



United States Department of the Interior



BUREAU OF LAND MANAGEMENT

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In Reply Refer To:
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Charles Rich, Chief
Complaint Unit
State Water Resources Control Board
Division of Water Rights
PO Box 2000
Sacramento, CA 95812-2000

Re: 363: DL: 262.0 (18-09-02)

Dear Mr. Rich:

With this letter I am providing to the Water Rights Division the disposition of Bly Tunnel complaint deliberation by Eagle Lake Field Office of the Bureau of Land Management. We will not be reconsidering our 1985 decision to continue a historic water flow through the tunnel.

As you are aware, on January 8, 2009, the Eagle Lake Field Office responded to your November 10, 2008 letter to answer complaints regarding “diversion” of Eagle Lake water through the Bly Tunnel. Our complaint response to you indicated that according to our 1985 Decision Record, the pipe was installed during 1986 plug construction to “meet the legal rights of downstream property owners authorized to appropriate water from Willow Creek”. Since that time, water accumulated above the plug, at or above the pipe level, has been continuously released through the pipe at a varying rate.

Water Rights

This office’s 1985 Decision to install a pipe was based in part on our understanding of the Division’s opinion regarding the right to Bly Tunnel water. An August 1982 letter from Water Rights Division Senior Engineer R. Paul Art stated that, “. . . water users on Willow Creek have a right to Eagle Lake water that reaches the creek such as seepage into the tunnel . . .” Another Division of Water Rights letter, this in 1977 from Supervising Engineer D.W. Sabiston, stated, “We therefore believe that rights to the water originating in the Eagle Lake tunnel and rights to use water . . . were adjudicated by the Fleming v. Bennett decree.”

This office appreciates Division of Water Rights diligence and response to our May 12, 2009 request for a current view of downstream user rights to tunnel flow. Your June 1, 2009 letter counters the previously cited Division opinions stating that “. . . we do not believe that there are any water users downstream of the Bly Tunnel that have a valid basis of right to demand that water be allowed to continue to flow through and past the tunnel plug.” This office also understands from your letter that water originating from the tunnel “is not subject to the State Water Board’s permitting authority” and that “the right to divert all percolating groundwater coming from the tunnel and the responsibility for controlling such diversion belongs to BLM.”

Public Comment

Beginning with a June 18, 2009 special session of the Eagle Lake Interagency Board of Directors, BLM began soliciting information from the public that would provide a basis for exploring a reconsideration of the 1985 Decision Record that provided for bypassing up to 7 cfs¹ through the tunnel plug (see attached *Addendum to Eagle Lake Tunnel Hazard Reduction and Seal Environmental Analysis (1985)*). Comments received at the meeting and afterwards were primarily from those interested in turning off the pipe flow because of its purported contribution to lowering lake levels. They were concerned that low lake levels are causing economic hardship for business', rendering boat ramps unusable and harming fish, wildlife, and lake vegetation. Some said that the BLM favors ranchers over recreationists, while others contended that flow through the pipe violates the agreement that the lake would be allowed to seek its natural level. It was said that the bypass flow should not be trivialized as it is a contributor to outflow from the lake and that the pipe is responsible for the loss of 36.8 inches of water over the last 23 years.

Other commenter's offered opinions that the lake level is low because of drought, not because of flow from the pipe. Others said that historic flows from the pipe benefit wildlife, vegetation, and agriculture along Willow Creek and that shutting off the pipe would harm those interests. These commenter's suggested that shutting off the flow from the pipe may cause more environmental harm to Willow Creek than environmental benefit to Eagle Lake, because the flow from the pipe has a negligible effect on lake level.

Some suggested that conflicting water rights opinions must be reconciled, that there was a lack of factual analysis in the June 1, 2009 DWR letter to the BLM, and that the BLM has no authority to shut off flow from the pipe.

Still other commenter's said that turning off the pipe would have little effect on flow from the lake, the water would simply find other outlets.

Some commenter's offered solutions including annual monitoring of tunnel flow to determine a relationship to lake level, turning off the pipe during drought periods, seasonally-timed releases through the pipe, turning off the flow for five years of monitoring, cessation of cloud seeding over Lake Almanor, and controlling lake flow into the tunnel with an earthen dike at the lake.

Consultation

Regular consultations with six tribal governments have included briefings on the Bly Tunnel. The Washoe, Paiute, Maidu, and Pit River tribes, of which the governments are comprised, have not expressed concerns.

California's State Historic Preservation Office (SHPO) initially suggested to this office that water flowing from the tunnel's exit portal provided necessary historic context for listing of the tunnel and the ditch on the National Register of Historic Places. If this were to be the case, BLM would have no choice but to continue to provide for moving water out of the tunnel and through the ditch. On a September 15, 2009 site visit, BLM was advised by SHPO that flowing water was *not* necessary to list the site on the register. While not applying to historic properties, there is still a question as to whether flowing water is required to list as a cultural landscape. The BLM is still investigating this question.

On September 9 and 10, 2009, the Eagle Lake Field Office hosted a Bly Tunnel tour and discussion at a regularly scheduled meeting of the Northeast California Resource Advisory Council (RAC)². The council

¹ The 1985 *Addendum to Eagle Lake Tunnel Hazard Reduction and Seal Environmental Analysis* updated the 1974 Environmental Analysis Record. According to the *Addendum*, 8 cfs leaves the tunnel instead of 10cfs and that approximately 1 cfs is from seepage into the tunnel below the plug.

² The 15 members of the council, broadly representing commercial/commodity, environmental/historical and government are appointed by the Secretary of the Interior for three year terms to provide counsel to the three northeastern California field offices related to land management issues.

agreed that a tour and briefing did not provide enough information for them to offer a recommendation. Members who expressed their personal views were uncomfortable with stopping the pipe flow. One member would like to see the decision shifted to the Water Resources Control Board or have BLM shut off the flow on a trial basis to study effects.

Water Budget

It has always been BLM's contention that water exiting the tunnel since 1935 is intercepted groundwater flow that likely includes lake water. *The Eagle Lake Tunnel Hazard Reduction and Seal Environmental Analysis* addendum stated, ". . . it is known now that the tunnel flow results from natural subsurface flow including lake water seepage through porous pyroclastic material and fault systems not affected by the 1986 sand plug. The assumption made therefore is that the flow from the lake is uncontrollable; it will occur somewhere, but not necessarily through the tunnel, regardless of the measure taken to seal the tunnel."

Your June 1, 2009 letter stated, ". . . there is not evidence to suggest that the tunnel is intercepting flow that would naturally occur in Willow Creek". It is true that we have no proof of a preexisting spring at the tunnel outlet nor do we have proof that a stream flowed from that location to Willow Creek. We do feel contrary to your opinion, given the geology and topography of the area, that water currently flowing from the Bly Tunnel *would* have discharged into the Willow Creek watershed had the tunnel never been built, contributing to ground water, other springs in the area and probably Willow Creek.

Some have argued that the impact of flow through the pipe has an additive impact on lake level; that the lake would be higher now without the pipe. The assertion is not justifiable. It is illogical to accumulate a component of outflow from the lake over time independent of the overall water budget. Factors such as overall lake level, the impact that lake level has on evaporation rates as well as how much lake level and associated pressure (head) causes an increase in outflow have to be included in any assessment of cumulative lake levels. As stated earlier, flow from the pipe is a component of total outflow from the lake that would find another outlet if the pipe valve were closed.

Ultimately Eagle Lake sets its own elevation based on inflow, not by a controlling flow from a pipe which accounts for a small percentage of total lake outflow (1.3-8.6% (Kupferman)). Retention time of water molecules is not indefinite, especially in an incompletely sealed body of water. Additionally, this office has noted that at higher lake levels, more head pressure behind the plug produces higher flows through the pipe and leakage through tunnel walls below the plug. The same is true for overall outflow from the lake where at higher lake levels more water leaves the system because of a higher head, not to mention greater evaporation due to greater lake surface area.

Ecosystem Effects

The current Eagle Lake elevation of 5096 ft (as of October 2009) is within the range of recorded natural variability during the last 94 years. Not counting the period during the Bly Tunnel Project from 1923 through 1935 when the lake level was dropped to an elevation of 5091, the elevation has ranged from a low of 5091 ft in 1935 to a high of 5125 ft in 1916. As pointed out in the 1974 *Environmental Analysis Record*, "the nature of a closed basin lake such as Eagle Lake is one of fluctuation. It depends on rising to high levels during wet years to compensate for the lowering of water levels during drought years."

The adverse impacts of low lake levels to natural and human environment have been previously acknowledged by the BLM and are not disputed. The California Department of Fish and Game (CDF&G) confirmed in its September 8, 2009 letter that "loss of water substantial enough to lower the lake below a level capable of providing adequate amounts of littoral zone habitat could be detrimental to the ecosystem and the recreational trophy fishery." The Department feels however that the ". . . small increment of water [flowing through the pipe] is not significant relative to the overall annual water loss and would not have any measurable impact to the lake's fish resources." "Dr. Lewis W. Oring of the University of Nevada, Reno's College of Agriculture, Biotechnology and Natural Resources points out that not only does the fishery suffer

at lower lake levels but other critical elements of the ecosystem including two severely declining populations of grebe (letter from Lewis Oring, October 31, 2009).

CDF&G has a concern that a reduction of flow through the tunnel could be detrimental to fish in Willow Creek, including a stretch through a recently designated BLM Area of Critical Environmental Concern (*Record of Decision Eagle Lake Resource Management Plan, 2008*). The water that is benefiting users downstream has become an integral component of an artificially created ecosystem in the ditch from the tunnel to Willow Creek. Eighty-seven years after construction, the “ditch” now has a fully developed riparian system and aquatic life. Some water would need to continue to run through the ditch to avoid adverse impacts to that ecosystem as well as the ecosystem of Willow Creek.

Conclusions

Reconsideration of the previous decision by this office was not taken lightly. Eagle Lake is one of the major recreation attractions in Lassen County and the second largest natural lake entirely in California. The importance of the lake for fish and wildlife habitat are well documented. With approximately forty percent of the shoreline public lands, the BLM has a large stake in the lake’s water quality and scenic values including retention of the natural setting of the lake shore. As a member of the Eagle Lake Interagency Board of Directors, the BLM shared in the resolution to allow the lake to seek a natural elevation. The 1985 decision to place a pipe through the plug was based on an understanding of water rights, previous tunnel flows and the hydrology of natural outflow. The significant degree of due process associated with that decision is well documented. I find no basis to begin a process to reconsider water flow through the plug pipe.

Cordially yours,

Dayne Barron
Field Office Manager

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1. Addendum to Eagle Lake Tunnel Hazard Reduction and Seal Environmental Analysis
2. Kupferman Memo