left one foot higher (5,606) through Labor Day. This demonstrates a dedication to aggressive conservation efforts resulting in a GPCD use that under SBX 7-7 the District is not required to meet for nearly another decade.

We believe that PG&E and TUD have requested a waiver providing the highest lake elevation we can possibly reach this year. To go beyond that level would be unjustifiable and unreasonable and place an

³ 2010 Urban Water Management Plan, Tuolumne Utilities District, June 2011

⁴ 2010 Urban Water Management Plan, page 3-6, Tuolumne Utilities District, June 2011

⁵ 2010 Urban Water Management Plan, page 3-7, Tuolumne Utilities District, June 2011

⁶ IBID

unwarranted burden upon the 44,000 customers of the District, the communities, and farms for the purpose of discretionary recreation. Not only would this place a significant hardship to this region, it could place lives and property at stake in order to preserve recreational lake levels. The Pinecrest Lake Level Study reveals that there is no impact to recreation between the elevations of 5,608 and 5,606. However, if the lake level is required to remain at 5,608, there will be significant hardship to the county of Tuolumne, its visitors, businesses and environment.

Thank you again for your prompt attention to this important issue for the people, communities and farms of Tuolumne County. I would welcome the chance to meet with you or any other of your staff should you have additional questions or concerns. Due to the urgency of this matter as defined within this letter, we request a response by June 15, 2012.

If you have any questions on this matter, the District staff and I would welcome the opportunity answer them.

Sincerely,



Peter J. Kampa
General Manager

Cc: PG&E
Jesse Barton
TUD Board of Directors
Barbara Evoy
Tom Howard
State Water Resources Control Board

Enclosures:

- Attachment 1 – Schematic of Ditch System and water treatment plants
- Attachment 2 – A portion of the Columbia Ditch system
- Attachment 3 – Water Conservation Rules and Implementation Schedule
- Attachment 4 – PG&E/TUD Water Supply Agreement