

Nicholas F. Bonsignore, P.E. Robert C. Wagner, P.E. Paulo J. Whealen Andrew T. Bambauer, P.E. David M. Houston, P.E. Ryan E. Stolfus

August 10, 2005

Mr. Gary Hobgood
Department of Fish and Game
Sacramento Valley Central Sierra Region
701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

Re: Lake Alpine Water Company - Field Visit for Protest Resolution

Dear Mr. Hobgood:

This letter will serve to follow up on our field visit on July 5, 2005 regarding the Department of Fish and Game's (DFG) protest against State Filed Application 5648-7 and companion Water Right Application 31523 of Lake Alpine Water Company (LAWC), filed with the State Water Resources Control Board (State Water Board). The purpose of the field visit was to review the project facilities to develop information for protest resolution.

The meeting was attended by:

Bruce Orvis III, Lake Alpine Water Company Bill Verigin, Engineer for Lake Alpine Gary Hobgood, Department of Fish and Game Jesse Barton, Law Office of Daniel F. Gallery Robert Wagner, Wagner & Bonsignore Engineers Ryan Stolfus, Wagner & Bonsignore Engineers

LAWC owns and operates Bear Lake, which was constructed in 1965 and impounds 360 acre-feet of water. LAWC diverts water from Bear Creek which is tributary to Bloods Creek thence the North Fork Stanislaus. Bloods Creek is unimpaired. The Bear Creek dam is located at an elevation of approximately 7,000-foot. The LAWC holds Water Right License 11007 for 240 acre-feet of storage in Bear Lake with a maximum allowable use of 140 acre-feet. Lake Alpine Water Company is seeking a new water right to put the remainder of water that is stored in Bear Lake to beneficial use (approximately 220 acre-feet of storage and 175 acre-feet by direct diversion for a total proposed new diversion of 395 acre-feet annually).

As part of the review we inspected the following (see attached map):

- all points of stream inflow into Bear Lake;
- the Bear Lake Dam and spillway;
- the reach of Bear Creek between the dam and the Lake Alpine community store culvert (a possible migration barrier);
- the Bear Creek Culvert under Highway 4 (a migration barrier);
- the confluence of Bear Creek and Corral Gulch;
- the confluence of Bear Creek/Corral Gulch and Bloods Creek;
- and Bloods Creek at the Forest Route 7N01 culvert (a migration barrier).

You expressed your concerns that LAWC's diversions would cause a diminished flow in Bear Creek. We do not believe the proposed diversions will have any meaningful impact on the hydrology of Bear Creek, or more importantly Bloods Creek. As demonstrated by the attached hydrographs the project will have an insignificant temporal effect on the flow of Bear Creek and an unnoticeable effect on flow of Bloods Creek below its confluence with Bear Creek. Bear Creek would typically be dry at the point of diversion under unimpaired conditions in early June corresponding to the end of the snowmelt. The winter of 2004-05, which was unusually wet, was producing inflow as of July 5, due to the remaining snow pack. We believe the inflow has since ceased. The only effect the project would have on Bear Creek below the dam would be a drying of the creek a few days earlier than would naturally occur. The project has no effect on the watershed above the dam.

Shown on Figure 1 is the estimated long term average daily discharge of Bear Creek. The data for Bear Creek was developed from stream flow measurements taken on Bloods Creek. The Bear Creek hydrograph compares unimpaired and impaired conditions. The impaired conditions assume that Bear Lake is completely empty at the beginning of each water year. It is also assumed that LAWC takes water at the maximum rate of direct diversion all the time. These are very conservative assumptions. Our analysis shows that the impaired hydrograph is not significantly different than the unimpaired hydrograph.

Along Bear Creek and Bloods Creek, there are potential barriers to fish passage. Image 1 is a three barrel culvert under the road near the Lake Alpine store that is approximately 0.6 miles downstream of the dam (map point #6). During certain flow conditions this culvert may not present a significant barrier to fish passage, however as demonstrated Bear Creek would normally dry up after snowmelt despite the presence of the LAWC's diversions. Therefore, we would not expect to find fish beyond this after the cessation of flow.

During our field inspection we found some fish in the reach of Bear Creek below the dam and above the three barrel culvert. The fish probably came from Bear Lake by way of the spillway. You suggested to us that under most flow conditions there isn't any attraction in Bear Creek to cause fish to move from downstream into the upper reach of Bear Creek. Further it was suggested that when flow began to subside any fish found in this reach would find their way downstream with the receding water. Image 2 is the Bear Creek culvert under highway 4,



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approximately 1.0 miles downstream of the dam (map point #7). This culvert would prevent fish from passing to Bear Creek in any event during most flow conditions of the year.

Further downstream, on Bloods Creek, before its confluence with the North Fork Stanislaus River is another significant barrier to fish passage (Image 3), approximately 3.7 miles downstream of the Bear Lake dam (map point #10). This barrier further decreases the likelihood of passage to Bear Creek. You were also concerned with the effect that a drying Bear Creek could have on other aquatic species that may inhabit the reach of Bear Creek below the dam and upstream of the three significant fish barriers. Any other species dependent on the water resources in Bear Creek below the dam, would be expected to experience the same hydrologic conditions in the future that they have seen in the past whether or not LAWC diverts water pursuant to this project. As shown the only expected change is the cessation of flow at the point of diversion a few days earlier than under unimpaired conditions.

Figure 2 shows the estimated long term mean daily discharge of Bloods Creek below its confluence with Bear Creek under the impaired and unimpaired conditions of Bear Creek. The hydrograph represents the discharge of Bloods Creek approximately 0.5 miles downstream of the fish passage barrier on Bear Creek at the culvert under Highway 4 (Image 2). As shown, the effects of the proposed and existing maximum diversions on Bear Creek have very little effect on the flow of Bloods Creek.

Data for Figure 2 was developed by correlating the unimpaired discharge on the Merced River, USGS Gaging Station 11266500, Merced River at Pohono Bridge near Yosemite. Figure 3 shows a very close relationship between the flows of the Merced River and Bloods Creek for 2003, an average run off year for the Merced River at Pohono Bridge.

Table 1 shows the estimated annual discharge at various points in the Bloods Creek watershed and the face value of water rights on file with the State Water Board. The total estimated discharge of Bloods Creek at its confluence with the North Fork Stanislaus River is 23,315 acre-feet per year. The total face value of all water rights within the Bloods Creek watershed including the LAWC's existing and proposed diversions is 650 acre-feet. This represents about 2.8% of the discharge of Bloods Creek. The face value of diversions of 650 acre-feet is very likely overstated because it assumes the total amount will be diverted every year at the maximum allowable rate. Even considering these conservative assumptions the analysis shows that the effect on Bloods Creek is not meaningful.



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You proposed dismissal terms for your protest dated January 12, 2005 are reprinted as follows:

"For the protection of fisheries, wildlife, and other instream uses in Bear Creek and Blood Creek, diversions under this permit shall be subject to maintenance of minimum bypass flow. A measure of flow shall be bypassed around the point of diversion during the allowable diversion season that will be of sufficient quantity and quality to maintain in good condition, any fisheries and wildlife resources that would exist in downstream reached under unimpaired flows. Determination of the bypass flow must be based on site-specific biological investigations conducted by the Permittee in consultation with FDG staff. No diversion shall occur under this permit until DFG and the Permittee have agreed on the minimum bypass flow, no water shall be diverted if the stream flow at the point of diversion is 2 cfs or less."

The site specific analysis of data as requested by the DFG, discussed herein, shows that diversions from Bear Creek will not impact Bloods Creek in any meaningful way. Bear Creek ceases to flow at the point of diversion after snow melt under unimpaired conditions. Under the impaired conditions of the proposed project Bear Creek will cease flow on average four days sooner. This is not a meaningful impact.

We believe that we have demonstrated there is no benefit to Bear Creek from a requirement for bypass or release and that we have satisfied the Department's protest. We respectfully request that your protest be withdrawn. Please contact me or Mr. Ryan Stolfus from my office if you have any questions.

Very truly yours,

WAGNER & BONSIGNORE CONSULTING CIVIL ENGINEERS

Robert C. Wagner, P.E.

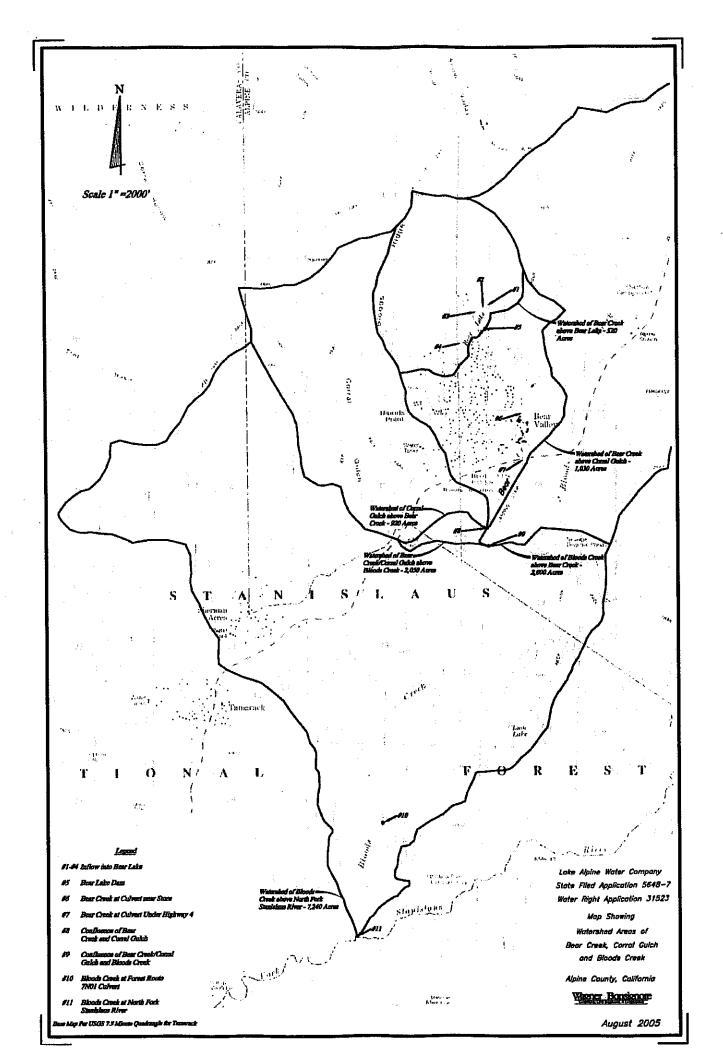
Encls. √

cc: Kathy Mrowka (via email & US Mail)

Lake Alpine Water Company, Board of Directors (via email)

Dan Gallery (via email)
Jesse Barton (via email)
Bill Verigin (via email)
Bruce Orvis, III (via email)





Impaired Bear Creek flow is based on a empty lake starting October 1 and daily withdrawal of 0.75 cfs from the lake. 1-Dec Creek data. (Bear Creek Watershed is approximately 51.5% of the Bloods Creek Watershed, at the Bloods Unimpaired Bear Creek flow developed from Bloods below Bear Lake dam on average, 4 days sooner under impaired conditions than Bear Creek is estimated to cease flow 1-Nov under unimpaired conditions. 1-Oct Creek Gaging location). 1-Sep Estimated Long Term Mean Daily Discharge Notes: Bear Creek Above Corral Gulch 1-Aug Date 1-Jul 1-Jun 1-May -Bear Creek Unimpaired Flow 1-Apr ---- Bear Creek Impaired Flow 1-Mar 1-Feb 1-Jan 10 50 40 30 20 Flow (cfs)

FIGURE 1

Bear Creek Culvert Under Road Near Store (Map Point #6)

Bear Creek Culvert Under Highway 4 (Map Point #7)

IMAGE 3

Bloods Creek Culvert Under Forest Route 7N01 (Map Point #10)

average daily use by the Lake Alpine Water District as well as the amount of flow from the upper Bear Creek 1-Dec watershed required to fill Bear Lake, assuming it is The impairment shown below is calculated from 1-Nov completely empty starting October 1. 1-0ct 1-Sep Estimated Long Term Mean Daily Discharge Notes: Bloods Creek Below Bear Creek 1-Aug Date 1-Jul 1-Jun 1-May Bloods Creek Flow Below Bear Creek (With Impairments from Bear Creek) 1-Apr Bloods Creek Flow Below Bear Creek (Unimpaired) I-Mar The proposed project has Bloods Creek confluence flows of Bloods Creek at the point directly below little or no effect on the with Bear Creek 1-Feb 1-Jan 0 250 200 150 100 20 Flow (cfs)

FIGURE 2

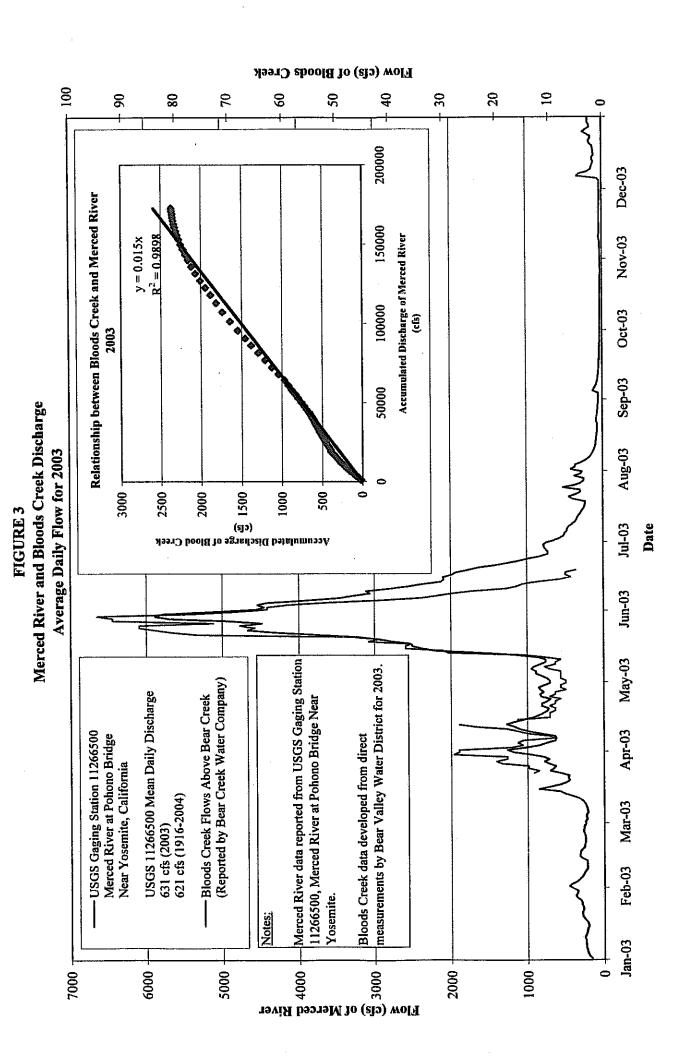


TABLE 1

Estimated Average Annual Discharge within Bloods Creek Watershed

Point	Discharge
	(af)
Bear Creek Above Bear Lake Dam	1,440
Bear Creek Above Corral Gulch	2,890
Corral Gulch above Bear Creek	2,579
Bloods Creek Below Bear Creek/Corral Gulch	13,045
Bloods Creek at North Fork Stanislaus	23,315

Water Rights Located Within the Bloods Creek Watershed as Shown on State Water Resources Control Board Spot Maps

RightOwnerSourceA13353Sherman Acres Mutual Water AssociationUnnamedA20312Lake Alpine Water CompanyBear CreelA21485Lake Alpine Water CompanyBear CreelA22291Bear Valley Homeowners AssociationUnnamedA29813Bear Valley Homeowners AssociationUnnamed		DIVERSION		Maximum
· Association sociation sociation sociation	4	Season	Use	Annual Use
Association sociation sociation sociation				(af)
sociation sociation	Unnamed tributary to Bloods Creek	6/1 to 9/1	4000 gallons/day	1.4
sociation	Bear Creek tributary to Bloods Creek	1/1 to 12/31	.075 cfs	54.3
sociation		10/1 to 6/1	Storage 240 af	140.0
	bear Creek tributary to bloods Creek	1/1 to 12/31	DD of .05 cfs	140.0
	Unnamed tributary to Corral Gulch thence Bloods Creek	1/1 to 12/31	and a manufacture of the state	3.2
	Unnamed tributary to Corral Gulch thence Bloods Creek	1/1 to 12/32	7000 gallons/day	8.0
A21523 Lake Alnine Water Company Bear Cree	Bear Creek tributary to Bloods Creek	10/1 to 7/1	Storage 220 af	395.0
-			DD of .78 cfs	
\$13730 James L Orvis & Bruce Orvis	Unnamed tributary to Bloods Creek	1/1 to 12/31	.067 cfs	48.5
S14798 Scott C. Parker Unnamed	Unnamed tributary to Bloods Creek	3/1 to 10/1	150 gallons/day	0.1
			Total	650.5