

# Konrad Fisher

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State Water Resources Control Board  
Division of Water Rights  
Attention: Mara Irby  
P.O. Box 2000  
Sacramento, California 95812-2000  
wrhearing@waterboards.ca.gov  
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## Re: **Marble Mountain Ranch-Cole Hearing**

To SWRCB, Division of Water Rights & Hearing Team:

Thank you for the opportunity to provide comments and evidence to support the Marble Mountain Ranch-Cole Hearing. I am the only landowner and water right holder on Stanshaw Creek downstream from the diversion maintained by Marble Mountain Ranch (MMR). My property is dissected by Stanshaw Creek and extends from the west side of Marble Mountain Ranch (MMR) to the Klamath River. I've attached a map as **Exhibit 1** showing property ownership relative to Stanshaw Creek.

I rely on water from Stanshaw Creek to meet my domestic, irrigation, and emergency fire suppression needs. Although it is not the focus of this hearing, I request that corrective actions protect my water rights from infringement by MMR's diversion. I detailed these issues in a February 25, 2015 letter to SWRCB attached as **Exhibit 2**.

I support corrective measures that protect public trust resources and my ability to exercise my water rights for current and future uses including a fish-friendly micro-hydropower system.

### **WASTE & UNREASONABLE USE**

MMR's water diversion constitutes waste and unreasonable use, and unreasonable method of diversion for reasons including, but not limited to the following:

(1) Diverting water from Stanshaw Creek for hydropower production and returning it to Irving Creek is unreasonable, particularly given the alternatives detailed below under corrective actions.

(2) On numerous occasions, including as recently as September, 2017, water diverted from Stanshaw Creek was flowing from the east side of MMR property onto a public dirt road near Irving Creek. This constitutes waste.

(3) MMR's hydropower system constitutes waste because it relies upon a low head system (the vertical drop between the POD and point of power production) rather than a high head system.

High head systems can produce a given unit of electricity with significantly less water. Additionally, MMR's hydropower system constitutes waste because it lacks a battery bank that could store excess power that is produced and not used, thus allowing less water to be diverted. I've attached an estimate for a more efficient hydropower system as **Exhibit 3** that produces 4,180 watts with a .23 CFS diversion.

(4) Lack of a control mechanism at MMR's point of diversion constitutes an unreasonable method of diversion and causes waste.

(5) MMR's diversion ditch constitutes a wasteful and unreasonable method of diversion because it loses an estimated 0.5 CFS of water to conveyance loss, and causes landslides in the winter which discharge sediment into Stanshaw Creek and the Klamath River. I've attached photos of one such sediment discharge event as **Exhibit 4**.

### **HARM TO PUBLIC TRUST RESOURCES**

MMR's diversion harms public trust resources in Stanshaw Creek and the Klamath River including fisheries and recreational opportunities. In addition to sediment discharges discussed above, I have personally witnessed dead juvenile coho and Chinook salmon and steelhead trout in lower Stanshaw Creek immediately after MMR increased its water diversion in the summer leaving fish stranded.

Most summers since the Coles purchased MMR, their diversion has completely dewatered the lowest reach of Stanshaw Creek before it reaches the Klamath River. On numerous occasions, MMR's diversion has also severely reduced the size of a natural pool in Stanshaw Creek near its confluence with the Klamath River, rendering it unusable for swimming. I've attach photos of one such occurrences as **Exhibit 5**.

Lack of connectivity between Stanshaw Creek and the Klamath River prevents juvenile salmon from escaping lethal water quality conditions in the Klamath River in late summer and eliminates cold water refugia in the Klamath River that is used by migrating adult and juvenile salmon.

By preventing Stanshaw Creek water from reaching the Klamath River, MMR's diversion also eliminates a plume of clean water in the Klamath River in the summer which provides swimming for the public at times when Klamath River water quality is unsafe for swimming. Eliminating this plume of water in Stanshaw Creek also limits recreational fishing in this section of the Klamath River because adult fish do not congregate.

### **CORRECTIVE MEASURES**

#### **Enforce NMFS Bypass Flow Requirements**

SWRCB should require MMR to comply immediately with NMFS bypass flow requirements and diversion method requirements and install flow measuring devices to verify compliance.

Diversion curtailments over the last two summers, as compared to previous summers since the Coles purchased MMR, have brought considerable benefits. As a result of reduced water diversion over the last two summers: (1) I have not witnessed juvenile salmonids die due to stranding; (2) Stanshaw Creek has continually reached the Klamath River allowing fish to migrate between the creek and the Klamath River; (3) The pool near the mouth of Stanshaw Creek that provides salmonid rearing and swimming for humans has remained full; and (4) A plume of cold clean water in the Klamath River near the mouth of Stanshaw Creek has provided refugia for salmon and swimming for the public at times when Klamath River water quality is impaired. These benefits will increase further with corrective actions detailed below.

While the NMFS bypass flow requirements represent a significant improvement, I encourage NMFS and SWRCB to consider whether NMFS bypass flow requirements for winter months are adequate to protect Public Trust Resources and fisheries habitat. Large diversions in winter months, even if water is returned upstream of the reach usable for anadromous fish, may compromise flushing flows necessary for habitat maintenance.

Moreover, Marble Mountain Ranch's large winter diversion relative to bypass flows has, on several occasions, harmed water quality in Stanshaw Creek when said diversion is temporarily halted for maintenance. At such times, flows increase dramatically below the point of diversion and transport sediment down Stanshaw Creek and into the Klamath River.

### **Prevent Water Quality Impairments**

MMR's existing unlined conveyance ditch creates instability on a steep hillside and is about three times wider than would be necessary if water was diverted via pipe. Consequently, the ditch washes out during many winters creating mudslides that clog salmon habitat in Stanshaw Creek, causing plumes of muddy water to enter the Klamath River, and clogging my domestic water system.

SWRCB should order MMR to: (1) Install a pipe along their existing diversion ditch and modify the ditch according to recommendations of a qualified, independent third party to prevent the aforementioned water quality problems; or (2) Decommission their existing ditch and divert water from an alternative location via pipe. It is common practice in this area to divert water through the forest via pipe and a narrow trail rather than a ditch approximately as wide as a car.

### **Limit diversion for consumptive uses to an amount that is beneficially used**

The Coles have estimated non-consumptive water use at .353 CFS while SWRCB estimated it at .103 CFS. Both estimates are detailed in **Exhibit 6**, Page 11. SWRCB should limit MMR's diversion for consumptive use based on standard calculations for domestic and irrigation purposes.

## **Eliminate Waste**

MMR should reduce or eliminate conveyance losses, estimated at 0.5 CFS, by piping water to its place of use.

MMR should cease diverting more water than is needed. As recently as September, 2017 water was draining off of the east side of Marble Mountain Ranch onto Forest Service land near Irving Creek.

**Prohibit MMR from diverting water for hydropower production unless and until said diversion avoids harm to downstream water right holder(s), fisheries, and public trust resources.**

Since the 1990s, I have urged Doug Cole to consider alternative ways to meet his electricity needs that do not harm fisheries resources, public trust resources, or our ability to exercise our riparian and any pre-1914 water rights. During this period of time, I have researched micro-hydro systems in our region so that I could propose corrective measures that would meet electricity needs of my property and MMR.

Last year, Mr. Cole agreed to evaluate alternatives including solar power and a micro-hydro system that includes a higher point of diversion, and therefore provides more head (the vertical distance between a point of water diversion and point of power production). Such a hydropower system would: (1) Use considerably less water to produce a given unit of electricity; and (2) If designed properly, allow me to exercise my water rights for hydropower production while returning the water above the reach of Stanshaw Creek that provides anadromous fish habitat.

Proposals for MMR to generate hydropower using its current POD, and returning the water to Stanshaw Creek along Highway 96 have been evaluated in detail. Unfortunately, this option would preclude me from exercising my water rights to install a hydropower system that returns water to Stanshaw Creek above the reach used by anadromous fish. This option would also require permits to dig a trench along Highway 96 from the California Department of Transportation, and possibly the company that maintains buried fiber optic lines.

In an effort to exercise my water right to produce electricity without harming fisheries and public trust resources, I obtained the aforementioned estimate for a hydropower system that would produce 4,180 watts with a .23 CFS diversion.

With a special use permit from the U.S. Forest Service, Marble Mountain Ranch could install an equally efficient hydropower system scaled to meet their electricity needs. By using a higher point of diversion for hydropower production, and returning the water into Stanshaw Creek above my point of diversion, MMR would avoid infringement upon my water rights for current and future needs.

MMR may also pursue a hydropower system using water from Irving Creek. Since MMR is within the Irving Creek watershed, returning water to Irving Creek after use would be significantly easier than returning water to Stanshaw Creek.

Given the permitting requirements and cost of the aforementioned physical solutions, the most feasible solution may be for MMR to install a solar system with a battery backup, paired with a diesel generator to charge batteries when solar power is inadequate. I have provided an estimate for a solar system as **Exhibit 7**.

**Determine electricity needs based on reasonable and customary usage for off-grid locations if they divert water for hydropower.**

If MMR or I divert water for hydropower production, SWRCB should require each of us to determine reasonable and customary electricity needs for off-grid locations. I have attached a document that details household energy consumption for various appliances as **Exhibit 8**. In our area, it is necessary for off-grid households and businesses that produce hydropower to use less electricity than on-grid households and businesses. This is accomplished by using energy efficient appliances, wood heat, and gas instead of electric appliances where possible. While it may seem overly prescriptive in normal situations, I believe it is a reasonable requirement for those of us who seek to divert water for hydropower from flow-limited streams.

Fortunately, physical solutions exist that would satisfy electricity needs for the Cole's property and mine without reducing flow levels in the reach of Stanshaw Creek used by anadromous fish.

Thank you for dedicating your time and resources to resolve this difficult issue. Please feel free to contact me if you have any questions or need additional information.

Sincerely,



Konrad Fisher