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BEFORE THE STATE WATER RESOURCES CONTROL BOARD
STATE OF CALIFORNIA

In the Matter of: DOUGLAS AND HEIDI COLE AND MARBLE MOUNTAIN RANCH	POST-HEARING CLOSING BRIEF OF KARUK TRIBE AND KLAMATH RIVERKEEPER

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The Karuk Tribe and Klamath Riverkeeper submit this closing brief following the four-day hearing held by the State Water Resources Control Board ("State Board") in the Matter of Douglas and Heidi Cole and Marble Mountain Ranch (collectively "MMR").

I. Introduction: Clarifying the California Reasonable Use Law and California Public Trust Law Issues Involved in Hearing

The Karuk Tribe and Klamath Riverkeeper submit that the focus of the State Board's decision in this matter should be on efforts to return Stanshaw Creek flows to the natural unimpeded hydrograph to the greatest extent feasible, and on the unreasonableness of the current use of MMR diversion given the feasible alternatives to generate electricity for MMR. Two main premises provide the foundation for the conclusion that MMR's diversion and use of Stanshaw Creek water results in waste and unreasonable use of water and constitutes an unreasonable method of diversion. First, to fully protect public trust resources such as salmon and steelhead, and dependent Karuk Tribe cultural beneficial uses and other public trust uses of salmon and steelhead, the instream flows in watercourses such as Stanshaw Creek must closely reflect the natural unimpaired hydrograph. Second, when the purpose of diverting water is to generate off-stream hydropower and there are feasible alternatives to generate power that can eliminate or greatly reduce the diversion and use of water for this purpose, the continued diversion and use of water for this purpose is unreasonable under California reasonable use law.

Regarding the first main premise, for Stanshaw Creek to provide salmon and steelhead with full protection as a cold water refuge to escape the lethally warm summer/early fall temperatures on the Klamath River and to fully protect Stanshaw Creek as a spawning ground for steelhead, mere connectivity between Stanshaw Creek and the Klamath River is not enough. To provide this full protection, Stanshaw Creek flows need to be more robust than the minimum amounts that achieve mere connectivity and instead need to more closely reflect Stanshaw Creek's natural unimpaired hydrograph. Therefore, if the State Board decision in this matter reduces MMR's diversions only enough to establish connectivity, but does not restore flows that more closely reflect Stanshaw Creek's natural unimpaired hydrograph, the decision

will not provide salmon and steelhead with the full protection called for under California public trust law.

Stanshaw Creek is not the first watercourse in California where the issue of ensuring flows for fish beyond mere connectivity has been at issue. This issue also arose on the 60-mile area below the Bureau of Reclamation's Friant Dam on the San Joaquin River. Due to the lack of releases from Friant Dam, this 60-mile reach had been intermittently dry for 60 years. This meant that the stream and creeks that feed into channel of the San Joaquin River had lost their connectivity with the actual San Joaquin River. As a result of a settlement reached in 2006, the Bureau of Reclamation has recontoured the San Joaquin River banks and channel in this 60-mile reach and has begun releasing water below Friant Dam. Pursuant to the standard in the settlement, however, these releases are designed to achieve more than establishing mere connectivity and minimum flows. Rather, the standard in the settlement requires Friant dam releases and flows to maintain salmon and steelhead fisheries downstream in reference to the natural unimpaired hydrograph for this stretch of the San Joaquin River. This unimpaired hydrograph provides the instream habitat conditions in which salmon and steelhead evolved and are most productive and healthy.

The approach to flows and Friant Dam releases on the San Joaquin River provides an appropriate backdrop and context to consider how the State Board should proceed regarding MMR's diversions on Stanshaw Creek. In the case of dried out river channel below Friant Dam on the San Joaquin River, it was not sufficient to release just enough water to establish mere connectivity. Rather, the Bureau of Reclamation needed to release quantities of water (and at specific times) that more closely resembled the natural unimpaired hydrograph to ensure appropriate protection of downstream salmon and steelhead fisheries. The same goes for Stanshaw Creek. It is not enough that MMR reduces its diversions to achieve minimum bypass flows. Rather, to fully protect salmon and steelhead, MMR's diversions need to be reduced to allow Stanshaw Creek's flows to resemble the natural unimpaired hydrograph to the greatest extent feasible given reasonable alternatives to satisfy reasonable electricity needs.

Regarding the second main premise, pursuant to California reasonable use law, the key

consideration in determining whether diversions of and purpose of use of water is unreasonable is whether there are alternative means to achieve the objectives for the water that is being diverted. In the case of MMR, the vast majority of its diverted water is being used not for consumptive uses but to generate electricity via an inefficient off-stream hydropower system. Yet, the administrative record makes plain that there are feasible alternatives to generate electricity for MMR that either don't require any diversions of Stanshaw Creek waters (e.g. solar/diesel) or (via a new point of diversion ("POD")) would allow the diverted waters used for hydropower generation to naturally return to Stanshaw Creek and decrease the volume of water necessary (increased head). Under these circumstances, where the record is clear that Marble Mountain Ranch has feasible ways to generate electricity without its current diversions from Stanshaw Creek, MMR's continued operation of its off-stream hydropower system amounts to an unreasonable diversion and use of water under California law.

Because there are feasible alternative ways for MMR to generate electricity without operating its antiquated off-stream hydropower system, it becomes clear that arranging for "return flow" to Stanshaw Creek is **not** the real issue in this matter, either legally or in terms of hydrology and fisheries. The real issue is that under applicable California reasonable use law and California public trust law MMR does not have the right to continue to divert water from Stanshaw Creek to operate its current wasteful and inefficient off-stream hydropower system. MMR's focus on return flow is in fact a "red herring" (pardon the fisheries metaphor) in that it wrongly suggests that the key concern at this hearing is whether it is feasible for MMR to arrange for return flow rather than whether it is feasible for MMR to switch to an alternative method to generate electricity that would eliminate the need to arrange for return flow.

II. Factual Background

A. The Karuk Tribe, Salmonids, the Klamath River, and Stanshaw Creek

With over 3,600 members, the Karuk Tribe is the second largest federally recognized Indian Tribe in California. (KT-1 at 1.) The Klamath River is the lifeblood of the Karuk people. (KT-1 at 1.) Salmonids, including Chinook salmon, federally-protected Coho salmon, and steelhead, are essential to the health and well-being of the Karuk Tribe. As Leaf Hillman,

Director of the Karuk Department of Natural Resources and cultural leader stated:

> we consider ourselves as salmon people, as salmon has been one of our primary subsistence foods for countless generations […] in the place where we have our aboriginal roots, so we say from time immemorial. (Vol. II at 128:4-8; *see also* KT-1 at 2.)

The importance of salmon to the Karuk people continues today, even though the resource is in decline and is nearly decimated by over 165 years of resource extraction and dams and diversions since the Klamath gold rush era. (KT-1 at 2.) According to Mr. Hillman:

> The salmon, not only do we rely on and have relied on the past, [but we] continue to rely on to the extent that salmon still persist in the Basin. [We] continue to rely on salmon for not only our subsistence use, but also [salmon] have been used in our ceremonies as well as our basic identity is tied very closely to the salmon. And we consider salmon to be a very close relative of ours and therefore are obliged to take care of them much as we are obliged to take care of our relations; human relations as well as our nonhuman relations. (Vol. II at 128:12-22.)

The decline of salmon has immeasurable negative impacts on the Karuk people. (KT-1 at 2-3.) As Mr. Hillman testified:

> And unfortunately in my life time I've seen a fairly precipitous decline in the salmon resources available in the Klamath Basin. And I'm well familiar with the direct impact that that has on the health -- and the general health and wellbeing of Karuk people. And because of our close dependence on salmon we have -— we've conducted a number of studies dating back to, I believe the first one was conducted about 1995 that provides direct correlation between the lack of salmon in the diets of our tribal members today to the physical health and the prevalence of heart disease … diabetes and other related illnesses that are directly related to lack of salmon in the diet of contemporary Karuk people. (Vol. II at 129:2-16.)

The Karuk Tribe understands the importance of cold-water tributary streams, such as Stanshaw Creek, to the overall health of salmon populations and the ecological integrity of river as a whole. (KT-1 at 2-4; KT-2 at 1-2.) As Mr. Hillman stated:

> we have limited capacity to deal with issues and certainly have to prioritize on issues that we spend time and resources trying to address. But [Stanshaw Creek] is a unique system and that thermal refugia that's provided at the mouth for juvenile Coho, in particularly -- specifically, is a unique attribute of that system. And because of that we have, and continue to invest resources in trying to take care of that place and monitoring that place, because of its significance to the survival of juvenile Cohos. (Vol. II at 130:16-131:3.)

Protecting public trust beneficial uses in the Klamath River Basin will protect and

preserve the Karuk Tribe's culture and spiritual and physical health. The Klamath River salmon, including those that use Stanshaw Creek, are both a public trust resource and a tribal trust resource, which means the United States government has an obligation to protect these resources for the benefit of the Karuk Tribe. (Vol. IV at 125:15-126:25.) The State of California likewise has an obligation to consult with tribes to ensure their cultural resources are protected. (Vol. IV at 127:1-18.)

B. Beneficial Uses, Public Trust and Tribal Trust Resources of Stanshaw Creek

Stanshaw Creek originates high in the mountains above the Klamath River, falling thousands of feet from its headwaters to its confluence with the Klamath River. (KT-4 at 3.) Along its length, Stanshaw Creek provides habitat for benthic organisms and macroinvertebrates that form the foundation of the food web that salmonids such as Coho salmon and steelhead depend on to survive their juvenile life stages in the Klamath Basin. (NMFS-1 at 2.) Stanshaw Creek empties onto the Klamath River floodplain after passing under Highway 96. (KT-4 at 2-3.) On the floodplain, Stanshaw Creek supplies water to pool off the main channel of the Klamath River. (KT-4 at 3.) Stanshaw Creek supports numerous beneficial uses essential to the overall health of the entire Klamath River watershed, including the health of the people that depend on the resources the river provides.

1) Cultural Use by the Karuk Tribe

The existing beneficial uses of the mid-Klamath River and its tributaries includes Native American cultural uses (*see* WR-62 at 2061-2062), which are defined as: "Uses of water that support the cultural and/or traditional rights of indigenous people …" (WR-62 at 2059.) The testimony and evidence presented demonstrate that Stanshaw Creek is vital to supporting the existing Native American cultural beneficial uses in the entire mid-Klamath basin. As Mr. Hillman explained, Coho salmon and steelhead are essential to the very existence of the Karuk culture. (Vol. II at 127:25-129:16; KT-1.) These fish depend on Stanshaw Creek at its confluence with the Klamath River as critical habitat during all phases of their life history spent in the Klamath River basin. KT-4; KT-9 at 3-5; Vol. IV at 18:12-22:21.)

Moreover, Stanshaw Creek, and cold water tributaries like it have long provided refuge

for Karuk people during the long, hot Klamath summers. (Vol. I at 165:21-167:13.) Ambient temperatures in the Klamath Basin regularly exceed 90 degrees Fahrenheit for long stretches in the summer, and for generations the confluences of cold water tributaries and the Klamath River, such as at Stanshaw Creek, have provided cool water for swimming and shaded areas to rest and recreate. (Vol. I at 165:21-167:13.)

2) Cold-water Refugia

Stanshaw Creek provides essential thermal refuge for juvenile Chinook salmon, threatened Coho salmon, and steelhead. "Thermal refugia" are defined as "[c]older areas within a water body that provide cold water refuge from unsuitably warm water." (WR-13 at 1104; WR-62 at 2155.) Stanshaw Creek is designated in the Basin Plan as a tributary to the Klamath River known to provide thermal refugia for salmonids. (WR-13 at 1102; WR-62 at 2189; KT-9 at 25, 31, 42, 70, 116-117.) Mr. Soto, the biologist for the Karuk Tribe with 17 years of experience working in the Klamath Basin and who has visited Stanshaw Creek at least 100 times in his career, testified that "the primary value to Stanshaw Creek is it's thermal refugia value and the cold water that Stanshaw Creek provides, and the off-channel pond habitat that's located in Lower Stanshaw Creek." (Vol. IV at 15:9-13.)

The value of Stanshaw Creek as thermal refugia for Coho salmon cannot be understated: Coho salmon use the thermal refugia created by Stanshaw Creek year-round (Vol. IV at 18:12-20:5; KT-4 at 3-4); Coho salmon use it to survive the arduous journey from their natal streams to the ocean throughout the hot summer months in the Klamath River, when temperatures in the river are otherwise lethal (Vol. IV at 20:6-22:11; KT-4 at 3-4; KT-9 at 25, 31, 42, 70, 116-117); and Coho salmon will spend long periods of time in these areas with cool water and substantial food supply to grow sufficiently to survive the journey to the ocean and then survive in the ocean until they return to the Klamath Basin to spawn (Vol. IV at 22:12-21; KT-4 at 3-4.) In addition, flows to the Klamath River from cold-water streams such as Stanshaw Creek help to minimize and prevent outbreaks of disease that are particularly problematic for salmonids in warm temperatures found during summer months in the Klamath River. (Vol. IV at 85:2-88:2 and 99:15-100:14.)

3) Additional Designated Beneficial Uses

In addition to the Native American cultural uses and cold-water thermal refugia supported by Stanshaw Creek, the Regional Board identifies Stanshaw Creek as supporting the following beneficial uses, among others: Cold Freshwater Habitat; Contact and Non-Contact Recreation; Commercial and Sport Fishing; Spawning, Reproduction and/or Early Development; Rare, Threatened or Endangered Species; and Migration of Aquatic Organisms. (WR-62 at 2062.) Stanshaw Creek provides benefits for Coho salmon year round, which aside from the summer thermal refuge benefits discussed above include the following: in the fall it provides a refuge for Coho salmon as they redistribute throughout the Klamath River to find winter rearing habitat; in the winter the confluence creates a slow moving channel that provides refuge from the higher velocity mainstem; and in the early spring the continued cold-water flowing from Stanshaw Creek attracts juvenile salmon to the thermal refuge that the off-channel pool will provide in the summer. (Vol. IV at 18:18-20:25; KT-9 at 3-5; NMFS-7 at 4.)

C. Marble Mountain Ranch Diversion

MMR's claimed water right allows it to divert up to 3 cfs from Stanshaw Creek with a handmade rock dam into an unlined ditch that traverses a steep hillside above Stanshaw Creek. (WR-9 at 1075.) The diversion has no fish screen. The diversion is operated independent of demand, as there is no means to accurately measure or regulate flow into the ditch. (WR-9 at 1075; WR-87 at 2495; Vol. I at 195:10-22; Vol. II at 147:21-148:10.) Conveyance loss in the ditch is 0.5 cfs. (WR-4 at 176-177; WR-9 at 1077; WR-82 at 2444; WR-87 at 2497; Vol. II at 77:25-79:1.) The ditch is prone to failure, and when it fails it causes erosion and results in discharges of sediment to Stanshaw Creek. (WR-87 at 2499; WR-89 at 2526-2538; WR-142 at 3135-3137; WR-167 at 3815-3816; WR-197; Vol. I at 208:5-211:11; Vol. III at 133:20-134:1; Vol. IV at 229:24-232:6.) During low flow periods, MMR diverts most of the Stanshaw Creek flow, and at times dewaters the creek completely. (WR-76; WR-89 at 2524, 2537; OMRT-5; Vol. IV at 104:19-108:20; 170:17-173:19, 186:18-188:24.)

Surface water diverted from Stanshaw Creek is conveyed to the MMR property for consumptive uses and to generate electricity. The vast majority of diverted water is used to

generate power with an antiquated Pelton wheel. (WR-9 at 1076; WR-87 at 2496; WR-200 at 3.) Water diverted for domestic use is stored in a series of tanks with sufficient capacity to supply the ranch for a week during the summer season. (WR-9 at 1075; WR-80 at 2409.) Diverted, non-consumed water is subsequently conveyed in an unlined ditch and discharged to a neighboring watershed, Irving Creek, rather than returned to the Stanshaw Creek watershed. (WR-9 at 1077; WR-13 at 1100, 1104-1107; WR-82 at 2440.) The discharge to Irving Creek is via a conveyance that causes significant erosion and discharge of sediment. *Id*.

D. Impacts of the Diversion on the Beneficial Public Trust Resources

The Karuk Tribe, the NMFS, CDFW, and the Regional Board agree that the MMR diversion has significant deleterious impacts on Stanshaw Creek and the salmon and steelhead that depend on it. (KT-4; KT-2; NMFS-3; NMFS-7; CDFW-1 at 3-4 (and cited exhibits).) There are no other diversions that cause the severe negative impacts on public trust beneficial uses the creek provides. (WR-141 at 3128; NMFS-3 at 8; KT-4 at 6.) Mr. Soto, biologist for the Karuk Tribe, confirmed that dewatering of Stanshaw Creek in summer months resulted in killing of juvenile Coho salmon. (KT-4 at 5; Vol. IV at 28:21-31:2 and 70:12-17.)

As a result of the MMR diversion in spring, summer and fall, Stanshaw Creek is nearly dewatered, and the cold water pool adjacent to the Klamath River loses its ecological functionality. According to Mr. Soto, as well as fishery experts from NMFS and CDFW, the most significant problems created by the Stanshaw Creek diversion are two-fold:

> First, fish are excluded from Stanshaw Creek's thermal refuge when low flows fail to connect the creek to the river. As a result these salmon are forced to seek refuge in other locations further upstream or downstream which extends their exposure to lethally warm conditions. Second, the fish residing in the refuge pool are trapped and unable to migrate away from harmful conditions or predators.

(KT-4 at 4; *see also* NMFS-3 at 2-3; CDFW-13 at 2.) Fish require regular connectivity between the pond and the Klamath River to ensure they are able to avoid these problems, which occur at different points in time. Mr. Soto, as well as experts from NMFS and CDFW, testified that limiting the MMR diversion to ensure that 90% of the flow was permitted to bypass the diversion structure, and maintaining a minimum flow of at least 2 cfs below the diversion,

would ensure that the benefits Stanshaw Creek provides to fishery resources would be maintained. (WR-141 at 3128-3132; NMFS-3; NMFS-1 at 1-2, 8-9, 11-12; CDFW-37 at 7; Vol. III at 226:17-227:5; KT-4 at 5; Vol. IV at 31:5-19.)

The MMR diversion also impairs downstream water rights holder's ability to use water for beneficial uses, including domestic use and irrigation, pursuant to a riparian and claimed pre-1914 water right. (WR-4 at 104; Vol. IV at 181:11-189:1 and 159:18-21).

The MMR diversion ditch also harms water quality and constitutes an unreasonable method of diversion. There have been numerous ditch failures recorded since 1994, with resulting discharge of sediment to the thermal refugia pool at the confluence with the Klamath River. (WR-142 at 3135; WR-184 at 4273; OMRT-4; OMRT-5; CDFW-17; Vol. IV at 41:10-42:3, 154:8-11, 156:17-23, 170:17-173:19, 181:11-182:18.) The Regional Board determined that the method of diversion has caused or contributed to multiple violations of the Water Code and Basin Plan. (WR-142 at 3136-3141; Vol. I at 208:2-13.)

Finally, as result of the negative impacts to water quality and fishery resources caused by the MMR diversion, the MMR diversion results in harm to the tribal trust and public trust resources essential to the Karuk Tribe's physical and spiritual health described above.

E. Efforts to Bring About a Solution to Impacts of MMR Hydropower Diversions

1) Community Efforts

Neighboring landowners, Klamath Riverkeeper, and the Karuk Tribe have spent years trying to reach a solution that allows MMR to continue to divert water for reasonable use while ensuring other beneficial uses of Stanshaw Creek are maintained and public trust resources are protected. (KT-1 at 3-4; KT-2 at 2; (Vol. II at 131:12-132:7.) Dr. Craig Tucker, the Natural Resources Policy Advocate for the Karuk Tribe, testified that the Karuk, the Mid-Klamath Watershed Council, Mr. Konrad Fisher, and others have spent years attempting to address the issue. (Vol. IV at 124:9-19 and 127:19-132:21; KT-2 at 2.) These efforts include a series of meetings near the end of 2014 and the beginning of 2015, which included specific discussions with MMR to help find funding and develop a plan that would dramatically reduce the negative impacts of the MMR diversion. (*Id.*; Vol. IV at 135:5-142:3.) During these meetings, Mr. Cole

indicated his willingness to implement a solution that would limit the MMR diversion to 1.16 cfs (which included 0.66 cfs to generate power and for consumptive use and accounted for 0.5 cfs in conveyance loss). (Vol. IV at 127:19-132:21, 135:6-21.) Despite best efforts by the Karuk Tribe, Klamath Riverkeeper, and others, and for reasons that remain unexplained, MMR refused to continue these good faith discussions to reach a solution. (Vol. IV at 135:22-142:3.)

2) Regulatory Agency Efforts

For decades, the North Coast Regional Water Quality Control Board (Regional Board) and other regulatory agencies have encouraged MMR to correct the unreasonable aspects of its diversion and ensure that its actions do not harm the public trust. (WR-1; WR-35; WR-36; WR-38; WR-39; WR-40; WR-42; WR-53; CDFW-1). The Regional Board issued CAO No. R1-2016-0031 ("CAO") requiring MMR to eliminate the threat of future discharges and to clean up and abate the effects of discharges of soil, rock and miscellaneous debris into Irving Creek, Stanshaw Creek, and the Klamath River. (WR-142.) MMR has not complied with the CAO, and is subject to three notices of violation for the CAO. (WR-152; WR-162; WR-167.)

III. The Reasonable Use Doctrine and Public Trust Doctrine

A. Reasonable Use Doctrine

All water resources of the state must be put to reasonable beneficial use and not wasted. (*See* Cal. Const., art. X, § 2; *see also* Water Code §§ 100, 275.) This rule of reasonableness, *i.e.*, the reasonable use doctrine, is the overriding principle governing all uses of all water resources in California and constitutes a mandatory constitutional requirement. (*See Joslin v. Marin Municipal Water Dist.,* (1967) 67 Cal.2d 132, 137-40; *see also Peabody v. Vallejo*, (1935) 2 Cal. 2d 351, 366-68, 372; *see also* Cal. Const., art. I, § 26.) A water use must be *both* beneficial and reasonable. (Cal. Const., art. X, § 2; *Joslin*, 67 Cal.2d at 143.) Whether a use is unreasonable is determined on a case-by-case basis, and changes over time. (*Tulare Irr. Dist. v. Lindsay-Strathmore Irr. Dist.* (1935) 3 Cal. 2d 489, 567 ("What is a beneficial use at one time may, because of changed conditions, become a waste of water at a later time."); *see also Imperial Irr. Dist. v. State Water Res. Control Bd.* (1986) 186 Cal.App.3d 1160, 1166.) Impacts on fish, recreation, and habitat are a relevant consideration in determining whether a

diversion is unreasonable. (See *Envt'l Defense Fund, Inc. v. East Bay Mun. Utility Dist.* (1980) 26 Cal.3d 183, 191, 200 (allowing complaint to go forward on these allegations).) Reasonable water use "cannot be resolved *in vacuo* isolated from statewide considerations of transcendent importance." (*Joslin*, 67 Cal.2d at 140.) It is the State Board's duty and obligation to prevent the unreasonable use and waste of water. (Cal. Const., art. X, § 2; *see Elmore v. Imperial Irrigation Dist.* (1984) 159 Cal. App. 3d 185, 193-97; *IID*, 186 Cal.App.3d at 1170-71; *see* Water Code § 179.)

B. Public Trust Doctrine

The public trust doctrine establishes that the waters and wildlife of the state belong to the people, and that the state acts as a trustee to manage and protect these resources and their associated public uses for its peoples' benefit. (*Nat'l Audubon Soc'y v. Superior Court* (1983) 33 Cal. 3d 419, 441-49; *see also* Cal. Const., art. X, § 5; Cal. Const., art. I, § 25.) The purpose of the public trust "evolve[s] in tandem with the changing public perception of the values and uses of waterways." (*Audubon,* 33 Cal.3d at 434) The public trust doctrine applies to constrain the extraction of water from navigable waters that impacts navigation and other public interests, such as the right to fish, bathe, swim, and use for recreation. (*Id*. at 434-37.) Ecological values are among those values protected by the public trust. (*Id*. at 435.)

As the state agencies responsible for administering California's water resources, including allocation of recycled water, the public trust doctrine imposes on the State Board an *affirmative* duty to take the public trust into account in the planning and allocation of those resources, and to protect impacted public trust uses whenever feasible. (*Id.* at 441, 445-47.) This is a continuing duty, and includes the obligation to *reconsider* terms and conditions of past orders, decisions, or water allocations to protect public trust resources. (*Id.* at 447; see also *Imperial Irr. Dist. v. State Water Res. Control Bd.* (1990) 225 Cal.App.3d 548, 561-64.) No party may assert or acquire a vested right to divert or use water in a manner harmful to the interests protected by the public trust. (*Audubon*, 33 Cal.3d at 445.) "Trust uses" encompass all public uses, so that in practical effect the doctrine imposes no restrictions on the state's ability to allocate trust property. (*Id*. at 440-41.)

IV. Analysis

As detailed below, established California reasonable use law and public trust doctrine precedent strongly support imposing limitations on MMR's diversion to meet the August 3, 2016 NMFS Flow Recommendations (NMFS-3), which may as a practical matter require MMR to eliminate diversions for off-stream hydropower.

As explained below, pertinent feasibility questions require consideration of alternative ways for MMR to generate electricity, not just the feasibility of arranging return flows; considering feasible alternatives, MMR's diversion is a misuse of water; considering feasible alternatives, public trust law requires limits on MMR's diversion to ensure Stanshaw Creek flows resemble the natural unimpaired hydrograph; previous State Board actions related to hydropower production support an order limiting MMR's diversion; application of factors in Decision 1600 demonstrate MMR misuses water; and immediate corrective actions are needed to eliminate the misuse of water and protect public trust and tribal trust resources.

A. The Pertinent Feasibility Questions Relate to Alternative Ways for MMR to Generate Electricity, Not to Whether MMR Can Arrange for Return Flow

MMR asserts that it is not economically feasible to restore flows on Stanshaw Creek to maintain connectivity between Stanshaw Creek and the Klamath River because of the potentially high costs of arranging for the return of water below the current off-stream hydropower turbine to Stanshaw Creek (rather than flowing into Irving Creek), and therefore the State Board should not order compliance with the NMFS Flow Recommendations. (Vol. I at 69:17-18; 71:21-72:2.) MMR's focus on the costs associated with arranging return flow is legally misplaced and is simply an attempt to divert attention away from the pertinent cost question, which is whether there are feasible alternatives for MMR to generate the electricity it needs. *See infra* Section IV.B. (discussing relevant case law establishing the standard that all feasible alternatives to the current use must be considered).

MMR's focus on the costs of arranging return flows is misplaced because instream flows can be restored within Stanshaw Creek that more closely resemble the natural unimpaired hydrograph – keeping the water in Stanshaw Creek and eliminating the need to

arrange for return flows. Based on the submitted testimony and evidence, if MMR switched to feasible alternative sources for its electricity – such as a solar panel and diesel generator system, or moving the POD upstream and installing a more efficient hydropower turbine – these changes would completely eliminate the need for the MMR to arrange for return flow (and therefore eliminate the need for MMR to incur any costs associate with arranging for such return flow). As Bryan Elder (an engineer with the State Board) testified:

> As far as the alternative energy proposal, the main costs I looked at were the more expensive alternative of $526,000 from Golden West Energy which provided some options for Marble Mountain Ranch to satisfy that obligation, one of which being a six-year lease which would be approximately $55,000 per year with $142,000 buyout at the end of the lease period. Essentially, by implementing this particular alternative, it would result in an increase of $21,000 per year in the existing utility expenses which, again, if you look back to that cash flow for 2016 of approximately $127,000, its well within their current cash flow. And it represents 7.9 percent of gross revenue, the total amount, the $55,000 per year, which is less than what that percentage was in 2014…**the alternatives that I reviewed are financially feasible**, based on current cash flow and equity."(bold added.) (Vol. IV at 220:17-221:16.)

Caitlin Bean (who works with the Fisheries Restoration Grant Program at the CDFW) also testified about the "energy audit" that was performed in connection with research into the impacts of MMR's diversions on salmon and steelhead. The audit examined whether hydropower was the appropriate long-term energy solution for MMR, and suggested a replacement solar power system would be a feasible solution. (Vol. III at 239:12-240:5.)

Similarly, Dr. Tucker (Natural Resource Policy Advocate for the Karuk Tribe) testified:

> [There have] been quite a few studies that's part of the record that looks at the ability to use solar power, to integrate solar and diesel together. [...] I have a lot of friends and colleagues who live in that stretch of the Middle Klamath. And the people who are, you know, off the grid have a more dependable power supply [than] people who are on the grid, actually, because of the remoteness of the area and the tough rough winters. But no one has, requires, a three [CFS] diversion in order to meet their power needs. And even there are neighborhoods in the area with multiple houses that meet their power needs with dramatically smaller diversion[s]…it looked to me like there had been quite a bit of investigation in alternatives to using this amount of water to power his system. (Vol. IV at 131:1-24.)

Joey Howard of Cascade Stream Solutions LLC testified that there were some efforts by MMR to evaluate alternative ways to generate electricity for MMR other than its current antiquated off-stream Pelton wheel. These alternatives included moving the POD on Stanshaw

Creek upstream to allow return flow to naturally go back to the Stanshaw Creek and a switch to a combined solar/diesel system. Mr. Howard's testimony suggested that he did not move forward with this analysis of alternative ways to generate electricity because the owners of MMR were not open to considering such approaches. (Vol. I at 60:7-64:7.)

Similarly, at the hearing MMR's consultant, Jeffrey Meyer (of ECORP Consultant), was asked whether MMR asked him to evaluate alternative systems that could produce the same amount of electricity with less water. Mr. Meyer responded: "I was not." (Vol. II at 165:10.) He was then asked "So Mr. Cole did not ask you to evaluate alternatives that could accomplish the same goal with less water?" Mr. Meyer responded "No." (Vol. II at 168:8-11.)

MMR's refusal to consider alternatives to its currently configured off-stream hydropower system was confirmed by Mr. Cole (one of MMR's owners). In response to a question about whether MMR would consider the alternative of moving the POD further upstream to reduce impacts on salmon and steelhead, Mr. Cole testified: "You need to understand that I will never agree to relocating the point of diversion another 1,000 or 2,000 feet up…I will never go there… I don't want to go there." (Vol. III at 47:6-16.) In later testimony at the hearing, Mr. Cole again asserted his unwillingness to consider alternatives: "I don't want to change points of diversion…And so that's my bottom line." (Vol. III at 78:25-79:5.) Mr. Cole's testimony is consistent with that of Mr. Howard and MMR's own consultant Mr. Meyer, that for its own reasons MMR has been unwilling to seriously consider alternatives to generate electricity for MMR that do not involve continuation of its current diversion and off-stream Pelton wheel.

MMR's refusal to consider alternatives, however, is fundamentally at odds with California reasonable use law. As explained in the following section, California court decisions have expressly held that when there are feasible alternatives that would reduce adverse impacts on instream fisheries, the law requires that such alternatives be considered.

B. Given Feasible Alternative Ways to Generate Electricity, MMR's Diversion of Stanshaw Creek Water for Continued Operation of its Current Off-Stream Hydropower System is "Unreasonable" and "Wasteful" under California Reasonable Use Law

The leading California Court decisions affirming reliance on reasonable use law include

analysis and identification of feasible alternatives to the alleged unreasonable use water. Applicable law provides that the pertinent cost question related to the MMR's diversions is whether there are economically feasible alternatives to generate electricity that would enable Stanshaw Creek flows to more closely resemble the natural unimpaired hydrograph: the pertinent cost question is **not** whether it is economically feasible to arrange for return flows to Stanshaw Creek based on the configuration of the current off-stream hydropower system.

In the 1935 *Tulare* decision involving the use of the pre-planting floods on fields to drown gophers, the California Supreme Court noted that there were alternative methods to managing gophers. (3 Cal.2d 489 (1935).) This analysis of alternatives led the *Tulare* court to find that diverting and using water to flood fields before planting to manage gophers was "unreasonable" giving competing demands for water.

In the 1971 *Erickson v. Queen Valley Ranch Company* case involving the loss of 80% water in an earthen canal (through absorption and evaporation), the California Court of Appeal discussed how this loss could be reduced by either transporting the water in a pipe or lining the canal in concrete. (22 Cal.App.3d 578 (1971).) This analysis of alternatives led the *Erickson* court to find that the high-water loss rates associated with transporting the water in an earthen canal were "unreasonable.".

In the 1980 *EDF v. EBMUD* decision, the California Supreme Court considered proposed diversions by EBMUD on the Lower American River that were predicted to have significant adverse impacts on fisheries. (26 Cal.3d 183 (1980).) The Court held that California reasonable use law required EBMUD to consider alternative points of diversion to reduce or avoid the instream impacts on fisheries.

In the 1967 *Joslin* decision, the California Supreme Court considered whether the continued operation of an instream gravel mining business should prevent the construction of an upstream dam by water agency. (67 Cal.2d 132 (1967).) The Court held that under these circumstances the continued operation of the instream gravel business constituted an unreasonable use given other demands for water and given that there were alternative sources of gravel available for the public other than this particular private instream gravel mining

operation. The *Joslin* Court explained:

> Is it "reasonable," then, that the riches of our streams, which we are charged with conserving in the great public interest, are to be dissipated in the amassing of mere sand and gravel which for aught that appears serves no public policy? We cannot deem such a use to be in accord with the constitutional mandate that our limited water resources be put only to those beneficial uses "to the fullest extent of which they are capable," that "waste or unreasonable use" be prevented, and that conservation be exercised "in the interest of the people and for the public welfare." (Cal. Const., art. XIV, § 3.) We are satisfied that in the instant case the use of such waters as an agent to expose or to carry and deposit sand, gravel and rock, is as a matter of law unreasonable within the meaning of the constitutional amendment.

Just as in *Joslin*, MMR's operation of its current off-stream hydropower system does not serve any public purpose, but rather is simply a means for Marble Mountain Ranch to generate electricity for its own private consumption on its own private property.

In the 2014 *Light v. State Water Resources Control Board*, decision involving direct diversions from the Russian River for frost protection, the California Court of Appeal discussed how the use of off-stream ponds (for frost protection) was an alternative to reduce the need for direct diversions from the Russian River. (226 Cal.App.4th 1463 (2014).) This analysis of alternatives led the *Light* court to find that the State Board program requiring a consideration of off-stream ponds to store water for frost protection was consistent with California reasonable use law.

Consistent with the *Tulare*, *Erickson*, *EDF v. EBMUD, Joslin* and *Light* decisions, in the case of the Marble Mountain Ranch's diversions from Stanshaw Creek, the pertinent reasonable use cost question is whether there are economically feasible alternatives to Marble Mountain Ranch's current use of the diverted water. Nearly all of the water diverted from Stanshaw Creek is used to generate off-stream hydropower electricity for private consumption. In this circumstance, the reasonable use inquiry should focus on the availability of alternative means to provide electricity to the property.

In fact here, the legal basis for focusing on such feasible alternatives is even stronger and more compelling than it was in the *Tulare*, *Erickson*, *EDF v. EBMUD* and *Light* decisions, which all involved the direct consumption of diverted water to either irrigate agricultural lands

or for municipal consumption (where there is no replacement for water). With MMR, the documentation and hearing testimony in the administrative record provides substantial evidence that there are numerous feasible alternative ways to generate electricity for its property that either do not involve water at all (e.g., combined solar/diesel), or that would require less water that could more easily be returned back to Stanshaw Creek with less costly infrastructure or potentially using an alternative point of diversion. Discontinuation of MMR's use of water to run its outdated inefficient off-stream hydropower system would enable flows in Stanshaw Creek to return to levels closely resembling the natural unimpaired hydrograph. This, in turn, would provide more robust protection for salmon and steelhead.

C. Given the Feasible Alternatives to Generate Electricity, California Public Trust Law Requires MMR to Limit Its Diversions so Stanshaw Creek Flows More Closely Resemble the Natural Unimpaired Hydrograph

In its landmark 1983 *Audubon* decision, the California Supreme Court held that the State Board must "fully protect" public trust resources and uses "whenever feasible." (33 Cal.3d 419 (1983).) Public trust resources include fisheries such as salmon and steelhead. When it comes to fisheries, the "fully protect" standard in California public trust law calls for more robust instream flows than those needed to maintain mere connectivity, and more robust instream flows than the minimum bypass flow requirements often used under the federal Endangered Species Act (ESA). While the ESA minimum flows methodology is designed to prevent fisheries from going extinct, the public trust's "fully protect" criteria sets forth a higher standard of fisheries protection. Because there are reasonable alternatives to meet MMR's electricity needs without water, or with considerably less water, the "fully protect" standard provides a higher level of protection than ESA minimum flows.

The *Audubon* decision eventually led to State Board Decision 1631 in 1994. In Decision 1631, the State Board first identified what flows from the feeder creeks were needed to fully restore public trust resources and uses, which included the trout fishery in the creeks. After first identifying the creek flows needed to fully protect public trust resources and uses, the State Board then considered the "economic feasibility" of reducing diversions from the Mono Lake feeder creeks to achieve this full protection. The State Board determined there were

"economically feasible" alternatives to current levels of diversions by the Los Angeles Department of Water and Power (LADPW), such as improved water efficiency, increased use of recycled or grey water, and improved management of groundwater aquifers.

Based on its examination of these alternatives to current diversion levels, the State Board concluded that curtailment of LADWP's diversions of Mono Lake's feeder creeks was indeed "feasible." This does not mean that in Decision 1631 the State Board ordered LADWP to undertake a particular set of actions to manage its broader water supply portfolio. Rather in Decision 1631 the State Board's identification of a range of feasible alternatives by which water supply meets could be met led the State Board to impose restrictions on diversions from Mono Lake's feeder creeks needed to protect fisheries and other public trust resources.

Importantly, in terms of fisheries protection, in Decision 1631 the State Board did not ask what is the minimal amount of bypass flow in the feeder creeks that would maintain some connectivity with Mono Lake or that would prevent fish from going extinct (the approach often taken under the federal ESA when the federal wildlife agencies establish minimum bypass or instream flow standards). Instead, in fulfilling its public trust obligations, in Decision 1631 the State Board focused on the flows needed to fully protect fisheries. This distinction is significant in the context of MMR's Stanshaw Creek diversions.

Here, the August 3, 2016 NMFS Recommendation determined:

> By analyzing case studies where ecologic goals were uses to set the magnitude of water diversions, Richter *et al*. (2011) found that diversions limited to 6-20% of the unimpaired flow provided protection of riverine ecology. **For a high level of protection, the study suggested a presumptive standard of no more than a 10% diversion. A high level of protection is defined as minimal change to the standard structure and function of the riverine ecosystem. Klamath River SONCC Coho salmon have a critical need for cold water refugia provided by Klamath River tributaries such as Stanshaw Creek throughout the low flow season. Any loss of cold water during this time would decrease the quality and function of habitat. Because of the critically high summer Klamath River water temperatures, NFMS recommends a bypass flow that maintains at least 90% of the unimpaired flow…NMFS recommends that no more than 10% of the estimated unimpaired flow be diverted from Stanshaw Creek up to the limits of anadromy, throughout the low flow season, regardless of the water year** to ensure water quality and food supply is maintained for the over-summering Coho salmon in the pond. (bold added). (NMFS-3 at 8-9.)

The "high level of protection" in the 2016 NMFS Recommendations is consistent with the "full protection" standard called under California public trust law. That is, the 90% unimpaired flow standard proposed by NMFS more closely approximates Stanshaw Creek's natural hydrograph. This 90% unimpaired flow standard should apply year-round. A lower minimum bypass flow approach sometimes used under the federal ESA, would fall short of what California public trust law requires.

As Ms. Tauzer of NFMS explained at the hearing:

> Our recommendation consists of several parts, but its primarily focused on preserving 90 percent of the natural flow in the anadromous reach. The 90 percent recommendation was based on a study by Richter in 2011 where a 90 percent bypass is recommended as a bypass flow that will preserve a high level of ecological function. And that's what we think is necessary in Stanshaw Creek because of its uniqueness as a cold-water refugia, as a method of producing a food supply to the cold-water refugia and downstream. (Vol. III at 160:23-161:9.)
>
> Since our original bypass recommendation in 2001, there has been much research about the importance of cold-water tributary input and off-channel habitat for the Klamath River, for example the Coho Recovery Plan that Shari [Shari Whitmore of NMFS] was mentioning, and Shari's these work, and others including the Richter Study in 2011. **The Richter-type studies are showing more and more the importance of preservation this natural variability of the hydrograph**." (bold added.) (Vol. III at 163:4-16.)

Additionally, the situation addressed in the State Board "feasibility" analysis (the second part of the sequenced analysis under California public trust law) in Decision 1631 is analogous to the situation with MMR's current levels of diversion from Stanshaw Creek.

More specifically, MMR's concern is maintaining a supply of electricity for the ranch's private consumption, and there are feasible alternatives to the current levels of diversion and use for this purpose. As discussed above, these alternatives include switching to an integrated system of solar panels and diesel generation to provide electricity or by installing an efficient hydropower system that uses more "head" (the verticle distance between the POD and point of electricity production) and thereby requires a fraction of the current quantity of water diverted for non-consumptive use. Consistent with Decision 1631, this does not mean that the State Board must order MMR to make specific changes to how it generates electricity for the property, but rather that in light of economically feasible alternative ways to generate electricity

for MMR, the State Board is on firm legal ground to restrict MMR's Stanshaw Creek diversions to ensure there is adequate instream flow to fully protect salmon and steelhead.

D. Unreasonable Uses of Water Related to Electrical Power Production

In addition to the *Tulare*, *Erickson*, *EDF v. EBMUD* and *Light* court decisions discussed above, in State Board Resolution 7578 (1975), titled *Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Powerplant Cooling*, the State Board specifically and expressly relied on California reasonable use law to restrict and generally prohibit the use of inland freshwater for the cooling of powerplants:

> There is a limited supply of inland water resources in California. […] Projected future water demands when compared to existing developed water supplies indicate that general fresh-water shortages will occur in many areas of the State prior to the year 2000. The use of inland waters for powerplant cooling needs to be carefully evaluated to assure proper future allocation of inland waters for all other beneficial uses. **The loss of inland waters through evaporation in powerplant cooling facilities may be considered an unreasonable use of inland waters** when general shortages occur." (emphasis added.)

Resolution 7578 further provides "use of fresh inland waters for powerplant cooling will be approved by the Board only when it is demonstrated that the use of **other** water supply source or **other** methods of cooling would be environmentally undesirable or economically unsound" and that "Applications to appropriate inland waters for powerplant cooling purposes shall include results of studies comparing the environmental impact of alternative inland sites as well as **alternative** water supplies and cooling facilities." (emphasis added.)

The approach taken in Resolution 7578 is instructive and pertinent to the State Board's evaluation of restricting MMR's diversions from Stanshaw Creek for off-stream hydropower generation. Just as California reasonable use law provides a proper legal basis for the State Board to prohibit the use of inland freshwater for powerplants that produce electricity, so does California reasonable use law provide a proper legal basis for the State Board to prohibit MMR's diversions from Stanshaw Creek to allow instream flows to more closely resemble the natural unimpaired hydrograph.

Moreover, just as in the *Tulare*, *Erickson*, *EDF v. EBMUD, Joslin* and *Light* court decisions, State Board Resolution 7578 focused on feasible alternatives as part of its

reasonable use analysis, of determining whether there are alternative water supplies to inland freshwater for powerplant cooling. Consistent with this approach, in the present hearing the State Board is on solid legal footing in evaluating and basing its decision on whether there are alternative feasible ways for MMR to generate electricity other than continued operation of its current outdated inefficient off-stream hydropower system.

E. MMR's Diversion and Use of Water Are a Misuse of Water

In Decision 1600, the State Board identified factors for consideration in determining whether a particular diversion results in the misuse of water. (WR-20 at 1679-1684; WR-63 at 2318.) Not all of the factors will apply in every case, nor are all factors required to be given equal weight. (WR-63 at 2318.) Application of these factors here clearly demonstrates the MMR diversion and use of water, particularly its off-channel hydropower use, is an unreasonable use of water and an unreasonable method of diversion.

1) Other Beneficial Uses for Conserved Water

There are numerous public trust beneficial uses that would be served with the water misused by MMR. (*See supra* Section II.A. and II.B.) The cold-water thermal refuge provided by non-diverted Stanshaw Creek flows are essential to the recovery and continued viability of threatened Coho salmon in the Klamath River Basin. NMFS, CDFW, the Karuk Tribe, and MMR's own expert all agree that the conserved water would provide substantial benefit to the overall ecological health of the Stanshaw Creek thermal refuge. (KT-4; NMFS-7; CDFW-4; MMR-21 at 22; Vol. I at 142:4-143:9.) Any water no longer be diverted for hydropower production would allow the cold-water thermal refugia to be restored to its natural function. The cultural value and importance of salmon resources to the Karuk Tribe would also benefit greatly. (*See supra* Section II.A., II.B., and II.D.) The health of salmonids in the Klamath River is critical to the overall health and well-being of the Karuk Tribe. *Id.* And it bears repeating that the tribal trust resources at issue here are public trust resources that the State Board has a duty to protect.

2) Whether the Excess Water Serves a Reasonable and Beneficial Purpose

As noted above, MMR does not have a reliable means for measuring or controlling its

diversion. (*See supra* Section II.C.) As a result, any water that it diverts in excess of that it puts to beneficial use is per se not reasonable. (*Tulare*, 3 Cal.2d at 547.) The evidence demonstrates that MMR diverts more water than is needed to generate power for its ranch operations. For example MMR claims it requires nearly 3 cfs diversion to operate the Pelton wheel, yet in the winter this 3 cfs is used to generate power used by 6 residents and maintain the off-season ranch operations, with the remainder consumed through the use of "heat sink." (Vol. II at 180:9-13, 225:21-228:18). In the summer, when creek flow drops below 3 cfs and sufficient water to power the system is not available, any water diverted in excess of that needed for consumptive use is not reasonable and does not serve a beneficial purpose.

3) The Amount of Water Reasonably Required for Current Use

The maximum current consumptive use by MMR has been estimated by the Regional Board as 0.183 cfs, and 0.235 cfs when a fire crew is present. WR-9 at 1087; WR-140. The non-consumptive use, electricity production, does not necessarily require any water if using alternative sources of energy such as solar power, battery storage, and diesel generators. Evidence in the record demonstrates that MMR itself believes it could operate on less water than it diverts. (WR-83 at 2475; KT-2 at 2-3; Vol. IV at 135:1-24, 228:18-229:23.)

4) Availability of a Physical Plan or Solution

Though MMR testified that a physical plan or solution would be costly, potentially making it infeasible, the evidence does not support this conclusion. The question is whether an available "physical solution" can meet the needs of all competing users. (*City of Barstow v. Mojave Water Agency* (2000) 23 Cal.4th 1224, 1250.) There is no question that physical solutions are available. Regarding the method of diversion, MMR could pipe the diversion ditch, install a fish screen, install a diversion control structure and measure its diversion. (WR-114 at 2772; WR-122 at 2848-2849; WR-125; WR-126; WR-177). Doing so would ensure MMR only diverted water needed to meet its reasonable *and* beneficial use demands. Regarding diversion for electricity production, available alternatives include energy systems that replace, reduce, or eliminate the reliance on hydropower. (*See, e.g.*, MMR-19; WR-157.)

5) Amount and Reasonableness of the Cost of Saving Water

The amount and reasonableness of the cost of saving water strongly supports a finding the MMR's current practices constitute a misuse of water. (*See supra* Section IV.A. and IV.B.) The relevant analysis is the cost of alternatives to MMR's current practices, and must include consideration of costs of producing power with solar panels and diesel generators or alternative methods of producing hydropower, not solely the costs of returning flows to Stanshaw Creek. *Id.* Evidence demonstrates costs of upgrading the system and changing its electricity production strategy are reasonable, could be absorbed by MMR, and would offset current costs associated with maintaining its antiquated and deteriorating system. (*See* WR-114 ($77,675 as costs of upgrading system to support consumptive use demands); WR-194 at 1-5 (analyzing costs of upgrading electricity production system and determining that MMR can absorb costs).) The costs of saving water support conclusion that current use is unreasonable.

It also cannot be ignored that MMR failed to undertake appropriate due diligence regarding the diversion structure or the reasonableness of using 3 cfs of water for off-stream hydropower production without returning flows to Stanshaw Creek prior to purchasing the ranch. (Vol. II at 257:8-258:4.) While MMR complains about the cost of upgrading its system, to the extent its competitors have been operating in compliance with the law, MMR has had a competitive advantage by not spending resources to ensure its diversion complied with the law. *See* WR-162 at 3608. Engaging in appropriate due diligence and expending costs necessary to compete fairly with competitors cannot be considered unreasonable.

6) Whether the Required Methods of Saving Water Are Conventional and Reasonable Rather Than Extraordinary

The evidence demonstrates that the available methods of saving water are conventional and reasonable. Solar power systems, diesel generators, and efficient, modern hydropower systems are all regularly and commonly relied upon by individuals and business operating "off-the-grid" as MMR does. (*See supra* Section IV.A.; WR-9 at 1080; WR-118 at 2829; WR-119 at 2832; WR-120 at 18; Vol. I at 199:14-22.) Even if MMR's ditch and hydropower system are considered common practices, they are unreasonable considering specific conditions and the

quantity of water used. (*Tulare,* 3 Cal.2d at 586; *Erickson*, 22 Cal.App.3d at 585.)

F. Corrective Actions Should Be Ordered to Immediately Eliminate the Misuse of Water by MMR.

1) Compliance Regional Board Cleanup and Abatement Order

The CAO provided MMR with time to resolve its unreasonable use and unreasonable method of diversion, while continuing to discharge to Irving Creek. However, the evidence before the State Board demonstrates that allowing a diversion that ultimately discharges to an adjacent watershed is unreasonable. That said, the CAO is a final order and the State Board should not disturb it. To the extent MMR needs adjustments to the CAO based on the State Board's order in this matter, it may petition the Regional Board for such relief.

2) Recommended Inclusion in State Board Order of NMFS Bypass Flows and Additional Diversion Restrictions

The Karuk Tribe and Klamath Riverkeeper support the NMFS bypass flow recommendations, which among other things call for the bypass of 90% of the unimpaired flows during the low flow season, to improve instream conditions for salmon and steelhead. Meeting the NMFS bypass flow recommendations will be sufficient to avoid a return to the previous situation where Stanshaw Creek routinely lost its connectivity to the Klamath River during summer months. As such, the NMFS bypass flows for Stanshaw Creek establish an important floor of protection for salmon and steelhead that should be incorporated into the State Board's final decision.

The 90% bypass flow standard should likewise be extended year-round, as doing so would be consistent with the "fully protect' standard under California public trust law, as well as California reasonable use law. As explained herein, the reliance on the antiquated Pelton wheel system to supply power to the ranch is not a reasonable use of water or a reasonable method of diverting water. The record supports the conclusion that they are numerous alternatives available to MMR to generate power year-round (e.g., diesel generator, solar power system) that do not require diversions that harm public trust resources. There is simply no justification for MMR to divert substantial flows – flows that would satisfy the domestic needs of over 25,000 people, and that are essential to the year-round protection of the

beneficial uses of Stanshaw Creek – to generate power. To satisfy the "fully protect" standard under California public trust law, the State Board should include restrictions on Marble Mountain Ranch's out of stream diversions to ensure that flows in Stanshaw Creek closely resemble the natural unimpaired hydrograph on year-round basis. The State Board should thus order immediate compliance with the NMFS flow recommendations. MMR has voluntarily limited spring and summer diversions, and there is no evidence to suggest that they are unable to generate needed power for the ranch without the diversion.

In addition, the State Board should not order MMR to develop a project to arrange for "return flows" to Stanshaw Creek. This assumes the continued existence of the diversion to the antiquated Pelton wheel, and will not ensure that MMR's efforts to address and eliminate its misuse of water will consider all available alternatives. We urge the State Board to develop a draft order that requires consideration by MMR of **all** available alternatives.

V. Conclusion

In light of the reasons and legal authority set forth above, and given the particular facts involved in this matter, the Karuk Tribe and Klamath Riverkeeper conclude:

(a) the State Board has authority under California public trust law to restrict MMR's diversions from Stanshaw Creek so that flows in Stanshaw Creek more closely reflect the natural unimpaired hydrograph, and are consistent with NMFS recommendations to adopt a year-round 90% unimpaired hydrograph flow standard; and

(b) the State Board has authority under California reasonable use law to find that MMR's continued diversion and use of Stanshaw Creek water for its present off-stream hydropower system is unreasonable because there are feasible alternatives to generate electricity to meet the needs of the ranch.

Respectfully submitted on March 29, 2018,

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Proof of Service

I served and true and correct copy of POST-HEARING CLOSING BRIEF OF KARUK TRIBE AND KLAMATH RIVERKEEPER on the parties to this matter by electronic mail sent from my email drev@lawyersforcleanwater.com on Thursday March 29, 2018 to the following recipients.

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Executed this 29th day of March, 2018 in Lyons, Colorado.

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