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EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

AUG 3 0 2016

CERTIFIED MAIL

Douglas Cole, et al.

100 Tomorrow Rd.

Somes Bar, CA 95569

guesstranch@marblemountainranch.com

CERTIFIED MAIL NUMBER: 7003 1680 0000 2965 6939

RETURN RECEIPT REQUESTED

SUBJECT: CORRECTIVE ACTIONS NECESSARY TO CORRECT ALLEGED WASTE AND UNREASONABLE USE OF WATER BY DOUGLAS AND HEIDI COLE AND MARBLE MOUNTAIN RANCH FROM STANSHAW CREEK IN COUNTY OF SISKIYOU

Dear Mr. Cole, et al.:

On July 17, 2013 the State Water Resources Control Board's (State Water Board) Division of Water Rights (Division) received a complaint alleging that you were diverting water in excess of your pre-1914 claim of right and as a result dewatering Stanshaw Creek in most summers and harming public trust resources. On December 17, 2014, Division staff met with you for a facility tour to observe your water diversion and use of water from Stanshaw Creek. Division staff conducted a second site inspection on February 12, 2015, together with staff from the North Coast Regional Water Board (Regional Water Board). During the inspection, Regional Water Board and Division staff observed evidence of ditch failures, an inadequate diversion headgate to control the amount of water diverted from Stanshaw Creek into the diversion ditch, and hydropower operation resulting in significant discharges to Irving Creek.

By certified mail dated December 3, 2015, the Regional Water Board gave you notice of violation and draft Cleanup and Abatement Order (CAO) describing water quality violations and prescribing corrective actions. The letter also included the Division's report of inspection identifying that your diversion of water constituted a waste and unreasonable use, and unreasonable methods of diverting water, as well as a violation of public trust. The Division's report of inspection also prescribed corrective actions. The letter stated that the Regional Water Board and the Division had completed their investigations and would pursue formal enforcement action if you failed to respond to the letter in 30 days and substantially address the concerns outlined in the Regional Water Board's draft CAO and the Division's report of inspection.

You responded with a letter dated January 19, 2016 with a preliminary scope of work and time schedule. After evaluating your response and discussing the matter with your legal counsel, the Regional Water Board and the Division concluded that your response failed to substantially address their concerns. In a letter dated February 12, 2016, the Regional Water Board and the Division notified you that they would pursue formal enforcement action, but also encouraged you to nonetheless pursue corrective actions.

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

You responded again by letter dated March 24, 2016 and identified corrective actions that you are willing to take and when such actions would be achieved. However, some of the dates you identified have past and the corrective actions have not been taken.

Therefore, to ensure that you and the Division agree on specific correction actions that must be taken by certain dates, the Division is requesting a hearing to adopt a Draft Order finding that you are diverting water in violation of Article X, section 2 of the California Constitution and section 100 of the California Water Code.¹ Enclosed is the Draft Order Finding Waste, Unreasonable Method of Use, and Unreasonable Method of Diversion of Water and Ordering Corrective Actions (Draft Order).² The Draft Order alleges there is substantial evidence that you are violating Article X, section 2 of the California Constitution, and Water Code section 100, which provide that the right to water from any natural stream shall be limited to reasonable beneficial use and that such right does not extend to the waste or unreasonable use of water. Under Water Code section 275, the State Water Board shall take all appropriate proceedings or actions to prevent the misuse of water in this State. Title 23, Division 3, Article 22, section 857 of the California Code of Regulations authorizes any interested person or the State Water Board, upon its own motion, to hold a hearing to determine if any misuse of water is occurring or has occurred.

Pursuant to Title 23, Division 3, Article 22, section 857, Division staff is recommending that by **June 30, 2018**, you should take prescribed corrective actions to cease misusing water and harming public trust resources. The Division has established a time schedule for project milestones and are requiring you to submit quarterly reports. The time schedule and reporting requirement is based on the scope of work and time schedule you provided in your March 24, 2016 letter. In summary, the Division requests that you:

1. Install a water diversion control mechanism at the point of diversion;
2. Measure diversions;
3. Return diverted water that is not put to beneficial use or water that is put to non-consumptive use back to Stanshaw Creek;
4. Eliminate unnecessary and unreasonable conveyance losses in the conveyance system;
5. Implement the bypass flows recommended by the National Marine Fisheries Service letter dated August 3, 2016 and install a measuring device, or devices if necessary, to demonstrate these flows are provided downstream;
6. Cease adverse impacts to public trust resources and habitat; and
7. Consult with the California Department of Fish and Wildlife to determine whether a fish screen to prevent fish entrapment should be installed or whether implementation of an alternative method such as point of diversion design modification should be used to prevent fish entrapment.

The time schedule's first interim deadline is October 15, 2016. The Division has therefore requested that the State Water Board hold a hearing within 90 to 120 days after October 15, 2016. If you meet the project milestones for the October 15, 2016 interim deadline, the Division requests that the parties, upon concurrence, request the State Water Board to postpone the hearing date. If the State Water Board holds a hearing, you will have an opportunity at the

¹ All references to the "Water Code" shall refer to the California Water Code.

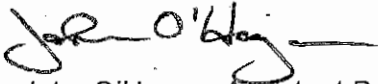
² For the purposes of title 23, Division 3, Article 22 of the California Code of Regulations, "misuse of water" or "misuse" means any waste, unreasonable use, or unreasonable method of diversion of water. (23 Cal. Code Regs., § 855, subd. (b).)

hearing to present evidence and make arguments to demonstrate you are not misusing water or harming public trust resources. A final order issued by the State Water Board would be enforceable through administrative civil liability, a cease and desist order, or through referral to the Attorney General.

Prior to the Division's request for hearing, on August 5, 2016 the Regional Water Board issued Cleanup and Abatement Order No. R1-2016-0031 for you 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. The Cleanup and Abatement Order will address alleged water quality violations you cause with your diversion facility and conveyance system. The State Water Board's adoption of the Draft Order will address the alleged misuse of water and public trust impacts, if you do not voluntarily comply with the Division's milestones and this matter goes to a hearing. Complementary, coordinated actions using both the State Water Board's water right and public trust enforcement authority and the Regional Water Board's water quality authority are necessary to fully address your alleged water quality violations, misuse of water, and public trust impacts.

If you have any questions regarding this Petition for Hearing, please contact Kathy Mrowka, Manager, Enforcement Section at (916) 341-5363 or Kathy.Mrowka@waterboards.ca.gov; or Kenneth Petruzzelli, Senior Staff Counsel, Office of Enforcement, at (916) 319-8577 or Kenneth.Petruzzelli@waterboards.ca.gov.

Sincerely,



*John O'Hagan, Assistant Deputy Director
Division of Water Rights*

Enclosures:

Draft Order WR 2017-00XX-DWR Finding Waste, Unreasonable Method of Use, and
Unreasonable Method of Diversion of Water and Ordering Corrective Actions
Division of Water Rights Report of Inspection
North Coast Water Quality Control Board Notice of Violation
North Coast Water Quality Control Board Cleanup and Abatement Order No. R1-2016-0031
North Coast Water Quality Control Board Report of Inspection
National Marine Fisheries Service Recommended Bypass Flows

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4 of 4

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STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

DIVISION OF WATER RIGHTS

ORDER WR 2017-00XX-DWR

**ORDER FINDING WASTE, UNREASONABLE METHOD OF USE, AND UNREASONABLE
METHOD OF DIVERSION OF WATER AND ORDERING CORRECTIVE ACTIONS**

In the Matter of Waste, Unreasonable Method of Use, and Unreasonable Method of Diversion of
Water

by

DOUGLAS AND HEIDI COLE AND MARBLE MOUNTAIN RANCH

SOURCES: Stanshaw Creek

COUNTY: Siskiyou

Under Water Code section 275, the State Water Resources Control Board (State Water Board) shall take all appropriate proceedings or actions to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water in this State.

Douglas and Heidi Cole and Marble Mountain Ranch (collectively “Diverter”), on Stanshaw Creek in the County of Siskiyou, are alleged to have diverted water and continue to divert water in violation of Article X, section 2 of the California Constitution and section 100 of the California Water Code¹, which provide that the right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water.

Pursuant to State Water Board Resolution 2012-0029, the Deputy Director for the Division of Water Rights (Deputy Director) is authorized to bring certain matters to the attention of the State Water Board by appropriate communication, including any matter that, in the judgement of the Deputy Director, should be brought to the attention of the State Water Board. State Water Board Resolution 2012-0029 also authorizes re-delegation of this authority from the Deputy Director to the Assistant Deputy Director for the Division of Water Rights (Assistant Deputy Director). This authority has been re-delegated.

¹ All references to the “Water Code” shall refer to the California Water Code.

On {DATE}, the Assistant Deputy Director for the Division of Water Rights (Division), pursuant to the California Code of Regulations, title 23, section 857, requested a hearing to determine whether the Diverter was misusing water and adoption of an order finding that the Diverter misused water that requires appropriate corrective actions, with a time schedule, for the Diverter to terminate the misuse of water.²

As required by the California Code of Regulations, title 23, section 857, Division Staff simultaneously granted the Diverter a reasonable period of time, until June 30, 2018, to cease misusing water, and established reasonable interim deadlines for project milestones. The Assistant Deputy Director requested a hearing within 90 to 120 days after October 15, 2016, the first interim deadline. If the Diverter satisfies the milestones for the October 15, 2016 interim deadline, the Division requests that the parties, upon concurrence, be allowed to request the State Water Board to postpone the hearing date.

Based on evidence and argument presented, the State Water Board finds that:

1. The Diverter has violated and is continuing to violate Article X, section 2 of the California Constitution and Water Code section 100 by misusing water.
2. The Diverter's diversion and use of water is in a manner that harms interests protected by the public trust which constitutes a misuse of water.
3. Corrective actions are necessary for the Diverter to cease misusing water and harming interests protected by the public trust.

FACTS AND INFORMATION

The facts and information upon which this Order is based are as follows:

Marble Mountain Ranch Water Rights

1. Marble Mountain Ranch (MMR) is located at 92520, Highway 96 in Somes Bar, Siskiyou County. MMR is owned and operated by the Cole family. MMR functions as a commercial guest ranch that offers activities such as horseback trail riding, hiking, whitewater rafting, jet boat rides, sport shooting, fly fishing and kayaking.
2. The Diverter diverts surface water from Stanshaw Creek, a tributary to the Klamath River, under a pre-1914 claim of right in two Statements of Water Diversion and Use (Statements), S015022 and S016375. The Diverter also has one Small Domestic Use Registration, D030945R, filed on December 1, 1998. The point-of-diversion (POD) for all of water rights is the same diversion facility located on Stanshaw Creek. The diversion facility is situated on land owned by the United States Forest Service (USFS).
3. S015022 was filed with the State Water Board on December 1, 1998 under the name of Douglas T. Cole, for the following purpose of use: domestic, power, irrigation, fish and wildlife protection and/or enhancement, fire protection and stock watering. S015022 claims a right to divert 2.5 cfs with no seasonal restrictions and is limited to such water as shall be reasonably required for beneficial use.

² For the purposes of the California Code of Regulations, title 23, Article 22, "misuse of water" or "misuse" means any waste, unreasonable use, or unreasonable method of diversion of water. (23 Cal. Code Regs., § 855, subd. (b).)

4. S016375 was filed with the State Water Board on May 28, 2010 for irrigation and domestic uses under the name of Marble Mountain Ranch. S016375 claims 3.0 cfs with no seasonal restrictions and is limited to such water as shall be reasonably required for beneficial use. S016375 claims a greater face value than S015022, even though it does not include hydropower as a beneficial use.
5. D030945 includes the following terms and conditions:
 - a. Term 5 - The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed 10 acre-feet per annum to be collected from January 1 to December 31 of each year. The capacity of the reservoir shall not exceed 10 acre-feet which is the stated capacity shown in the registration. The total amount of water to be taken from the source shall not exceed 10 acre-feet per water year of October 1 to September 30.
 - b. Term 10 - Pursuant to California Water Code sections 100 and 275 and the common law public trust doctrine, all rights and privileges under this registration, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.
 - c. Term 11- This appropriation is subject to prior rights. Registrant may be required to curtail diversion or release water stored during the most recent collection season should diversion under this registration result in injury to holders of legal downstream senior rights. If a reservoir is involved, registrant may be required to bypass or release water through, over, or around the dam. If release of stored water would not effectively satisfy downstream prior storage rights, registrant may be required to otherwise compensate the holders of such rights for injury caused.
 - d. Term 15 - Diversion works shall be constructed and water applied to beneficial use with due diligence.
 - e. Term 17 - In compliance with section 5937 of the Fish and Wildlife Code, if storage or diversion of water under this registration is by means of a dam, registrant shall allow sufficient water at all times to pass through a fishway or, in the absence of a fishway, allow sufficient water to pass over, around, or through the dam to keep in good condition any fish that may be planted or exist below the dam; provided that, during a period of low flow in the stream, upon approval of the California Department of Fish and Wildlife (DFW), this requirement will be satisfied if sufficient water is passed through a culvert, waste gate, or over or around the dam to keep in good condition any fish that may be planted or exist below the dam if it is impracticable or detrimental to pass the water through a fishway. In the case of a reservoir, this provision shall not require the passage or release of water at a greater rate than the unimpaired natural inflow into the reservoir.

- f. Term 18 - The facilities for diversion under this registration shall include satisfactory means of measuring and bypassing sufficient water to satisfy downstream prior rights and any requirements of DFW.
 - g. Term 20 - This registration does not authorize any act which results in the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Wildlife Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). If a "take" will result from any act authorized under this water right, the registrant shall obtain an incidental take permit prior to construction or operation. Registrant shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this registration.
 - h. Term 24 - The appropriation registered herein is subject to enforcement, including but not limited to revocation, by the State Water Board if 1) the State Water Board finds that the registrant knowingly made any false statement or knowingly concealed any material fact, in the registration; 2) the registration is not renewed as required by the conditions of this certificate; or 3) the State Water Board finds that the registrant is in violation of the conditions of this registration.
6. Stanshaw Creek is a tributary to the Klamath River. Stanshaw Creek has a drainage area of approximately four square miles. It has a short but significant section of habitat for Coho salmon (*Onchorhynchus Kisutch*) below the Highway 96 crossing, including an off-channel pond or pool located just upstream of its confluence with the Klamath River. This pool is filled by cold Stanshaw Creek water when high flows in the Klamath River subside, creating a high quality summer and winter rearing habitat for non-natal juvenile Coho salmon migrating down the Klamath River corridor. The National Marine Fisheries Service (NMFS), DFW, and the Karuk Tribe, have asserted that the Diverter's diversion and use of water adversely impact Coho salmon in violation of the federal Endangered Species Act and other laws. While both Juvenile Coho salmon and steelhead have been documented in Stanshaw Creek, the creek's moderate channel slope and relative lack of suitable-sized substrate diminishes its importance as a significant spawning stream within the Klamath River watershed. However, the off-channel pond provides excellent habitat for both summer and winter rearing of non-natal Coho salmon.
7. MMR's POD is located approximately three-quarters of a mile upstream of the Highway 96 crossing, on USFS property. The POD consists of a handmade rock wing diversion dam located on the east creek bank of the Stanshaw Creek channel. The rock wing diversion dam extends about halfway across the channel. An unlined ditch conveys the water approximately one-half mile to MMR. The POD and ditch were constructed with Chinese labor in the late 1800's. The Diverter continues to rely on these methods of diverting water.
8. The Diverter's claimed pre-1914 appropriative water right originates from an 1867 claim by Mr. E. Stanshaw for six hundred (600) miner's inches, or 15 cfs, to be used for mining, domestic and irrigation purposes on a large patented parcel that includes the present-day MMR property. The patent date for the original parcel was March 27, 1911. Based on a letter dated January 16, 2016, the Diverter now claims only 3 cfs under the pre-1914 appropriative right. The MMR property does not appear to be riparian and the

Diverter has not claimed a riparian right.

9. Division Staff identified two other diverters on Stanshaw Creek, one upstream from MMR and one downstream.
 - a. The upstream diverter is Mountain Home, held under Bruce Robinson. Mountain Home holds Permit 20955 (Application 25446). Permit 20955 has a priority date of August 3, 1977 and entitles Mountain Home to divert up to 1,200 gallons per day for domestic use year-round and up to 0.14 cfs from April 1 through August 30 of each year for irrigation from Sandy Bar Creek, a tributary to Stanshaw Creek and thence the Klamath River. The maximum amount diverted under the permit annually shall not exceed 60 acre-feet per annum. Although Mountain Home has not filed a claim, Mountain Home's property appears to be riparian to Stanshaw Creek. Based on Mountain Home's reported water use in its progress reports of permittee and on consultation with NMFS, Mountain Home's diversion has a negligible impact on public trust beneficial uses and conditions at the Diverter's POD.
 - b. The downstream diverter is Mr. Konrad Fisher (Fisher). Fisher diverts water from Stanshaw Creek under a pre-1914 and riparian claim of right, held under the name of J W Fisher Logging, in Statement S015230 for irrigating 1.6 acres of lawn and garden and for household use for up to 24 persons. Fischer owns 43 acres of land downstream and downslope from MMR that was also a portion of E. Stanshaw's larger patented parcel. Fisher and the Diverter are both successors in interest to E. Stanshaw. Based on consultation with NMFS and an assessment of Fisher's water use, Fisher has a negligible impact on flows and public trust beneficial uses in Stanshaw Creek.

Prior Water Right History

March 27, 1989 - Robert E. and Mary Judith Young, prior owners of the MMR property, file Application 29449 to appropriate 2,168 acre-feet per year of water, at a rate of 3 cubic feet per second (cfs), from Stanshaw Creek, between January 1 to December 31, for the purposes of fish and wildlife protection and/or enhancement and power generation.

November 17, 1994 - The Division sends a letter to the Diverter, stating that the Division's records have been updated to reflect the Diverter as the owner of the diversion pertaining to Application 29449.

March-August 2000. NMFS, USFS, Department of Fish and Game (DFG), and California Sportfishing Protection Alliance (CSPA) file protests against Application 29449, alleging the project would adversely affect resident fish species. James and Phylis Fisher, who own property downstream of MMR, file a protest alleging that the Diverter's proposed project would drastically reduce flows in Stanshaw Creek, especially during the dry season, result in insufficient water for their domestic and irrigation needs, and cause aesthetic impact to their riparian property.

July 26, 2000 – An Environmental Field Report, prepared by Division Staff Robert E. Miller, documents the results of a field visit by NMFS, DFG, the Karuk Tribe and the Division, to the Diverter's diversion facility that documents the presence of juvenile Coho and Steelhead in Stanshaw Creek pools below Highway 96 culverts. All of the participants present during the

field visit, with the exception of the Diverter, agree that the proposed project will potentially have negative impacts to anadromous Salmonids.

November 14, 2000 – Contact report by Division Staff, Robert Miller, details a conversation with Mr. Cole, who stated that an injunction has been filed against him by DFG. Mr. Cole also stated that a DFG warden went out to his property to remove rocks from his diversion to allow for the passage of fish. Mr. Cole claims that without the diverted water he will be forced out of business, as he cannot afford to run his diesel generator full time.

November 14, 2000 – Contact report by Division Staff, Robert Miller, details a conversation with Brian Boyd, DFG game warden. Mr. Boyd stated that he went out to MMR and made the diversion structure passable for fish and cited the Diverter under the authority of Fish and Game Code sections 1603 and 5901. Mr. Boyd states Mr. Cole became irate after receiving the citation and stated that he had the appropriate water right. Mr. Boyd countered that he was not concerned with water rights, since it does not pertain to the Fish and Game Code.

November 14, 2000 – Contact report by Division Staff, Robert Miller, details a conversation with Larry Allen, Circuit Prosecutor. Mr. Allen stated that a temporary restraining order was issued to Mr. Cole, because he was in violation of the law and irreparable damage was being done to Stanshaw Creek. A hearing was held and the court issued a preliminary injunction against Cole. Mr. Allen's civil complaint sought permanent injunctive relief penalties ranging from \$25,000 to \$50,000.

June 18, 2001 - Klamath Forest Alliance submits a complaint against the Diverter, alleging unauthorized diversions in excess of pre-1914 appropriative rights, a change in purpose-of-use not supported under the pre-1914 claim and adverse impact to public trust resources. Studies conducted by DFG find that federally listed Coho salmon exist in Stanshaw Creek and that the Creek provides a critical cold water refuge for the salmon.

October 17, 2001 - Division Staff Charles Rich and Michael Contreras inspect MMR's diversion facility. During the inspection Division Staff meet with representatives from NMFS, DFG, Karuk Tribe, Klamath Forest Alliance, Konrad Fischer and James Fischer (downstream property owners) and Mr. Cole, along with their attorney. Prior to the meeting, Division Staff take a flow reading of 0.61 cubic feet per second (cfs) downstream of the point-of-diversion. During the meeting, several of the biologists state that they believe lower Stanshaw Creek provides a thermal refuge for juvenile fish when temperatures in the Klamath reach lethal levels.

November 15, 2001 - NMFS issues a letter to the Division summarizing their findings from the October 17, 2001 visit and listing their protest dismissal terms. NMFS states that the following conditions will be sufficient for the removal of their protest:

1. Modify the existing diversion to limit the maximum amount of water diverted to 3 cfs. At the time of inspection there was no mechanism in place to control flow into the diversion facility.
2. Add a fish screen to the existing diversion to prevent fish from entering into the diversion. At the time of the inspection an 8-inch salmonid was observed in the flume of the diversion facility.
3. Return the flow currently diverted from Stanshaw Creek and discharged to Irving Creek back to Stanshaw Creek, which provides important thermal refuge for salmonids in the summer.

4. Maintain a minimum bypass flow of 1.5 cfs at all times and return all tailwater from the hydroelectric plant back to Stanshaw Creek.
5. Provide DFG with access to the POD and all places of use to conduct routine and random monitoring and compliance inspections.

November 20, 2001 - DFG issues a letter responding to the Division's ongoing complaint investigation into Application 29449. DFG reiterates their concern that Stanshaw Creek provides important summer thermal refuge for threatened and endangered Salmonids and that the reduced flow caused by the Diverter's diversion would adversely impact that habitat. DFG proposes instituting a year-round bypass flow of 2.5 cfs to be measured at the culverts below Highway 96 to mitigate potential impacts from the diversion on Stanshaw Creek. Additionally, DFG recommends that total flows be bypassed whenever stream flow falls below 2.5 cfs. DFG bases the proposed bypass on field reviews conducted at Stanshaw Creek and on best professional judgment. DFG also indicate that higher bypass flows may be required if 2.5 cfs is too low to maintain Salmonid passage at the mouth of Stanshaw Creek.

May 23, 2002 - Division Staff complete their investigation of the Klamath Forest Alliance complaint against the Diverter and issue a letter with the following conclusions to all interested parties:

1. A court of competent jurisdiction would most likely confirm that the Diverter has a valid pre-1914 appropriative right to divert water from Stanshaw Creek.
2. Evidence had not been submitted substantiating a pre-1914 right for power purposes, but Application 29449 if approved would cover all diversions for power purposes.
3. With the current irrigation system most diversions for power purposes during the low-flow periods of the year were incidental to domestic irrigation needs.
4. Prima facie evidence was available to indicate that lower Stanshaw Creek provides habitat for thermal refuge.
5. Bypasses similar to those present during the October 17, 2001 field investigation would provide adequate habitat for thermal refuge purposes.
6. Measuring flows on Stanshaw Creek on a regular basis was not practical. Any requirement to measure minimum bypass flows should not be established unless the requirement acknowledges that a sufficient diversion of water will be allowed into MMR's ditch to cover both the diversion and bypass requirement with subsequent measurement and release of a bypass back into the stream.

As a result of the conclusions, Division Staff recommend that the Diverter cease all diversion of water whether pursuant to a pre-1914 appropriative right or post-1914 appropriative right derived from Application 29449 or Small Domestic Registration D030945R, unless sufficient flow passes below the POD to maintain a flow in lower Stanshaw Creek, below the Highway 96 culverts, similar to that present during the October 17, 2001 field investigation (~0.7 cfs). Division Staff recommend determining bypass flow in either one of two ways:

1. If full diversion of the creek into MMR's ditch is not allowed, visually estimate the flow so that sufficient flow is available to fill a small, hand-dug ditch between the terminal pool of Stanshaw Creek and the Klamath River.
2. If full diversion of the creek into MMR's ditch is allowed, install a device capable of bypassing sufficient flow to maintain 0.7 cfs in the creek below the Highway 96 culverts before any water passes down the diversion ditch to MMR.

Division Staff recommend closing the complaint by the Klamath Forest Alliance and provide 30 days from the date of the letter for interested parties to issue any protests.

July 8, 2002 - NMFS issues a letter to the Division protesting the conclusions of the Klamath Forest Alliance complaint. NMFS states that the Diverter failed to present any evidence of a pre-1914 hydroelectric use of water and evidence only existed for 0.11 cfs of historical water use. NMFS objects to the Division's recommendation of a 0.7 cfs bypass flow, because it is based solely on a single measurement of the creek during the site visit in October 2001. NMFS argues that the Division's proposed conditions do not protect federally listed species, address returning flow to Stanshaw Creek, or mention installing a fish screen at the POD and that visually estimating flow in the creek is an insufficient method of monitoring flow.

May 5, 2005 – The Diverter submits to DFG a project design to mitigate adverse impacts to salmonids in Stanshaw Creek. The project involves piping the effluent from the Diverter's hydroelectric generation back to Stanshaw Creek above the Highway 96 culverts and modifying the diversion conveyance system to prevent discharges to Stanshaw Creek.

September 3, 2009 - The Division submits a letter to DFG, requesting written conditions for the small domestic use registration (D030945) for the Diverter. The letter references an email to the Division from DFG, stating that the Diverter may need a new Streambed Alteration Agreement (SAA), as well as file an incidental take permit for Coho.

October 15, 2009 – DFG responds to the Division's letter dated September 3, 2009 stating that DFG has not issued a new SAA to the Diverter, because stipulated conditions detailed in DFG's protest (filed with the Division on March 17, 2000) are mutually exclusive to issuing the SAA.

October 1, 2012 - Stoel Rives LLP submits a letter to the Division providing evidence that the Diverter has a pre-1914 right. The letter cites Water Code section 1202, stating that the Division has no jurisdiction over the Diverter's pre-1914 right. The letter argues that previous estimates of historical use were inaccurate and that the Diverter has a right to divert up to 3.6 cfs.

November 2, 2012 - The Division issues a letter to Stoel Rives LLP responding to their October 1, 2012 letter. The Division acknowledges that the Diverter, on December 1, 1998, filed a Statement of Water Diversion and Use (15022) claiming a pre-1914 right. However, the Diverter had not filed any Supplemental Statements pursuant to Water Code section 5104, subdivision (a). Consequently, Statement No. 15022 was inactive in the Division's records. In the letter, the Division provides the Diverter with notice of the Statement requirement and potential penalty. The letter further states that the Diverter should file a new Statement or contact Bob Rinker to see if Statement 15022 can be reactivated, so that online Supplemental Statements can be filed. The letter concludes that unless the Division receives, within 30 days, the information requested in the Division's March 30, 2012 letter, Application 29449 will be canceled pursuant to Water Code section 1276.

November 29, 2012 - Ms. Brenner of Stoel Rives LLP submits an initial Statement of Water Diversion and Use in order to reactivate S015022.

December 3, 2012 - Stoel Rives LLP contacts the Division to reactivate Statement S015022. On the same day the Division reactivates Statement S015022. Statement S015022 claims a pre-1914 right.

January 7, 2013 - The Division issue a letter to Stoves Rives LLP informing them of the cancelation of Application 29449.

Current Investigation

10. The State Water Board has authority to investigate diversions made under pre-1914 appropriative water right claims to determine whether such diversions are within the scope of the claimed right. In addition, State Water Board Staff shall investigate an allegation of misuse of water when an interested person shows cause or when the State Water Board itself believes a misuse may exist. (23 Cal. Code Regs. § 856.)
11. On July 17, 2013 the State Water Board received a complaint alleging that MMR was diverting water in excess of its pre-1914 claim of right, and that Stanshaw Creek was being dewatered in most summers as a result, causing impacts to public trust resources.
12. On September 1, 2014, Lennihan Law, P.C., at the request of the Mid Klamath Watershed Council and in collaboration with the Mid Klamath Watershed Council and Cascade Stream Solutions, released the Marble Mountain Ranch Stanshaw Creek Water Rights Report (Lennihan Report). The Lennihan Report reviewed MMR's chain of title, historical water use, and other information. It determined that, although the Diverter likely lacked a riparian water right, "the likely pre-1914 appropriative water right that can be exercised on Coles' Marble Mountain Ranch is approximately 1.16 cfs, with varying seasons of use."
13. On November 18, 2014, the Mid Klamath Watershed Council and Cascade Stream Solutions released the Marble Mountain Ranch Water Right Investigation: Water Use Technical Memorandum (Water Use Technical Memorandum). The Water Use Technical Memorandum assessed the MMR's beneficial uses. It determined that the Diverter put approximately 0.353 cfs to consumptive beneficial uses.
14. On December 17, 2014, State Water Board Staff met with Mr. Cole for a facility tour to document the diversion facility, diversion facility operation, conveyance system, place of use and water discharge to Irving Creek. After the MMR facility tour, State Water Board Staff attended a Stanshaw Creek Water Conservation stakeholders meeting in Orleans, California. Stakeholders included DFW, NMFS, USFS, Mid Klamath Watershed Council, Karuk Tribe representatives, Mr. Cole, and Fisher. The meeting provided a forum for stakeholders to ask questions and share opinions regarding the Lennihan Report and to solicit discussion about a physical solution and the potential process for obtaining public funding assistance for a physical solution project.
15. During site inspections, State Water Board Staff and North Coast Regional Water Board (Regional Water Board) Staff observed that:
 - a. The POD lacks a permanent control structure regulating the amount of water diverted from Stanshaw Creek. The POD requires regular maintenance by augmenting the placement of rocks in the stream channel.
 - b. The POD lacks devices to measure the diverted flow and the bypassed flow.
 - c. Water is gravity diverted at the POD and conveyed approximately one half-mile in a partially lined and partially unlined diversion ditch to an inlet where water is routed to the water treatment facility via a 2-inch PVC pipe and then through the penstock for hydroelectric power generation and irrigation.

- d. MMR has two outfall structures along the diversion ditch downstream from the POD to relieve excess amounts of water that would overflow the diversion ditch during periods of high flow in Stanshaw Creek.
- e. The excess water from the two outfall structures discharge back to Stanshaw Creek. The first of two outfall structures is located approximately 50-feet downstream of the POD. The first outfall structure operates in a similar manner as the POD and requires regular augmentation of flash board risers and rocks in the diversion ditch to manipulate the amount of water conveyed by the diversion ditch. The second outfall structure is located approximately 300-feet downstream of the POD and occurs just before the diversion ditch narrows from approximately 60 inches in width to approximately 30 inches in width. Flash boards are used in the second outflow structure to manipulate the amount of excess water discharged from the diversion ditch. Water from the second outfall structure is discharged via a shotgunned culvert into a small unnamed tributary to Stanshaw Creek, then to Stanshaw Creek. The culvert appeared to have caused a large erosion feature in the downslope channel. The two outfall structures spill excess flows well before any water is put to beneficial use.
- f. The diversion ditch is located on a steep heavily treed hill slope. The diversion ditch resembles a narrow road cut on a steep hillside. The diversion ditch requires regular maintenance due to sediment deposition, cut bank slumps and landslides. The hillside above the ditch on the inner berm is prone to slumping in to the diversion ditch due to the cut bank and removal of the slope base. Slope loading occurs during heavy rainfall events which increase the mass of materials up-slope, resulting in slumps into the ditch. State Water Board Staff noted limited free board space along the majority of the diversion ditch. The elevation of the outer berm crest of the diversion ditch varies greatly. These variations can be attributed to flows in the diversion ditch historically overtopping the low berm crest areas, resulting in hill slope sloughing and landslides.
- g. At the diversion ditch conveyance system inlet that splits the flow of water in the ditch, a portion of the water is routed via gravity by a two-inch PVC pipe to five 3,000 gallon plastic water storage containers that MMR uses for water treatment (Water Treatment Tanks). Water conveyed to the water storage containers are MMR's domestic water supply that serves residents living on the property and guests staying at MMR. Numerous leaks were observed in the tanks.
- h. The diversion ditch conveyance system continues below the Water Treatment Tanks and conveys water to a 14-inch diameter penstock pipe. Water that is conveyed through the penstock is used for hydropower and connects to MMR's irrigation system. The power generation facility consists of an 18" pelton wheel that is powered by two pressurized jets. Water flowing through the hydropower facility discharges into a diversion ditch that flows to a pond. The pond serves as a recreational feature and for fire protection.
- i. Irrigation flows are conveyed through a short run of nine-inch diameter steel pipe to a four-inch diameter PVC pipe that extends from the junction at the power plant to sprinklers located in the pastures and hose bibs located throughout the property. Division Staff has calculated that approximately seven acres of garden and pasture land is irrigated. Irrigation was not occurring at the

time of inspection.

- j. Water discharged from the hydropower facility is not re-used for irrigation or domestic needs, but rather flows into a ditch below the pond and continues across the property for approximately 850 feet to the south before water drops off a head cut to a ravine and into a tributary to Irving Creek. At the time of the inspection, Division Staff estimated that approximately 1.23 cfs was flowing through the hydropower facility and discharged into Irving Creek. Irving Creek is a tributary to the Klamath River located approximately one-mile downstream of the Stanshaw Creek and the Klamath River confluence.

16. On February 12, 2015, State Water Board Staff conducted a second site inspection. Regional Water Board Staff accompanied State Water Board Staff to document any potential water quality concerns associated with MMR's diversion facility and conveyance system.

- a. During the February 12, 2015 inspection Regional Water Board Staff and State Water Board Staff identified 19 areas where the diversion ditch has the potential to fail or has failed, allowing unauthorized discharges onto native slopes and causing the erosion of new stream channels delivering sediment towards or into Stanshaw Creek.
- b. During the February 12, 2015 inspection State Water Board Staff took three flow measurements at three locations within MMR's diversion ditch: 1) in the diversion ditch approximately 50-feet below the POD on Stanshaw Creek and below the first outfall structure; 2) in the diversion ditch approximately 100-feet downstream of the 2" domestic water line intake; and 3) in the diversion ditch below the recreational pond and before flow is discharged to Irving Creek. State Water Board Staff estimates the ditch capacity is approximately 3 to 4 cfs. Flow data and latitude and longitude coordinates for the data collections are summarized below in Table 1.

Table 1: Data Collection Latitude and Longitude

Location	Latitude/Longitude	Flow in CFS
1. Downstream just below POD	41.480845, -123.498259	2.23
2. Within diversion ditch 100' downstream of domestic water line intake & 50' upstream of terminus into penstock	41.474430, -123.503532	1.63
3. Downstream of the pond outlet	41.471788, -123.499589	1.23

- c. Location # 1 is located within MMR's diversion ditch just below the POD on Stanshaw Creek. State Water Board Staff recorded a flow rate of 2.23 cfs. Location # 2 is located within the diversion ditch 100-feet downstream of the 2-inch domestic water line intake and approximately 50-feet upstream of the terminus into the penstock. State Water Board Staff recorded a flow of 1.63 cfs at Location # 2. State Water Board Staff calculated a ditch loss of approximately 0.6 cfs by subtracting the flow taken at Location # 2 from Location # 1. The flow at Location # 3 was measured at 1.23 cfs and is located within the diversion ditch just below the pond. Flow was recorded at this location to determine the Diverter's consumptive water demand for domestic and irrigation uses.

The Diverter's domestic water demand was calculated by subtracting Location #3 from Location # 2. Had the Diverter been irrigating during the inspection, the difference between Location #2 and Location #3 also would have included the Diverter's irrigation demand.

17. On February 13, 2015 State Water Board Staff received photographic evidence from the Karuk Tribe Department of Natural Resources of a Coho salmon and five juvenile steelhead fish kill found in the Coho rearing pond located off channel near the confluence of Stanshaw Creek and the Klamath River in late July 2009. The Karuk Tribe claimed the fish mortality was due to a lack of flow entering the pond that led to a water temperature increase when Stanshaw Creek flows were reduced by MMR's diversion. The Karuk Tribe was monitoring temperature in the Stanshaw Creek off channel pond in the summer of 2009, however; the water data logger was buried by sediment in the fall and lost. The basis for the Karuk Tribe's temperature findings are based on another data logger deployed a half mile upstream along the Klamath River in off channel ponds at Sandy Bar Creek that recorded 22.9 Celsius and 19.2 Celsius on July 30, 2009.
18. On March 18, 2015, State Water Board Staff was informed that on August 27, 2013 the Diverter used diesel generators to provide MMR with electrical power, because there was insufficient flow in the diversion ditch to operate the hydro-power system and provide irrigation and domestic water for MMR. Under these conditions water should only be diverted for consumptive uses at MMR. If all water was being used for consumptive uses such as domestic and irrigation needs then there would be no discharges from MMR to Irving Creek. State Water Board Staff was further informed that excess diverted water was leaving the MMR pond and flowing toward Irving Creek. Measured flow during this instance was recorded at 1 cfs.
19. On or about December 3, 2015, the State Water Board and the Regional Water Board sent the Diverter a letter by certified mail and by electronic mail. The letter included a notice of violation (NOV) and a draft cleanup and abatement order (CAO) from the Regional Water Board describing water quality violations and prescribing corrective actions. The letter also included a report of inspection from the State Water Board identifying unreasonable methods of use and unreasonable methods of diversion resulting in waste and public trust violations. The State Water Board report of inspection also prescribed corrective actions. The letter stated that the Regional Water Board and the State Water Board had completed their investigations and would pursue formal enforcement action if the Diverter failed to respond to the letter in 30 days to discuss a response that would substantially address the concerns outlined in the Regional Water Board's CAO and the State Water Board report of inspection.
20. On January 14, 2016, Regional Water Board and State Water Board Staff met with Mr. Cole and various other stakeholders in Orleans, California. NMFS presented instream flow recommendations. The attendees also discussed the Regional Water Board and State Water Board inspection reports and recommended corrective actions. At the meeting Mr. Cole indicated that he had yet to institute any changes in his POD or methods of measuring his diversion and bypass flows.
21. On January 19, 2016, the Diverter, through legal counsel, responded to the Division's December 3, 2015 letter. According to the letter, the Diverter had repaired all leaking Water Treatment Tanks.

The letter also outlined immediate and long-term solutions to address concerns raised in the Regional Water Board's CAO and the State Water Board report of investigation. Nonetheless, due to the lack of timelines, specificity, identified consultants, and other factors, the Division and Regional Water Board Staff concluded that the letter did not demonstrate any commitments to actions substantially addressing the concerns outlined in the Regional Water Board's CAO and the State Water Board report of investigation.

22. On February 12, 2016, the Regional Board and the State Water Board notified the Diverter that, in light of their January 19, 2016 response, they would pursue formal enforcement action.
23. On March 24, 2016, through their legal counsel, the Diverter responded to the February 12, 2016 letter from the Regional Board and the State Water Board. The Diverter stated they were committed to working with the Regional Water Board and the State Water Board to implement corrective actions. The letter stated that the Diverter had retained Cascade Stream Solutions, an engineering firm, to implement the improvements and were working with Mid Klamath Watershed Council to identify funding assistance. The Diverter planned to install a 6" pipe in the conveyance ditch by spring 2016 in order to comply with the bypass flow requirements. Long term solutions, such as returning flow to Stanshaw Creek would not be completed until June 2018. The letter stated that the Diverter would submit a Restoration and Monitoring Plan (RMP) by April 15, 2016, but they failed to submit such a plan by that date.
24. In a letter dated April 15, 2016, the Diverter, through legal counsel, stated they were finalizing plans and a contract for the 6" pipe.
25. On April 20, 2016, in response to the March 24, 2016 and April 15, 2016 letters from the Diverter, Regional Water Board and State Water Board Staff, through legal counsel, e-mailed the Diverter's legal counsel with questions seeking clarification of the Diverter's proposed scope of work, project proposals, and project time schedule.
26. On May 13, 2016, Regional Water Board and State Water Board Staff met with Mr. Cole, the Diverter's legal counsel, NMFS, representatives from the Mid-Klamath Watershed Council, and the Diverter's engineers to discuss the questions listed in the Regional Water Board and State Water Board's April 20, 2016 e-mail, as well as questions about bypass flow requirements and other elements of the project.
27. Although the Diverter has started taking steps to eliminate their misuse of water, they have already fallen behind on their proposed time schedule. The Diverter has already failed to:
 - Stabilize the head cut and slope at the Irving Creek outfall. The Diverter proposed completing this task by April 15, 2016.
 - Report completion of stabilizing the head cut and slope at the Irving Creek outfall with photographs. The Diverter proposed completing this task by May 1, 2016.
 - Lay a six-inch pipe in the diversion ditch and install a headgate at the POD. The Diverter proposed completing these tasks by July 1, 2016.
 - Complete energy audit and water efficiency study described in January 19, 2016 letter. The Diverter proposed completing these tasks by July 1, 2016.

Waste, Unreasonable Method of Use, and/or Unreasonable Method of Diversion of Water

28. The Diverter is diverting more water than necessary in order to compensate for the loss of water early in the conveyance system due to significant leaks and ditch failures, as well as discharging water that is not consumptively used to Irving Creek. State Water Board Staff calculated that approximately twenty-seven percent of water diverted at the Stanshaw Creek POD is lost in the conveyance system and sixteen percent of water diverted is consumptively used. Fifty-six percent of the water diverted is non-consumptively used for hydroelectric power generation and discharged to Irving Creek.
29. During the facility inspections on December 17, 2014 and on February 12, 2015, State Water Board Staff observed that the facility's POD intake did not have a control mechanism to manage flow through the open ditch system. Without a control mechanism, such as a diversion gate that has the ability to restrict flow through the POD, water may be diverted in excess of the diversion ditch capacity and in excess of what is reasonably required for beneficial use. The Diverter's lack of a control mechanism to control their POD constitutes an unreasonable method of diversion and results in waste and/or unreasonable use of water.
30. During the low-flow summer months, there are times when the Diverter diverts in excess of their consumptive needs, but due to low flow conditions cannot divert enough water to operate the hydropower generation facility. The Diverter does not restrict their diversion during these periods to what is needed for domestic and irrigation needs only. As a result, the excess water diverted and not consumptively used is discharged to Irving Creek. Without a control mechanism on the POD, the Diverter lacks the ability to limit their diversion from Stanshaw Creek to an amount that can be beneficially used. During these periods, the Diverter relies on diesel generators for power generation. The Diverter's diversion of water in excess of what they can put to beneficial use and subsequently discharging that water to Irving Creek constitutes waste and an unreasonable method of using water.
31. During high flows in Stanshaw Creek water may be diverted in excess of the diversion ditch capacity which causes water to overtop the diversion ditch and results in slumps and landslides. In addition, the continuous deposition of sediment from Stanshaw Creek in the ditch reduces the ditch capacity and increases the risk of water overtopping the low berm areas. Similarly, when material from the up-slope cut bank slumps into the ditch, it can result in partially damming or completely damming the ditch and diverting stream flow out of the ditch and downhill. The diversion ditch thus constitutes an unreasonable method of diversion of water.
32. State Water Board and Regional Water Board Staff observed and documented evidence of ditch failures at nineteen (19) locations along the diversion ditch downstream from the POD, as well as in the discharge channel leading to Irving Creek. State Water Board and Regional Water Board Staff evaluated the Diverter's diversion facility for the potential threat to water quality and found that the ditch is a threat to water quality. Due to the unstable nature of the diversion ditch, the ditch is prone to failing and overtopping. The ditch failures result in erosion and sediment discharges to Stanshaw Creek. Quantities of water that have been historically lost to MMR's diversion ditch failures and overtopping the diversion ditch constitute a threat of unauthorized discharge to surface waters of the state and the United States. Stanshaw Creek is tributary to the Klamath

River, which is on the Clean Water Act section 303(d) list of water quality limited segments for sediment and temperature. The Klamath River also has total maximum daily loads for sediment and temperature. The diversion ditch thus constitutes an unreasonable method of diversion of water.

Harm to Public Trust Resources

33. During inspections, State Water Board and Regional Water Board Staff observed that:
- a. The diversion lacks a fish screen at the POD to prevent fish entrainment. The Diverter's POD intake does not have the ability to prevent fish from becoming entrained. Fish that become entrained in MMR's diversion ditch are killed if the fish are caught in the faster moving water that enters the penstock that conveys water to the hydropower turbines.
 - b. The facility's POD lacked devices to measure the diverted flow and bypassed flow. Without devices to measure the diverted flow and the bypassed flow, the Diverter cannot control their diversion to avoid harming public trust interests.
 - c. Water diverted from Stanshaw Creek to operate MMR's hydropower generation facility is discharged to Irving Creek rather than returned to Stanshaw Creek.
 - d. The headcut is actively eroding, resulting in a discharge of sediment to the Irving Creek watershed and, thence, to the Klamath River. Several trees have fallen due to erosion of their root masses.
 - e. Evidence of ditch failures that discharged sediment back into Stanshaw Creek. The discharge of sediment from ditch failures potentially impacts public trust beneficial uses.
34. On August 4, 2016 the State Water Board received updated written bypass flow recommendations for the MMR diversion from NMFS.
- a. NMFS's instream flow analysis stated that Juvenile salmonids rely on the cold water refugia provided by off-channel habitat and tributaries such as Stanshaw Creek. When the mainstem Klamath River temperature rises and flows recede, juvenile coho seek off-channel cooler habitat where they may remain throughout the warm season. The off-channel pond at the Stanshaw Creek confluence with the Klamath River provides important rearing habitat for juvenile coho, as well as for chinook and steelhead.
 - b. NMFS minimum bypass flow recommendations for Stanshaw Creek specify that a 2 cfs minimum bypass flow at the Diverter's point of diversion while also maintaining 90 percent of unimpaired flow at all times at the Anadromous Reach with no significant temperature gain between the diverted water and return flow.³

³ Page 11 of the NMFS bypass flow recommendations states "A maximum 3.3 cfs diversion that bypasses at least 90% of the unimpaired streamflow into the anadromous reach throughout the year will provide habitat to help conserve and protect listed coho salmon." NMFS subsequently clarified that the "maximum 3.3 cfs diversion" should have stated the "maximum 3.0 cfs diversion."

This is especially important in the summer due to thermal sensitivity and the need for connectivity and the need for ensuring adequate water quality and maintaining food supply for over-summering coho in the pond.

- c. Hydraulic analysis based on five cross sections surveyed in 2002 above the Highway 96 culvert, show that when the Stanshaw Creek instream flows drop below about 1.5 to 2.0 cfs, then the wetted channel width diminishes quickly as flows decrease reducing the available cross sectional area of the stream and decreasing available macroinvertebrate habitat and edge water rearing areas. It is important to maintain this base flow to protect macro-invertebrate production and to provide a minimum level of edge water rearing area.
 - d. NMFS recommends that the Diverter implement the bypass flows in addition to returning any hydroelectric portion of water to Stanshaw Creek to avoid unnecessary public trust resource impacts. NMFS, DFW, and the Karuk Tribe have asserted that the diversions of water by the Diverter adversely impacts Coho salmon in violation of the federal Endangered Species Act and other laws. DFW has concurred with the recommendations of NMFS.
35. The State Water Board has identified other water rights on Stanshaw Creek. Restricting these water rights before restricting the Diverter in order to implement the recommended bypass flows will not be necessary, because they are too small to have any significant or measurable impacts on the conditions of Stanshaw Creek at the Diverter's POD.
 36. The State Water Board has the obligation to protect the interests of the public in trust resources, including interests in commerce, fisheries, recreation, and ecology. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419; see generally *In re Water of Hallett Creek Stream System* (1988) 44 Cal.3d 448, 472 fn. 16; see also State Water Board Order WR 2016-0015⁴.)
 37. The public trust doctrine provides that the State of California, as sovereign, "owns all of its navigable waterways and the lands lying beneath them as trustee of a public trust for the benefit of the people." (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 434 [internal quotations omitted].) The purpose of the public trust "evolve[s] in tandem with the changing public perception of the values and uses of waterways." (*Id.*) Ecological values are among those values protected by the public trust. (*Id.* at 435.) The State's obligation as trustee is to preserve this trust property from harmful diversions by water rights holders (*Id.* at 445-448.) The public trust doctrine prevents any party from acquiring a vested right to divert or use water in a manner harmful to the interests protected by the public trust. (*Id.* at 445.) The State Water Board has the obligation to protect the interests of the public in trust resources, including interests in commerce, fisheries, recreation, and ecology. (*Id.*)
 38. The reasonable use and public trust doctrines are reinforcing and synergistic. Thus, diverting and using of water in a manner that harms interests protected by the public trust may also constitute a misuse of water. The Diverter's diversion and use of water in a manner that harms interests protected by the public trust constitutes a misuse of water.

⁴ Accessible at http://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/orders/2016/wro2016_0015.pdf

**Division of Water Rights Enforcement Action Under the California Code of Regulations,
title 23, section 856 et al.**

39. The State Water Board has the authority to prevent illegal diversions and to prevent waste or unreasonable use of water, regardless of the basis under which the right is held. (*Young v. State Water Resources Control Board* (2013) 219 Cal.App.4th 397, 404 [as modified (Sept. 20, 2013)].)
40. The State Water Board has the authority to protect public trust resources, such as fisheries, wildlife, aesthetics, and navigation. This investigation was conducted as part of the State Water Board's continuing authority to protect public trust resources such as the threatened Coho salmon and steelhead fisheries, and to prevent the misuse of water.
41. Pursuant to the California Constitution, Article X, section 2:

"It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. The right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or method of use or unreasonable method of diversion of water."
42. Water Code section 100 provides:

"It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such water is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. The right to water or to the use or flow of water in or from any natural stream or watercourse in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water."
43. Water Code section 275 provides that the State Water Board shall take all appropriate proceedings or actions to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water in this State.
44. Under the California Code of Regulations, title 23, section 856 State Water Board Staff shall investigate an allegation of waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water: (1) when an interested person shows good cause; or (2) when the State Water Board itself believes misuse may exist.

45. The California Code of Regulations, title 23, section 857, subdivision (a) of, if the investigation indicates misuse of water has occurred, the State Water Board Staff shall notify interested persons and allow a reasonable period of time in which to terminate the misuse or demonstrate to the satisfaction of the State Water Board Staff that misuse has not occurred.
46. In resolving disputes involving competing uses of water, California courts have frequently considered whether there is a "physical solution" available by which competing needs can best be served. (*Peabody v. Vallejo* (1935) 2 Cal.2d 351, 383-384; *City of Lodi v. East Bay Municipal Util. Dist.* (1936) 7 Cal.2d 316.) A physical solution is consistent with the constitutional goal of promoting maximum beneficial use of the State's water resources.
47. There is substantial evidence that the Diverter is misusing water. There is also substantial evidence that the Diverter's misuse of water harms public trust interests. There is a threat of continuing misuse of water, because the misuse of water has occurred for many years, previous collaborative efforts among stakeholders to eliminate the misuse of water have been unproductive, and the Diverter has already fallen behind their proposed time schedule for eliminating the misuse of water.
48. On August, 5, 2016, the Regional Water Board issued Cleanup and Abatement Order No. R1-2016-0031 for the Diverter 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. The CAO will address water quality violations the Diverter causes with their diversion facility and conveyance system. Complementary, coordinated enforcement action using both the State Water Board's water right enforcement authority and the Regional Water Board's water quality enforcement authority is necessary to fully address water quality violations, misuse of water, and public trust impacts. The broad issues to be addressed, the agency action and authority used, and the agency best suited to exercise that authority is summarized in Table 2.

Table 2: Issues to be addressed, the authority used, and the agency exercising authority.

Issue	Action and Authority Used	Agency
Discharge of pollutants to Irving Creek (Water Code §§ 13376, 13050; Regional Board Water Quality Control Plan - Action Plan for Logging, Construction and Associated Activities Prohibition 1 and 2)	Cleanup and abatement order (Water Code § 13304)	Regional Board
Discharge of pollutants from the conveyance ditch (Water Code §§ 13376, 13050)	Cleanup and abatement order (Water Code § 13304)	Regional Board
Failure to control amount of water diverted (Article X, § 2; Water Code § 100)	Misuse of water (Water Code § 275; 23 Cal. Code regs. § 857)	State Water Board
Conveyance losses in the conveyance ditch (Article X, § 2; Water Code § 100)	Misuse of water (Water Code § 275; 23 Cal. Code regs. § 857)	State Water Board
Water not put to beneficial use discharged to Irving Creek (Article X, § 2; Water Code § 100)	Misuse of water (Water Code § 275; 23 Cal. Code regs. § 857)	State Water Board
Water discharged to Irving Creek not returned to Stanshaw Creek (Public Trust; Article X, § 2; Water Code § 100)	Misuse of water, public trust (Public Trust; Water Code § 275; 23 Cal. Code regs. § 857)	State Water Board
Inadequate bypass flows for fishery resources (Public Trust; Article X, § 2; Water Code § 100)	Public Trust (Public Trust; Water Code § 275; 23 Cal. Code regs. § 857)	State Water Board

49. Pursuant to the California Code of Regulations, title 23, section 857, Division Staff granted the Diverter a reasonable period of time, until June 30, 2018, to terminate the ongoing misuse of water. Division Staff established a time schedule with deadlines for project tasks, described below in Table 3, to complete corrective actions outlined in the Division's report of investigation and terminate the misuse of water within a reasonable time. The interim deadlines are based on the time schedule for the project and scope of work the Diverter proposed in the March 24, 2016 letter. The interim deadlines were adjusted to follow the date the Assistant Deputy Director requested a hearing and issued this Draft Order. The interim deadlines were also adjusted to reflect the end of construction season – roughly October 15th of each year. Interim tasks likely involving construction and/or permitting were given more time to complete.
50. In implementing the corrective actions, Division Staff requested the Diverter to:
- a. Retain appropriately licensed and experienced California Licensed Professional(s) for all project tasks.
 - b. Secure all necessary permits for all projects tasks.
 - c. Notify the Division, Regional Water Board, and stakeholders when project tasks are complete.
 - d. Submit any plan for a project milestone to the Division for approval.
 - e. Copy the Division on any permit applications submitted to other agencies.

- f. Provide monitoring reports for Stanshaw Creek return flows to demonstrate stability of improvements.
- g. Provide monitoring reports to demonstrate stability of improvements, such as lining or piping, that eliminate the misuse of water in the conveyance system and for installing a water diversion control mechanism, such as a headgate, with a measurement device at the POD.
- h. Provide monitoring consistent with the RMP.
- i. Provide continuous measurement records of Stanshaw Creek flow downstream of the POD to demonstrate compliance with the NMFS bypass requirement.
- j. Measure and report diversions consistent with the requirements set forth in the California Code of Regulations, title 23, sections 907 *et seq.* Insofar as the time schedule requires measuring and reporting diversions sooner than required by the California Code of Regulations, title 23, sections 907 *et seq.*, the Diverter shall comply with the deadlines in Table 3.
- k. Submit quarterly progress reports addressing compliance actions. Quarterly progress report deadlines shall be January 1, April 1, July 1, and October 1 through January 1, 2022. These progress reports shall include updates on project development and permitting, descriptions of steps taken to develop and implement the required plans and any unforeseen circumstances that may affect progress on meeting identified deadlines.

Table 3: Time Schedule and Tasks

Date	Tasks
October 15, 2016	<ul style="list-style-type: none"> • Complete energy audit. • Complete water efficiency study. • Develop implementation plan to return flow back to Stanshaw Creek with input from stakeholders and permitting agencies. • Create plans to implement any feasible recommendations from the energy audit and water efficiency study. Submit Division of Drinking Water (DDW) Public Water System determination or copy of DDW Public Water System permit to Division • Install a permanent water diversion control mechanism at the POD, such as a headgate or other suitable structure(s), adequate to control the amount of water diverted. • Install conveyance infrastructure in the ditch, such as a pipeline or other suitable infrastructure, adequate to eliminate the misuse of water in the ditch. • Install a device for diversion measurement and reporting. • Put all water diverted to beneficial use. • Stabilize head cut and slope at Irving Creek. • Install a flow gauge upstream from the Stanshaw Creek POD and a flow gauge downstream below the Highway 96 culverts.
April 30, 2017	<ul style="list-style-type: none"> • Cease discharges to Irving Creek. • Submit final plans for review and approval by the State Water Board, Regional Water Board, and all other responsible agencies to return flow to Stanshaw Creek.
October 15, 2017	<ul style="list-style-type: none"> • Complete approved RMP resources improvements.
March 31, 2018	<ul style="list-style-type: none"> • Begin construction to return flows back to Stanshaw Creek.
June 30, 2018	<ul style="list-style-type: none"> • Stanshaw Creek return flow project completed. • NMFS bypass flow recommendations implemented.

51. Pursuant to the California Code of Regulations, title 23, section 857, the Assistant Deputy Director requested a hearing and order finding that the Diverter has misused water and is misusing water. The Division requested a hearing within 90 to 120 days after the October 15, 2016 interim deadline to determine whether any misuse of water has occurred or continues to occur and for an order finding that the Diverter misused water and is misusing water and ordering appropriate corrective actions, with a time schedule, for the Diverter to terminate any misuse of water. If the Diverter meets the milestones for the October 15, 2016 interim deadline, the Division requested that the parties, upon concurrence, could request the State Water Board to postpone the hearing date.

ORDER

IT IS HEREBY ORDERED, pursuant to Water Code section 275, Article X, section 2 of the California Constitution, and Water Code section 100, that the Diverter shall cease misusing

water in accordance with the following schedule and conditions:

1. The Diverter shall cease the misuse of water subject to the time schedule in Table 4.

Table 4: Time Schedule and Tasks⁵

Date	Tasks
October 15, 2016	<ul style="list-style-type: none"> • Complete energy audit. • Complete water efficiency study. • Develop implementation plan to return flow back to Stanshaw Creek with input from stakeholders and permitting agencies. • Create plans to implement any feasible recommendations from the energy audit and water efficiency study. Submit Division of Drinking Water (DDW) Public Water System determination or copy of DDW Public Water System permit to Division • Install a permanent water diversion control mechanism at the POD, such as a headgate or other suitable structure(s), adequate to control the amount of water diverted. • Install conveyance infrastructure in the ditch, such as a pipeline or other suitable infrastructure, adequate to eliminate the misuse of water in the ditch. • Install a device for diversion measurement and reporting. • Put all water diverted to beneficial use. • Stabilize head cut and slope at Irving Creek. • Install a flow gauge upstream from the Stanshaw Creek POD and a flow gauge downstream below the Highway 96 culverts.
April 30, 2017	<ul style="list-style-type: none"> • Cease discharges to Irving Creek. • Submit final plans for review and approval by the State Water Board, Regional Water Board, and all other responsible agencies to return flow to Stanshaw Creek.
October 15, 2017	<ul style="list-style-type: none"> • Complete approved RMP resources improvements.
March 31, 2018	<ul style="list-style-type: none"> • Begin construction to return flows back to Stanshaw Creek.
June 30, 2018	<ul style="list-style-type: none"> • Stanshaw Creek return flow project completed. • NMFS bypass flow recommendations implemented.

2. The Diverter shall implement the corrective actions subject to the following requirements:
 - a. The Diverter shall have the documentation, plans, and reports required under this Order prepared under the direction of appropriately qualified professionals.

⁵ Since the interim deadlines in the time schedule recommended in Table 3 follow the date of this Draft Order, the Division has recommended retaining that time schedule. However, the Division understands that the hearing date it requests will follow the October 15, 2016 interim deadline and appropriate adjustments to the time schedule may be necessary.

As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. The Diverter shall include a statement of qualification and registration numbers, if applicable, of the responsible lead professionals in all plans and reports required under this Order. The lead professional shall sign and affix their registration stamp, as applicable, to the report, plan, or document.

- b. All technical reports submitted by the Diverter shall include a cover letter signed by the Diverter, or a duly authorized representative, certifying under penalty of law that the signer has examined and is familiar with the report and that to his or her knowledge, the report is true, complete, and accurate. The Diverter shall also state if the Diverter agrees with any recommendations/ proposals and whether the Diverter approves implementation of said proposals. Any person signing a document submitted under this Order shall make the following certification:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

- c. The Diverter shall obtain all applicable local, state, and federal permits necessary to fulfill the requirements of this Order prior to beginning work.
- d. The Diverter shall notify the Assistant Deputy Director, Assistant Executive Officer of the Regional Water Board, and stakeholders when project tasks are complete.
- e. The Diverter shall submit any plan for a project milestone to the Assistant Deputy Director for approval.
- f. The Diverter shall copy the Assistant Deputy Director on any permit applications submitted to other agencies.
- g. The Diverter shall provide monitoring reports for Stanshaw Creek return flows to demonstrate stability of improvements.
- h. The Diverter shall provide monitoring reports to demonstrate stability of improvements, such as lining or piping, that eliminate the misuse of water in the conveyance system and for installing a water diversion control mechanism, such as a headgate, with a measurement device at the POD.
- i. The Diverter shall provide monitoring consistent with the RMP.
- j. The Diverter shall provide continuous measurement records of Stanshaw Creek flow downstream of the POD to demonstrate compliance with the NMFS bypass requirement.

- k. The Diverter shall measure and report diversions consistent with the requirements set forth in the California Code of Regulations, title 23, sections 907 *et seq.* In so far as the time schedule requires measuring and reporting diversions sooner than required by the California Code of Regulations, title 23, sections 907 *et seq.*, the Diverter shall comply with the deadlines in Table 3.
- l. The Diverter shall submit quarterly progress reports addressing compliance actions. Quarterly progress report deadlines shall be January 1, April 1, July 1, and October 1 through January 1, 2022. These progress reports shall include updates on project development and permitting, descriptions of steps taken to develop and implement the required plans and any unforeseen circumstances that may affect progress on meeting identified deadlines.
- m. All monitoring reports, technical reports or notices required under this Order shall be submitted to: the Assistant Deputy Director, Taro Murano, the Assistant Executive Officer for the Regional Water Board, and Stormer Feiler:

Assistant Deputy Director for the Division of Water Rights – John O’Hagan
John.O’Hagan@waterboards.ca.gov
Taro.Murano@waterboards.ca.gov

By mail to: State Water Resources Control Board, 1001 I St., 14th floor,
Sacramento, CA 95814

Assistant Executive Officer for the North Coast Regional Water Quality Control Board – Shin-Roei Lee
Shin-Roei.Lee@waterboards.ca.gov
Stormer.Feiler@waterboards.ca.gov

By mail to: North Coast Regional Water Quality Control Board, 5550 Skylane Blvd. Suite A, Santa Rosa, CA 95403

- 3. The Diverter shall report any changes in MMR’s ownership and/or any changes in responsible party or parties operating MMR to the Assistant Deputy Director no later than 30 days prior to a planned change and shall reference the number of this Order.
- 4. If the Diverter is unable to fully comply with the time schedule due to other federal, state, or local agencies with authority over the work required, the Diverter shall immediately alert the Assistant Deputy Director of the reason for delay and any problems with fully complying with the time schedule and diligently work to overcome such obstacles.
- 5. The Assistant Deputy Director for Water Rights is authorized to modify the timing and the content of the reporting required by all of the provisions of this order to more effectively carry out the intent of this order.
- 6. If the Diverter fails to cease misusing water pursuant to this Order, the Diverter shall violate this order and may be subject to enforcement action under Water Code sections 1831 and 1846. The State Water Board may also request appropriate legal action by the Attorney General, pursuant to the California Code of Regulations, title 23, section 859.

7. Nothing in this Order is intended to or shall be construed to limit or preclude the State Water Board from exercising its authority under any statute, regulation, ordinance, or other law, including, but not limited to, the authority to bring enforcement against the Diverter for unauthorized diversion or use in violation of Water Code section 1052.

CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on {DATE}.

Jeanine Townsend
Clerk to the Board

DRAFT

**DIVISION OF WATER RIGHTS
REPORT OF INSPECTION**

REGISTRATION: D030945**STATEMENTS: S015022 & S016375**

Date of Inspection: 12-17-2014 and 2-12-2015**Report Date:** 1/13/2015**Inspection Performed by:** Skyler Anderson (12-17-2014 & 2-12-2015) - Water Rights
Taro Murano (12-17-2014) - Water Rights
Michael Vella (2-12-2015) - Water Rights
Stormer Feiler (2-12-2015) North Coast Regional Water Board**Accompanied by:** Douglas Cole - Owner Marble Mountain Ranch**Persons Interviewed:** Douglas Cole**Telephone:** 530-469-3322**OWNERSHIP:** Douglas T Cole
92520 Highway 96
Somes Bar, CA 95568**SOURCE(S):** Stanshaw Creek
No change**POINT(S) OF DIVERSION:** Stanshaw Creek 41.47918741, -123.50004043
County: Siskiyou Parcel #: 026-290-200-000 (43.07 acres), 023-290-240-000 (4.20 acres) and 026-290-270-000 (0.05 acres)
No change**PURPOSE OF USE(S):** Domestic, Irrigation, Power, Stockwatering
Fish and Wildlife Preservation and Enhancement and Fire Protection
No change**AMOUNT:** S015022 Pre-1914 claim of right filed on December 1, 1998 for 2.5 cfs
S016375 Pre-1914 claim of right filed on May 28, 2010 for 3.0 cfs
Douglas Cole holds a Pre-1914 claim of right (S015022 & S016375) and a Small Domestic Registration (D030945)
No change**SEASON(S) OF DIVERSION:** Pre-1914 season of diversion 01/01 to 12/31

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Small Domestic Registration season of diversion 01/01 to 12/31

No change

PLACE OF USE:

Marble Mountain Ranch

No change

**METHOD(S) OF
DIVERSION:**

On Stream Diversion

No change

**COMPLIANCE TO
TERMS AND
CONDITIONS:**

S015022 is limited to 2.5 CFS with no seasonal restrictions and is limited to such water as shall be reasonably required for beneficial use.

S016375 is limited to 3.0 CFS with no seasonal restrictions and is limited to such water as shall be reasonably required for beneficial use.

D030945 has the following terms and conditions:

Term # 5 - The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed 10 acre-feet per annum to be collected from January 1 to December 31 of each year. The capacity of the reservoir shall not exceed 10 acre-feet which is the stated capacity shown in the registration.

The total amount of water to be taken from the source shall not exceed 10 acre-feet per water year of October 1 to September 30.

Term # 10 - Pursuant to California Water Code sections 100 and 275 and the common law public trust doctrine, all rights and privileges under this registration, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the SWRCB in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

Term # 11- This appropriation is subject to prior rights. Registrant may be required to curtail diversion or release water stored during the

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most recent collection season should diversion under this registration result in injury to holders of legal downstream senior rights. IF a reservoir is involved, registrant may be required to bypass or release water through, over, or around the dam. IF release of stored water would not effectively satisfy downstream prior storage rights, registrant may be required to otherwise compensate the holders of such rights for injury caused.

Term # 15 - Diversion works shall be constructed and water applied to beneficial use with due diligence.

Term # 17 - In compliance with section 5937 of the Fish and Wildlife Code, if storage or diversion of water under this registration is by means of a dam, registrant shall allow sufficient water at all times to pass through a fishway or, in the absence of a fishway, allow sufficient water to pass over, around, or through the dam to keep in good condition any fish that may be planted or exist below the dam; provided that, during a period of low flow in the stream, upon approval of the California Department of Fish and Wildlife, this requirement will be satisfied if sufficient water is passed through a culvert, waste gate, or over or around the dam to keep in good condition any fish that may be planted or exist below the dam if it is impracticable or detrimental to pass the water through a fishway. In the case of a reservoir, this provision shall not require the passage or release of water at a greater rate than the unimpaired natural inflow into the reservoir.

Term # 18 - the facilities for diversion under this registration shall include satisfactory means of measuring and bypassing sufficient water to satisfy downstream prior rights and any requirements of the California Department of Fish and Game.

Term 20 - This registration does not authorize any act which results in the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Wildlife Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). If a "take" will result from any act authorized under this water right, the registrant shall obtain an incidental take

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permit prior to construction or operation. Registrant shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this registration.

Term 24 - The appropriation registered herein is subject to enforcement, including but not limited to revocation, by the SWRCB if 1) the SWRCB finds that the registrant knowingly made any false statement or knowingly concealed any material fact, in the registration; 2) the registration is not renewed as required by the conditions of this certificate; or 3) the SWRCB finds that the registrant is in violation of the conditions of this registration.

No Change

HISTORY:

Douglas Cole diverts surface water from Stanshaw Creek under a Pre-1914 claim of right in two Statements of Water Diversion and Use (Statements), S015022 and S016375. Statement S015022 is filed under Mr. Cole's name, and S016375 is filed under Marble Mountain Ranch (MMR). S015022 was filed with the State Water Resources Control Board, Division of Water Rights (Division) on December 1, 1998 for the following purpose of use: domestic, power, irrigation, fish and wildlife protection and/or enhancement, fire protection and stock watering. S016375 was filed with the Division on May 28, 2010 for irrigation and domestic uses. Mr. Cole also has one Small Domestic Use Registration, D030945R, filed on December 1, 1998. The point-of-diversion (POD) for all the above water rights is the same diversion facility located on Stanshaw Creek. The diversion facility is situated on land owned by the United States Forest Service (USFS). MMR is located at 92520 on Highway 96 in Somes Bar, California. MMR is owned and operated by the Cole family. MMR functions as a commercial guest ranch that offers activities such as horseback trail riding, hiking, whitewater rafting, jet boat rides, sport shooting, fly fishing and kayaking.

On March 27, 1989, Robert E. and Mary Judith Young filed Application 29449 to appropriate 2168 acre-feet per year of water, at a rate of 3 cfs, from Stanshaw Creek, between January 1 to December 31, for the purposes of fish and wildlife protection and/or enhancement and power generation.

On November 17, 1994, the Division sent a letter to Mr. and Mrs. Cole, stating that the Division's records have been updated to reflect the Coles as the owners of the diversion pertaining to Application 29449.

On June 5, 1998, Division Staff, in a memorandum, described a site visit to Mr. Cole's diversion facility. The site visit was conducted to measure the rate of flow in Mr. Cole's diversion ditch.

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Mr. Cole was not present during the visit but Division staff did not need consent to access Mr. Cole's diversion ditch since it was located on land owned by the USFS. Using a pygmy meter, Division staff measured the flow in the diversion ditch to be 2.4 cfs.

On September 15, 1998, Division chief Harry Schueller, sent a letter to Mr. Cole in which he attempted to quantify the rate of Mr. Cole's diversion under his pre-1914 claim of right. Mr. Schueller argued that the maximum rate of diversion under the pre-1914 claim was 0.49 cfs continuous flow and may appropriately be 0.11 cfs. He based this on information taken from a 1965 Department of Water Resources Bulletin, which described a flow measurement made, by a forest service hydrologist, in the ditch that supplies Mr. Cole's diversion. However, the hydrologist only made a single measurement using a leaf to calculate velocity. In the letter, Mr. Schueller also stated that Mr. Cole would need to provide evidence that water had been used continuously on his property since 1914.

On March 8, 2000, the National Marine Fisheries Service (NMFS) filed a protest against Application 29449. NMFS protest alleged that Mr. Cole's proposed project may adversely affect Coho Salmon. In their protest, NMFS recommended that a minimum bypass flows be established, that the project avoid the construction of a dam or other barrier on Stanshaw Creek, or provide fish passage around any such barrier and that all diversions cease between June 1 and October 1.

On March 17, 2000, the Department of Fish and Game (now the Department of Fish and Wildlife, or DFW) filed a protest against Application 29449. DFW's protest alleged that the project would cause a reduction in stream flow during critical periods that could adversely affect fish resources or other sensitive species in Stanshaw Creek. DFW requested that they be granted a time extension to conduct a field investigation to develop minimum bypass flow conditions and season of diversion restrictions.

On August 23, 2000, the California Sportfishing Protection Alliance (CSPA) filed a protest against Application 29449. CSPA objected to the proposed project, on the grounds that it would reduce stream flow in Stanshaw Creek and as a result adversely affect resident fish species.

On November 15, 2001, NMFS issued a letter to the Division summarizing their findings from the October 17, 2001 visit and listing their protest dismissal terms. NMFS stated that following conditions would be sufficient for the removal of their protest:

1. The existing diversion should be modified to limit the maximum amount of water diverted to 3 cfs. At the time of inspection there was no mechanism in place to control flow into the diversion facility.
2. The existing diversion should include a fish screen to prevent fish from entering into the diversion. At the time of the inspection an 8-inch Salmonid was observed in the flume of the diversion facility.

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3. The diverted flow from Stanshaw Creek should be returned to Stanshaw Creek instead of to Irving Creek. Stanshaw Creek provides important thermal refuge for Salmonids in the summer. NMFS believes that returning the diverted flow to Stanshaw Creek can be accomplished without hindering the thermal refuge provided by Irving Creek, as the latter drains a larger watershed.
4. NMFS recommends that a minimum bypass flow of 1.5 cfs be maintained at all times, assuming that all tailwater from the hydroelectric plant is returned to Stanshaw Creek. NMFS believes that given the riparian cover, a bypass flow of 1.5 cfs will be sufficient to maintain low water temperatures in the creek. NMFS also requests that permanent staff gauges be installed at the POD to allow monitoring and to facilitate the release of bypass flows. Alternatively, Mr. Cole may perform a comprehensive biological and hydrological study to identify an alternate biologically based bypass flow.
5. Mr. Cole should provide DFW with access to the POD and all places of use for the purposes of conducting routine and random monitoring and compliance inspections.

On November 20, 2001, DFW issued a letter in response to the Division's ongoing complaint investigation into Application 29449. DFW reiterated their concern that Stanshaw Creek provides important summer thermal refuge for threatened and endangered Salmonids and that the reduced flow caused by Mr. Cole's diversion adversely impacts that habitat. DFW proposed instituting a year-round bypass flow of 2.5 cfs to be measured at the culverts below Highway 96 to mitigate potential impacts from the diversion on Stanshaw Creek. Additionally, DFW recommends that total flows be bypassed whenever stream flow falls below 2.5 cfs. DFW based the proposed bypass on field reviews conducted at Stanshaw Creek and best professional judgment. DFW also indicated that higher bypass flows maybe required if 2.5 cfs is too low to maintain Salmonid passage at the mouth of Stanshaw Creek.

On October 17, 2001, Division staff Charles Rich and Michael Contreras conducted an inspection of Mr. Cole's diversion facility located on Stanshaw Creek. During the inspection, Division staff met with representatives from NMFS, DFW, Karuk Tribe, Klamath Forest Alliance, Konrad Fischer and James Fischer (downstream property owners) and Mr. and Mrs. Cole, along with their attorney. Prior to the meeting, Division staff took a flow reading of 0.61 cubic feet per second (cfs) downstream of the point-of-diversion. During the meeting, several of the biologists stated that lower Stanshaw Creek provides a thermal refuge for juvenile fish when temperatures in the Klamath reach lethal levels.

On May 23, 2002, Division Staff completed their investigation of the Klamath Forest Alliance complaint against Mr. Cole and issued a letter with the following conclusions to all interested parties:

1. A court of competent jurisdiction would most likely confirm that Mr. Cole's has a valid pre-1914 appropriative right to divert water from Stanshaw Creek.

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2. Evidence has not been submitted to substantiate a pre-1914 right for power purposes, but Application 29449 if approved would cover all diversions for power purposes.
3. With the current irrigation system, most diversions for power purposes during the low-flow periods of the year are incidental to domestic irrigation needs.
4. Prima facie evidence is available to indicate that lower Stanshaw Creek provides habitat for thermal refuge.
5. Bypasses similar to those present during the October 17, 2001 field investigation should provide adequate habitat for thermal refuge purposes.
6. Measuring flows on Stanshaw Creek on a regular basis is not practical. Any requirement to measure minimum bypass flows should not be established unless the requirement acknowledges that a sufficient diversion of water will be allowed into Mr. Cole's ditch to cover both the diversion and bypass requirement with subsequent measurement and release of a bypass back into the stream.

As a result of the conclusions, Division staff recommended that Mr. Cole cease all diversion of water whether pursuant to a pre-1914 appropriative right or post-1914 appropriative right derived from Application 29449 or Small Domestic Registration D030945R, unless sufficient flow is passed below their POD to maintain a flow in lower Stanshaw Creek, below the Highway 96 culverts, similar to that present during the October 17, 2001 field investigation (~0.7 cfs). Division Staff recommended that bypass flow be determined in one of two fashions:

1. If full diversion of the creek into Mr. Cole's ditch is not allowed, the flow should be visually estimated so that sufficient flow would be available to fill a small, hand-dug ditch between the terminal pool of Stanshaw Creek and the Klamath River.
2. If full diversion of the creek into Mr. Cole's ditch is allowed, a device should be installed capable of bypassing sufficient flow to maintain 0.7 cfs in the creek below the Highway 96 culverts before any water is passed down the diversion ditch to Marble Mountain Ranch.

Division Staff recommended that the complaint by the Klamath Forest Alliance be closed and provided 30 days from the date of the letter for interested parties to issue any protests. Klamath Forest Alliances' complaint was closed on August 22, 2002.

On January 7, 2013, the Division issued a letter to Stoel Rives LLP, Mr. Cole's agent, informing them of the cancelation of Application 29449.

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On July 17, 2013 the Division received a complaint alleging that MMR was diverting water in excess of its pre-1914 claim of right, and that Stanshaw Creek was being dewatered in most summers as a result, causing impacts to public trust resources.

In September 2013, the Stanshaw Creek Coho Habitat Enhancement Project was completed by the Mid Klamath Watershed Council. The project restored approximately 4,500 square feet of high quality Coho rearing habitat at the mouth of Stanshaw Creek. Approximately 560 cubic yards of gravel and sediment was removed from the off-channel habitat near the confluence of Stanshaw Creek and the Klamath River. According to the Final Restoration report prepared by the Mid Klamath Watershed Council, the source of the sedimentation was partly attributed to a 2005/2006 flood event when the Marble Mountain Ranch diversion ditch failed which caused erosion.

On September 1, 2014 Lennihan Law in collaboration with Cascade Stream Solutions and the Mid Klamath Watershed Council completed the Marble Mountain Ranch Stanshaw Creek Water Rights Report. The report independently evaluates the water rights for the Coles' Stanshaw Creek diversion and uses of water for the purpose of informing stakeholders and to assist with the physical solution discussions. The report concludes that the Cole's pre-1914 appropriative water right is approximately 1.16 cfs, with varying seasons of use.

On November 17, 2014 Ross Taylor Associates (RTA) preformed a Habitat and Streamflow Assessment on Stanshaw Creek at the request of the Karuk Tribe. While conducting this assessment RTA observed nearly all surface water flow in Stanshaw Creek being diverted in MMR diversion ditch. RTA estimated that 80-90 percent of surface water flow was being diverted.

On December 17, 2014 Taro Murano and Skyler Anderson, Division staff met with Mr. Cole for a facility tour to document the diversion facility, diversion facility operation, conveyance system, place of use and water discharge to Irving Creek. After the MMR facility tour, Division staff attended a Stanshaw Creek Water Conservation stakeholders meeting in Orleans, CA. Stakeholders included DFW, NOAA, US Forest Service, Mid Klamath Watershed Council, Karuk Tribe representatives, the Coles and downstream land owner Konrad Fisher. The meeting provided a forum for stakeholders to ask questions and share opinions regarding the Marble Mountain Ranch Stanshaw Creek Water Rights Report and solicit discussion about the physical solution and the potential process for the physical solution project funding.

On February 12, 2015 Michael Vella and Skyler Anderson, Division staff, conducted a second site inspection to collect flow velocity at three locations in MMR's diversion conveyance system. Flow velocity that was collected can be found in Table 1. Division staff was accompanied by North Coast Regional Water Board Staff Stormer Feiler (Regional Water Board). Stormer Feiler was present to document any potential water quality concerns associated with MMR's diversion facility and conveyance system.

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On February 13, 2015 Division staff received photographic evidence from Toz Soto, Fisheries Program Coordinator for the Karuk Tribe Department of Natural Resources of a Coho salmon and five juvenile steelhead fish kill found in a Coho rearing pond located off channel near the confluence of Stanshaw Creek and the Klamath River in late July 2009 (Photo 1 & 2). Mr. Soto believes that the fish mortality was due to a lack of flow entering the pond that led to a water temperature increase when Stanshaw Creek flows were reduced by MMR's diversion. The Karuk tribe was monitoring temperature in the Stanshaw Creek off channel pond in the summer of 2009, however; the water data logger was buried by sediment in the fall and lost. The basis for Mr. Soto's temperature findings are based on another data logger deployed a half mile upstream along the Klamath River in off channel ponds at Sandy Bar Creek that recorded 22.9 Celsius and 19.2 Celsius on July 30, 2009.

On March 18, 2015, Joey Howard, principle of Cascade Stream Solutions, informed Skyler Anderson that on August 27, 2013 MMR was using diesel generators to provide MMR with electrical power. According to Joey Howard there was insufficient flow in the diversion ditch to operate the hydro-power system and provide irrigation and domestic water for MMR. Under these conditions water should only be diverted for consumptive uses at MMR. If all water was being used for consumptive uses such as domestic and irrigation needs then there wouldn't be discharges from MMR to Irving Creek. Joey Howard informed staff that excess diverted water was leaving the MMR pond and flowing toward Irving Creek. Joey Howard measured flow velocity during this instance and was recorded at 1 cfs.

On April 13, 2015 the Division received instream flow recommendations for the MMR diversion from the NMFS. NMFS's instream flow analysis stated that Juvenile salmonids rely on the cold water refugia provided by off channel habitat and tributaries such as Stanshaw Creek. When the mainstem Klamath River temperature rises and flows recede, juvenile coho seek off-channel cooler habitat where they may remain throughout the warm season. The off-channel pond at the Stanshaw Creek confluence with the Klamath River provides important rearing habitat for juvenile coho, as well as for chinook and steelhead (Tauzer, 2015).

On April 27, 2015 DFW informed the Division that in 2009 DFW recommended a minimum in stream flow of 2.5 cfs at the highway 96 bridge. DFW feels that at this point in time there is no reason to rescind or change that recommendation.

Stanshaw Creek is a tributary to the Klamath River with a drainage area of approximately four square miles. Stanshaw Creek has a short but significant section of Coho habitat below the Hwy 96 crossing. An off-channel pond is located just upstream of the Stanshaw Creek mouth. This pool is filled by cold Stanshaw Creek water when high flows in the Klamath subside, creating a high quality summer and winter rearing habitat for non-natal juvenile Coho salmon migrating down the Klamath River corridor. NOAA fisheries (NMFS), the Department of Fish and Wildlife (DFW), and the Karuk Tribe, assert that MMR's water diversion adversely impacts Coho salmon in violation of the federal ESA and other laws (Lennihan, 2014, p. 20). While both Juvenile Coho salmon and steelhead have been documented in Stanshaw Creek, the creek's

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moderate channel slope and relative lack of suitable-sized substrate diminishes its importance as a significant spawning stream within the Klamath River watershed. However, the off-channel pond located at Stanshaw Creek's confluence with the Klamath River provides excellent habitat for both summer and winter rearing of non-natal Coho salmon (Taylor, 2015).

INSPECTION:

Skyler Anderson conducted a site inspection at MMR on December 17, 2014 and February 12, 2015 in response to the July 2013 complaint. Division staff has also reviewed the file and records provided above, including the September, 2014, water rights report prepared by Martha Lennihan and Cascade Creek Solutions.

MMR's POD is located approximately three-quarters of a mile upstream of the Highway 96 crossing. The POD is located on United States Forest Service property. The POD consists of a handmade rock wing diversion dam located on the east creek bank of the Stanshaw Creek channel (Photo 3). Water is gravity diverted at the POD and conveyed approximately a half-mile in a partially lined and partially unlined diversion ditch to a juncture where water is routed to the water treatment facility and to the penstock for hydroelectric power generation.

The POD lacks a permanent control structure that would regulate the amount of water diverted from Stanshaw Creek and requires regular maintenance by augmenting the placement of rocks in the stream channel. MMR has constructed two outfall structures located within the diversion ditch downstream from the POD to relieve the diversion ditch from excess amounts of water that would overflow the diversion ditch that has little to no free board space.

The excess water from the two outfalls discharges water back to Stanshaw Creek. The first of two outfall structures is located approximately 50-feet downstream of the POD (Photo 4). The first outfall structure is operated in a similar manner as the POD and requires regular augmentation flash board risers and rocks in the diversion ditch to manipulate the amount of water conveyed by the diversion ditch. The second outfall structure is located approximately 300-feet downstream of the POD and occurs just before the diversion ditch narrows from approximately 60 inches in width to approximately 30 inches in width (Photo 5). Flash boards are used in the second outflow structure to manipulate the amount of excess water discharged from the diversion ditch. Water from the second outfall structure is discharged via a shotgunned culvert into a small unnamed tributary to Stanshaw Creek, then to Stanshaw Creek. The culvert appears to have caused a large erosion feature in the downslope channel (Photo 6 & 7).

The diversion ditch is located on a steep heavily treed hill slope. The diversion ditch resembles a narrow road cut on a steep hillside. The diversion ditch requires regular maintenance due to sediment deposition, cut bank slumps and landslides. The hillside above the ditch on the inner berm is prone to slumping in to the diversion ditch (Photo 8) due to the cut bank and removal of the slope base. Slope loading occurs during heavy rainfall events which increase the mass of

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materials up-slope, resulting in slumps into the ditch (Photo 9). Division staff Skyler Anderson noted limited free board space along the majority of the diversion ditch (Photo 10). The elevation of the outer berm crest of the diversion ditch varies greatly. These variations can be attributed to flows in the diversion ditch historically overtopping the low berm crest areas, resulting in hill slope sloughing and landslides (Photo 11).

During the February 12, 2015 inspection Regional Water Board staff, Stormer Feiler walked the entire three quarters of a mile diversion ditch. Stormer Feiler identified 19 areas on this length where the diversion ditch has the potential to fail or has failed delivering the entire diversion onto native slopes causing the erosion of new stream channels delivering sediment towards or into Stanshaw Creek. For a more detailed description and corrective actions please see the North Coast Regional Water Quality Control Boards Notice of Violation.

Water from the diversion ditch is routed via gravity to MMR's (5) 3,000 gallon plastic water storage containers (Photos 13 & 14) via gravity by a two inch PVC pipe (Photo 12). Water conveyed to the water storage containers are MMR's domestic water supply that serves residents that live on the property and guests that stay at MMR. MMR treats its' domestic water by using slow sand filter technology and chlorination (Photo 15). This water serves a domestic use for residents and guests staying at MMR in addition to limited irrigation.

The diversion ditch conveyance system continues below MMR's water treatment tanks and conveys water to a 14-inch diameter penstock pipe that is approximately 450-feet long with an approximate vertical distance of 200-feet (Photo 16). Water that is conveyed through the penstock is used for hydropower and it is connect to MMR's irrigation system. The power generation facility consists of an 18'' pelton wheel that is powered by two pressurized jets (Photo 17). Water flowing through the hydropower facility is then discharged into a diversion ditch that flows to MMR's pond (Photo 18). The pond serves as a recreational feature and for fire protection (Photo 19).

Water used for irrigation and fire protection is conveyed through a short run of nine inch diameter steel pipe to a junction that reduces to a four inch diameter PVC pipe. The PVC pipe extends from the junction at the power plant to sprinklers located throughout the property.

Water discharged from the hydropower facility is not re-used for irrigation or domestic needs but rather flows into a ditch below the pond and continues across the property for approximately 850-feet to the south before water drops off a head cut to a ravine and into a tributary to Irving Creek. At the time of the inspection, it was calculated that approximately 1.23 cfs was flowing through the hydropower facility and discharged into Irving Creek. Irving Creek is a tributary to the Klamath River located approximately 1 mile downstream of the Stanshaw Creek and the Klamath River confluence.

During the February 12, 2014 inspection Division staff, Skyler Anderson took three flow measurements at three locations within MMR's diversion ditch: 1) in the diversion ditch

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approximately 50-feet below the POD on Stanshaw Creek and below the first outfall structure; 2) in the diversion ditch approximately 100-feet downstream of the 2'' domestic water line intake; and 3) in the diversion ditch below the recreational pond and before flow is discharged to Irving Creek (Photo 20). Division staff estimates the ditch capacity is approximately 3-4 cfs. When the ditch is flowing at capacity Flow data and latitude and longitude coordinates for the data collections are summarized below in Table 1.

Table 1:

<u>Location</u>	<u>Lat/Long</u>	<u>Flow in CFS</u>
1. Downstream of the POD	41.480845, -123.498259	2.23 C.F.S.
2. Downstream of the domestic intake	41.474430, -123.503532	1.63 C.F.S.
3. Downstream of the pond outlet	41.471788, -123.499589	1.23 C.F.S.

Location # 1 is located within the MMR's diversion ditch just below the POD on Stanshaw Creek and Division staff, Skyler Anderson recorded a flow rate 2.23 cfs. Location # 2 is located within the diversion ditch 100-feet downstream of the 2-inch domestic water line intake and approximately 50-feet upstream of the terminus into the penstock. Division staff, Skyler Anderson recorded a rate of flow of 1.63 cfs at Location # 2. Division staff, Skyler Anderson calculated a ditch loss of approximately 0.6 cfs by subtracting the flow taken at Location # 2 from Location # 1. The rate of flow at Location # 3 was measured at 1.23 cfs and is located within the diversion ditch just below the pond. Flow was recorded at this location to determine the MMR's consumptive water demand for domestic and irrigation uses. MMR's domestic and irrigation water demand was calculated by subtracting Location #3 from Location # 2. At the time of the inspection, MMR's domestic and irrigation demand is approximately 0.4 cfs.

FINDINGS:

Based on the review of the documents described above and the site inspections, Division staff Skyler Anderson identified three areas of concern relating to MMR diversions: 1) diversions potentially in excess of the claimed pre-1914 appropriative water right; 2) potential waste and unreasonable use, or waste and unreasonable method of diversion; and 3) potential public trust impacts caused by MMR diversions.

The State Water Board has authority to investigate diversions made under pre-1914 appropriative water right claims to determine whether such diversions are within the scope of the claimed right. Diversions in excess of a pre-1914 appropriative right may be unauthorized diversions subject to enforcement action before the Board.

Pursuant to the California Constitution, Article 10, section 2 and California Water Code section 100, the right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water.

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Finally, the State Water Board also has the authority to protect public trust resources, such as fisheries, wildlife, aesthetics, and navigation. This investigation is being conducted as part of the State Water Board's continuing authority to protect public trust resources, including the threatened Coho salmon and steelhead fisheries.

The Division finds that although MMR may be diverting within the scope of its pre-1914 water right, MMR's diversion constitutes a waste and unreasonable use of water, an unreasonable method of diversion of water, and potentially harms public trust resources.

Scope of the Pre-1914 Water Right

MMR's claimed pre-1914 appropriative water right originates from an 1867 claim by Mr. E. Stanshaw for six hundred (600) miner's inches, or 15 cfs, to be used for mining, domestic and irrigation purposes on a large patented parcel that includes the present-day MMR property. MMR now claims only 3 cfs under the pre-1914 appropriative right, based on the estimated capacity of the existing ditch. The July, 2013, complaint received by the Division alleges that MMR diverts water in excess of the pre-1914 appropriative right.

The scope of the pre-1914 appropriative right available to MMR has been the subject of much contention, and at least two prior Division investigations. In a letter dated September 15, 1998, the Division concluded that the upper limit of the pre-1914 right available to MMR is 0.49 cfs, and could be as low as 0.11 cfs. In 2002, following a more detailed investigation, including review of evidence submitted by the legal counsel for the Coles, the Division concluded that a court of competent jurisdiction would most likely confirm that the Coles have a valid pre-1914 appropriative right for the full domestic and irrigation purposes at MMR, although there was no evidence to substantiate a pre-1914 appropriative right for power generation.

As noted above, Lennihan Law and Cascade Stream Solutions prepared a detailed report on the Marble Mountain Ranch Stanshaw Creek water rights in 2014. This report was prepared at the request of the Mid Klamath Watershed Council, and is an independent and neutral evaluation of the MMR water rights based on documents from several sources, including the Division of Water Rights. Various parties, including legal counsel for the Coles, and Konrad Fisher, commented on the draft report prior to finalization. Legal counsel for Mr. Fisher submitted additional comments to the Division in February, 2015.

The Division finds the Lennihan/Cascade Stream Solutions report to be an exhaustive and authoritative review of the available record. With the exceptions noted below, the Division incorporates the analysis and findings in Lennihan/Cascade Stream Solutions report here. Specifically, the Division agrees that there is sufficient evidence to allow a reasonable decision maker to conclude that power generation may have been initiated before 1914.

However, the Division disagrees with the Lennihan/Cascade Stream Solutions conclusion that periods of lower water use by MMR's predecessors since 1914 have resulted in forfeiture of some portion of the pre-1914 water right such that MMR retains only a pre-1914 appropriative

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water right totaling 1.16 cfs (including 0.35 cfs for domestic and irrigation, 0.31 cfs for power generation, and reasonable losses of approximately 0.5 cfs). The Lennihan/Cascade Stream Solutions report fails to incorporate the recent appellate court decision in *Millview County Water District v. State Water Resources Control Board* (2014) 229 Cal.App.4th 879. The *Millview* court held that forfeiture of a water right claim only occurs when a claimant's use of less than the full appropriation lasts at least five years, and at least some of that period must be in the face of a conflicting claim, such as an actual appropriation or an application to appropriate. (229 Cal.App.4th at 903.) Although instream public trust resources may constitute a conflicting claim (see, e.g., *Millview*, 229 Cal.App.4th at 904-905), the law is sufficiently unsettled, and the evidence sufficiently undeveloped, to prevent the Division from assuming that public trust resources constitute a conflicting claim during any potential forfeiture period here.

There is no evidence in the record to suggest that there were any conflicting actual appropriations or applications during any of the forfeiture periods found in the Lennihan/Cascade Stream Solutions report (i.e., 1920s through around the mid-1950s). Similarly, although Konrad Fisher has more recently alleged a conflicting claim, there is no evidence of a decrease in the MMR diversion and use during that time.

Given the unsettled legal issues surrounding forfeiture, the State Water Board or a reviewing court could reasonably conclude that the MMR pre-1914 water right may be up to the full capacity of the ditch, which MMR claims to be 3 cfs. On that basis, the Division concludes that MMR's diversions do not appear to be in excess of its claimed pre-1914 water right.

The Division notes that Konrad Fisher and his legal counsel have submitted comments alleging that Mr. Fisher and the Old Man River Trust (OMRT), of which Mr. Fisher is a beneficiary, may claim some portion of the original pre-1914 water right because the OMRT property is also located on the Stanshaw property subject to the 1867 claim. Mr. Fisher also claims that MMR diversions interfere with his riparian rights. For purposes of determining whether MMR may be diverting in excess of its pre-1914 right, it is not necessary to determine if Mr. Fisher or OMRT retain any portion of the original Stanshaw pre-1914 water right. In any event, the State Water Board is not the proper venue to resolve disputes between pre-1914 water right claimants, or between pre-1914 claimants and riparian claimants.

Waste and Unreasonable Use of Water:

The Division finds that MMR's diversion may constitute a waste of water resources. Division staff observed a number of leaks in MMR's drinking water tanks (Photo 12 & 13). Division staff was not able to quantify the amount of water leaking from two of the three tanks used in the sand filtration process, although the leaks appear to be substantial. Quantities of water lost to leaks in the domestic water treatment plant system and not put to beneficial use constitute a waste.

Moreover, during the low-flow summer months, there are times when MMR cannot divert enough water to operate the hydro-power generation facility. During these periods, MMR relies on diesel generators for power generation. However, MMR does not restrict its diversion during

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these periods to what is needed for domestic and irrigation needs only (approximately 0.35 cfs plus reasonable conveyance losses of approximately 0.5 cfs). The excess water diverted and not consumptively used is discharged to Irving Creek. Without a control mechanism on the POD, MMR lacks the ability to limit its diversion from Stanshaw Creek to an amount that can be beneficially used. All water that is diverted from Stanshaw Creek that is not consumptively used or put to beneficial use constitutes a waste and/or an unreasonable use of water.

Unreasonable Method of Diversion of Water

Division staff find that MMR's on-stream POD and the conveyance ditch constitute an unreasonable method of diversion of water based on the absence of a control mechanism to regulate the amount of water diverted at the POD; the absence of a fish screen to prevent fish entrainment and mortality; the amount of water loss that occurs from the POD to the place of use; and the potential water quality and public trust impacts from ditch failures.

During the Division's facility inspections on December 17, 2014 and on February 12, 2015, Division staff observed that the facility's POD intake did not have a control mechanism to manage flow through the open ditch system. Without a control mechanism, such as a diversion gate that has the ability to restrict flow through the POD, water may be diverted in excess of the diversion ditch capacity and in excess of what is reasonably required for beneficial use.

During winter months when flows in Stanshaw Creek are the highest water may be diverted in excess of the of the diversion ditch capacity which causes water to overtop the diversion ditch and results in slumps and landslides. In addition, the continuous deposition of sediment from Stanshaw Creek in the ditch reduces the ditch capacity and increases the risk of water overtopping the low berm areas. Similarly, when material from up-slope slumps into the ditch, it can result in partially damming or completely damming the ditch and diverting stream flow out of the ditch and downhill.

North Coast Regional Water Board staff observed and documented evidence of ditch failures at nineteen (19) locations along the diversion ditch downstream from the POD, as well as in the discharge channel leading to Irving Creek. Regional Water Board staff evaluated MMR's diversion facility for the potential threat to water quality and found that the ditch is a threat to water quality. Division staff concurs in these findings. For a more detailed description and corrective actions please see the North Coast Regional Water Quality Control Boards Notice of Violation. Due to the unstable nature of the diversion ditch that are described above, the ditch is prone to failing and overtopping. Quantities of water that have been historically lost to MMR's diversion ditch failures and overtopping the diversion ditch constitute a threat of unauthorized discharge to surface waters of the state.

Furthermore, Division staff find that the method of diversion is unreasonable based on the absence of a fish screen at the POD to prevent fish entrainment. MMR's POD intake does not have the ability to prevent fish from becoming entrained. Fish that become entrained in MMR's

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diversion ditch are killed if the fish are caught in the faster moving water that enters the penstock that conveys water to the hydropower turbines.

Division staff also calculated approximately twenty-seven percent of water that is diverted at the Stanshaw Creek POD is lost in the conveyance system and seventeen percent of water diverted is consumptively used. Fifty-six percent of the water diverted is non-consumptively used for hydroelectric power generation and is discharged to Irving Creek.

It is reasonable to assume that MMR is diverting more water than necessary for the uses in order to compensate for the loss of water early in the conveyance system. Quantities of water resources diverted in excess of amounts that are beneficially used and the operation of a diversion facility that is prone to leaks, loss of water and failure is an unreasonable method of diversion of water.

Harm to Public Trust Resources

The National Marine Fisheries Service (NMFS) provided the Division on April 13, 2015 instream flow recommendations for Stanshaw Creek (Tauzer, 2015). Based on the NMFS flow recommendations and MMR's diversion facility operation, the Division finds that MMR's diversion may potentially impact public trust resources.

NMFS Stanshaw Creek flow recommendations specify flows need to be conserved on dry years to maximize the water quality and food supply to the off-channel pond and cold water seep to the Klamath. Because of the thermal sensitivity and connectivity needed throughout the summer, the diversion should be limited to zero or a small fraction of the flow as the flows recede and water temperatures rise. NMFS recommends that no more than 10% of the estimated unimpaired flow be diverted from Stanshaw Creek from May 15 through October 31 regardless of the water year type and that no diversion be allowed below 1.5 cfs to ensure water quality and food supply is maintained for the over-summering coho in the pond (Tauzer, 2015).

The lower reach of Stanshaw Creek provides rearing habitat for adults and juvenile coho in the November through April period as well as important macro-invertebrate production. Hydraulic analysis based on five cross sections surveyed in 2002 above the Highway 96 culvert, show an inflection in the water surface width as the flows drop below about 1.5 to 2.0 cfs. The inflection on the curve represents the low flow channel and the point where the wetted channel width drops off quickly with flow. It is important to maintain this base flow to protect macro-invertebrate production and to provide a minimum level of edge water rearing area. Two cubic feet per second bypass flow should protect the edge water during the November 1 – May 14 period when flows drop to these low levels.

NMFS recommends that MMR implement the bypass flows in addition to returning any hydroelectric portion of water to Stanshaw Creek to avoid unnecessary public trust resource impacts.

CDFW recommends a minimum in stream flow of 2.5 cfs at the Highway 96 Bridge.

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NMFS, the Department of Fish and Wildlife (DFW), and the Karuk Tribe, assert that the diversions of water by MMR are adversely impacting Coho salmon in violation of the federal ESA and other laws (Lennihan, 2014).

CORRECTIVE ACTIONS:

The Division finds that the Coles must take the following corrective actions to prevent the waste and unreasonable use of water, unreasonable method of diversion of water, and harm to public trust resources.

1. Install a water diversion control mechanism at the POD. When Stanshaw Creek is under high flow conditions MMR will have the ability to restrict the amount of water entering the diversion ditch, limiting the risk of ditch failures and diverted water from overtopping the diversion ditch. When flow in Stanshaw Creek is insufficient to meet all of MMR's consumptive water demands, a control structure will limit the amount of water diverted to an amount that can be beneficially used. Provide a time schedule for installation of a water diversion control mechanism at your POD and photographic evidence that documents installation of the control mechanism, to be reviewed by the Division. MMR may need to consult with the Regional Water Quality Control Board concerning a 401 Certification Permit and DFW regarding a 1600 Lake and Streambed Alteration Permit to install a water diversion control mechanism.
2. Return diverted water to Stanshaw Creek that is not put to beneficial use or water put to non-consumptive use. The lack of flow that remains in Stanshaw Creek due to your diversion and the excess water that is discharged to Irving Creek is waste and unreasonable use of water based on impacts to public trust resources. Provide a time schedule that identifies a date for installation of a conveyance system that returns water back to Stanshaw Creek and photographic evidence of installation, to be reviewed by the Division. MMR may need to consult with the Regional Water Quality Control Board concerning a 401 certification permit and DFW regarding a 1600 lake and streambed alteration agreement for to install a water diversion control mechanism.
3. Fix all leaks associated with the MMR water treatment system. Provide photographic evidence to the Division that all leaks were repaired and confirmation that additional leaks are not present. The Coles must provide a time schedule that identifies a date for completion of the water treatment system repairs, to be reviewed by the Division.
4. Water diverted from the POD must be piped or conveyed in a lined ditch to prevent unnecessary ditch loss. Conveyance of water in a lined channel or a pipe will prevent, ditch failures, overtopping of berm crest, erosion of conveyance system and loss of water through seepage. Piping the diversion will help to prevent the unauthorized discharge of water and sediment to surface waters of the state and sedimentation impacts to the off

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channel pond that is coho salmon and steelhead rearing habitat and reduce the chance of catastrophic ditch failures. The Coles must submit a time schedule to the State Water Board that identifies a date for completion of the diversion system modifications, or provide alternatives to prevent unnecessary water loss, to be reviewed by the Division.

5. Immediately implement the NMFS and DFW by-pass flows and cease impacts to public trust resources and habitat.
6. The Coles must consult with CDFW to determine whether a fish screen to prevent fish entrainment should be installed or whether an alternative method or POD design could be modified to prevent fish entrainment.

Enclosures: NMFS instream flow recommendations for Marble Mountain Ranch Diversion

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Photo 1 - Dead Coho salmon found in near confluence of Stanshaw Creek and Klamath river in the off channel pond that is supplied water from Stanshaw Creek.



Photo 2 - Dead Coho salmon found in near confluence of Stanshaw Creek and Klamath river in the off channel pond that is supplied water from Stanshaw Creek.

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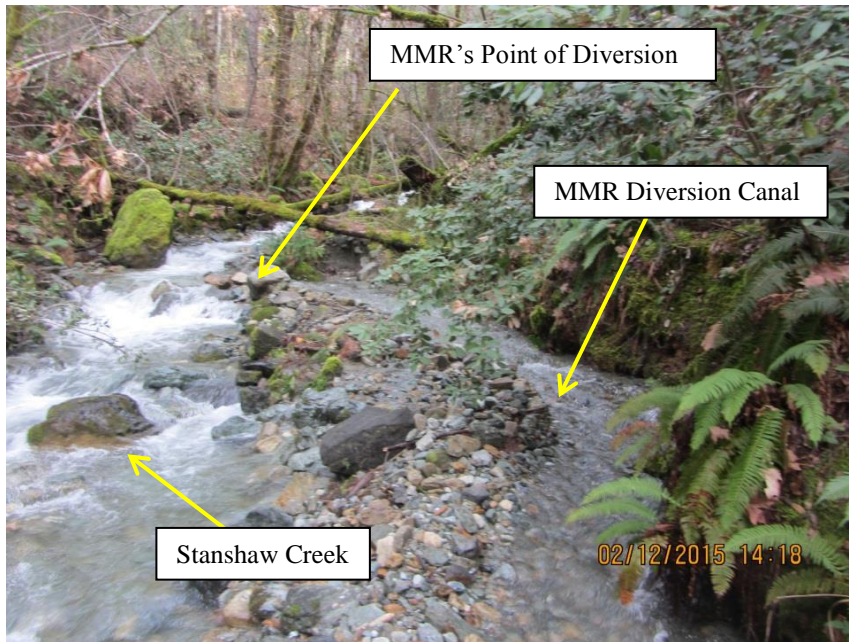


Photo 3 – MMR POD on Stanshaw Creek



Photo 4 – Outfall structure located 50-feet downstream of POD.

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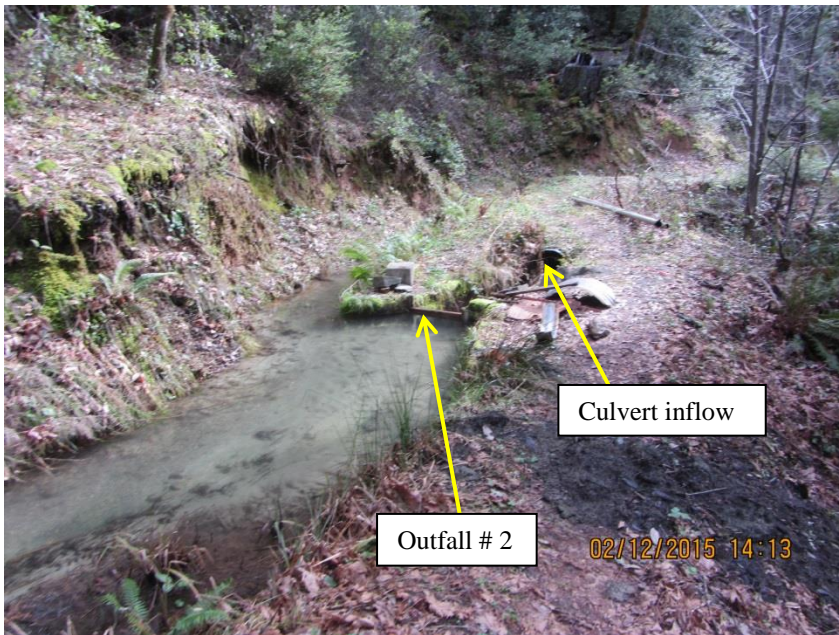


Photo 5 – Second outfall structure in diversion ditch.



Photo 6 – This photo shows the outflow from Outfall # 2 on the diversion ditch.

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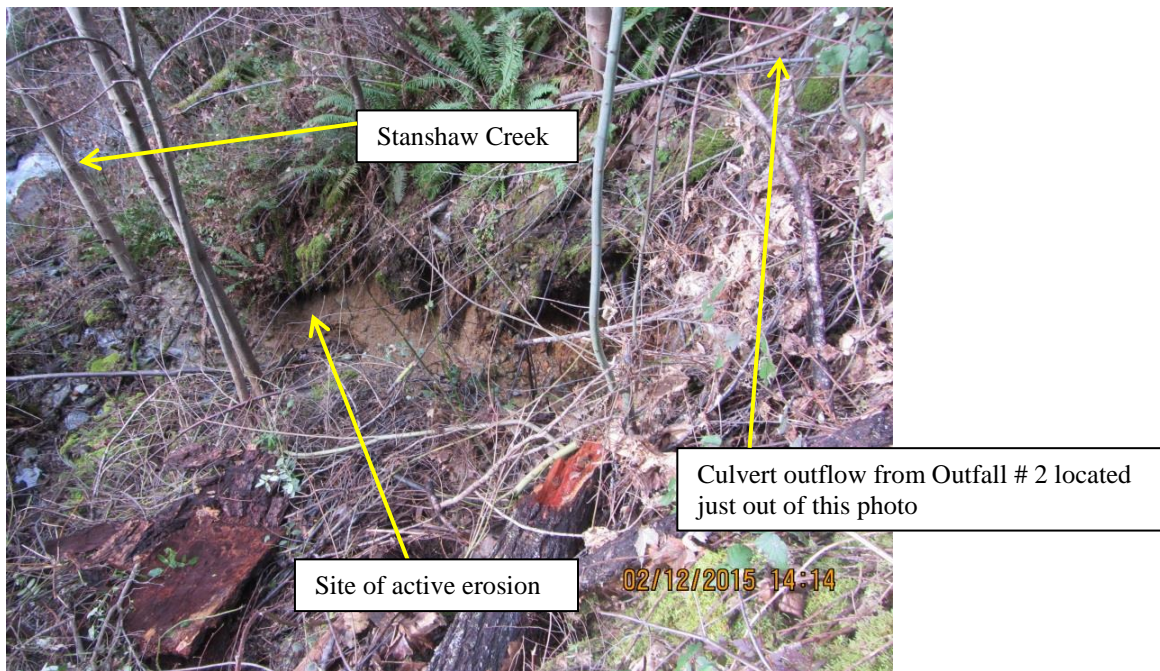


Photo 7 – Large erosion feature caused by outfall # 2.



Photo 8 – Area of active cut bank slumping.

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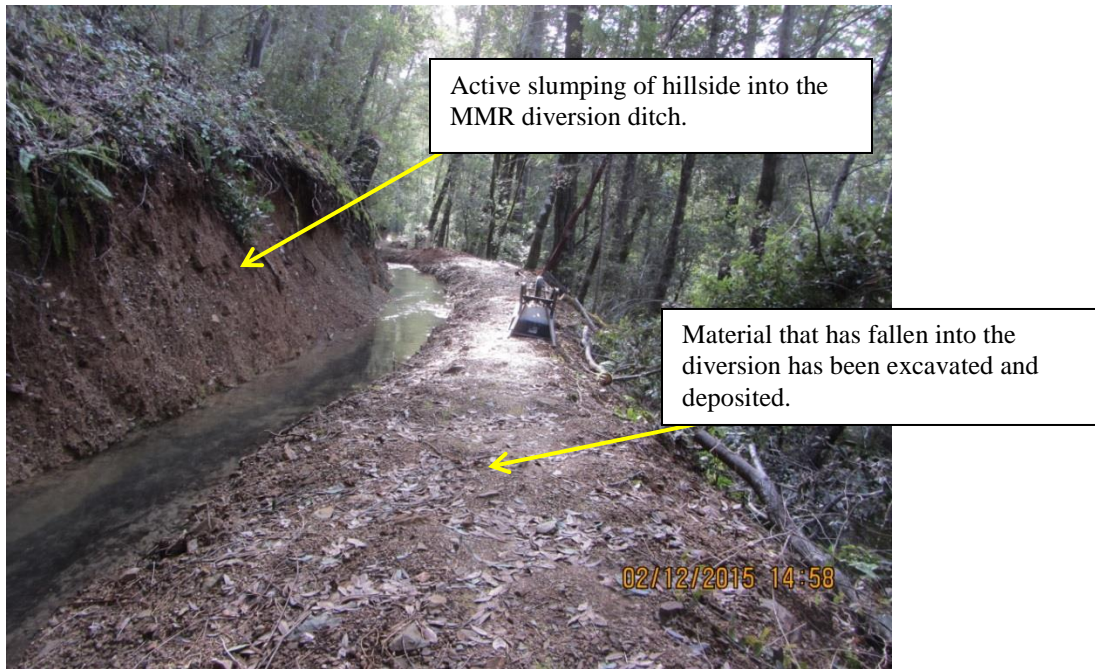


Photo 9 – Area of active slumping into MMR Diversion ditch.



Photo 10 – limited free board space within the ditch.

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Photo 11 – Large landslide caused by cut bank slump damming ditch and redirecting diverted flow downhill..



Photo 12 – Intake for water treatment facility.

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Photo 13 – (3) 3,000 gallon storage tanks.



Photo 14 – leaks coming from one of the 3,000 gallon water tanks used for filtration.

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Photo 15 – (2) 3,000 gallon storage tanks.



Photo 16 – 14-inch diameter penstock pipe.

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Photo 17 - 18- inch Pelton Wheel



Photo 18 – None consumptive water used for hydroelectric power flowing towards the Coles' pond.

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Photo 19- Pond



Photo 20- Discharge to Irving Creek.

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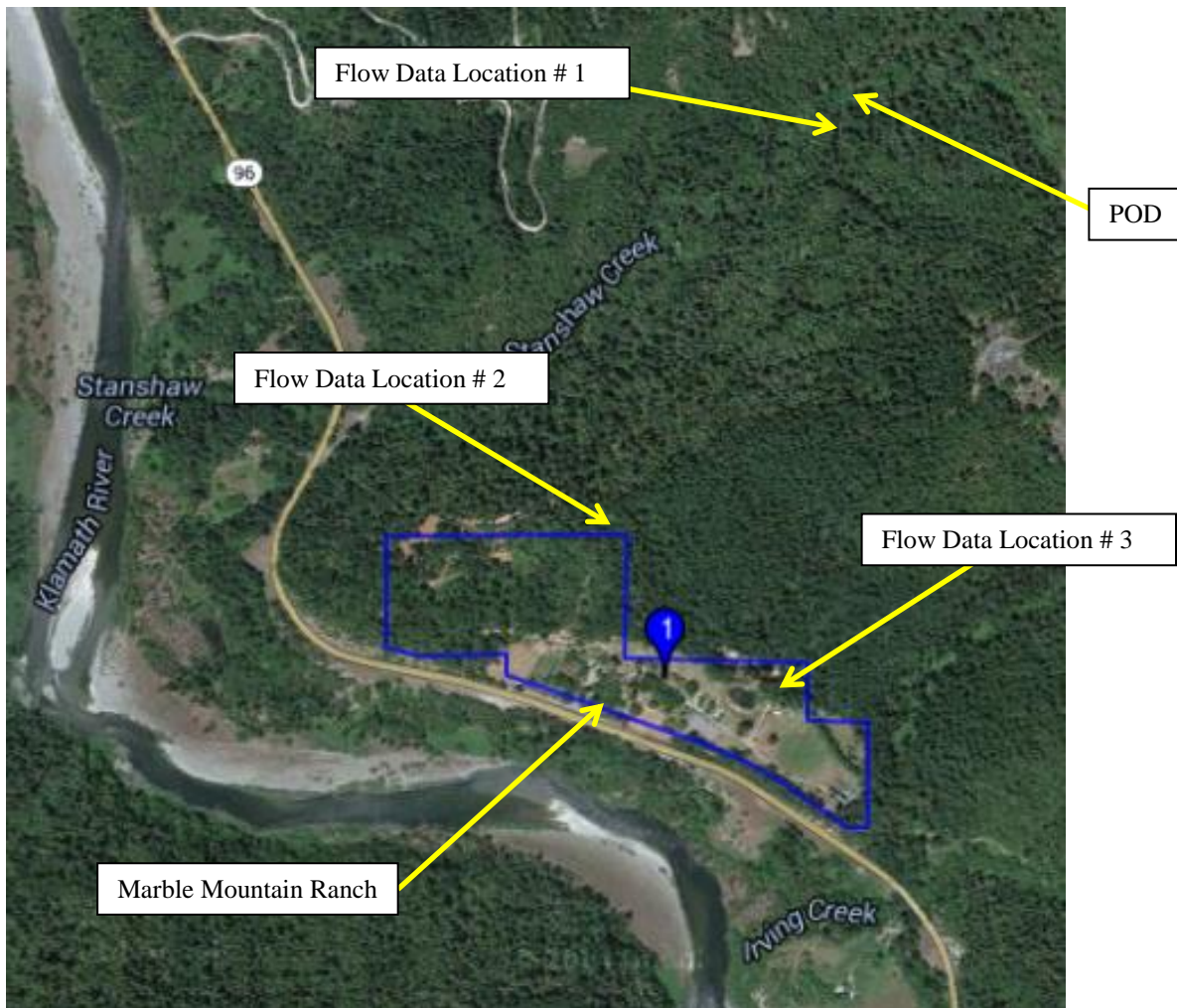


Photo 21 – Aerial photo identifying locations where flow velocity was recorded.

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References:

Asarian, E. K., Jacob PhD. (2013). Synthesis of Continuous Water Quality Data for the Lower and Middle Klamath River, 2001-2011, Klamath Basin Tribal Water Quality Group: 50.

Bartholow, J. M. (2005). "Recent water temperature trends in the lower Klamath River, California." North American Journal of Fisheries Management **25**(1): 152-162.

Belchick, M. (1997). Cool Water Areas of the Klamath River. Klamath, CA, Yurok Tribal Fisheries Program: 13.

Beschta, R. L., R. E. Bilby, et al. (1987). "Stream temperature and aquatic habitat: Fisheries and forestry interactions." Streamside Management: Forestry and Fishery Interactions **57**: 191-232.

Brett, J. R. (1952). "Temperature tolerance in young Pacific salmon, genus *Oncorhynchus*." Journal Fishery Resource Board of Canada **9**(6): 265-323.

Coutant, C. C. (1977). "Compilation of Temperature Preference Data." Journal of the Fisheries Research Board of Canada **34**(5): 739-745.

Hallett, S. L., R. A. Ray, et al. (2012). "Density of the Waterborne Parasite *Ceratomyxa shasta* and Its Biological Effects on Salmon." Applied and Environmental Microbiology **78**(10): 3724-3731.

Lennihan Law, Mid Klamath Watershed Council and Cascade Stream Solutions 2014. Marble Mountain Ranch Stanshaw Creek Water Rights Report.

Ray, R. A., R. A. Holt, et al. (2012). "Relationship between Temperature and *Ceratomyxa Shasta*-Induced Mortality in Klamath River Salmonids." Journal of Parasitology **98**(3): 520-526.

Reiser, D. W. and T. C. Bjornn (1979). Influence of Forest and rangeland management on anadromous fish habitat in the Western United States and Canada. Habitat Requirements of Anadromous Salmonids. W. R. Meehan. Idaho Cooperative Fishery Research Unit, University of Idaho, Moscow. **General Technical Report**.

Taylor, R. (2015). Findings report for Stanshaw Creek habitat and instream flow assessment: 10.

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Witmore, S. K. (2014). Seasonal growth, retention, and movement of juvenile coho salmon in natural and constructed habitats of the mid-Klamath River. Natural Resources: Fisheries. Humboldt State University Masters Theses and Projects, Humboldt State University. **M.S.:** 75.

North Coast Regional Water Quality Control Board

December 3, 2015

Douglas and Heidi Cole
92520 Highway 96
Somes Bar, CA 95568

Dear Mr. and Mrs. Cole:

Subject: Notice of Violations Associated with the Stanshaw Ditch, 92520 Highway 96, Somes Bar

File(s): Stanshaw Ditch, Marble Mountain Ranch - Siskiyou County APN 026-290-200 - WDID No. 1A15024NSI

Please be advised that you are in violation of the federal Clean Water Act, the California Water Code, and the Water Quality Control Plan for the North Coast Region (Basin Plan), due to unregulated discharges of waste in waters of the state and/or of the United States associated with maintenance, operation, and chronic failures of the Stanshaw Ditch.

Background

At the request of staff of the State Water Resources Control Board Division of Water Rights (Division), on February 12, 2015, North Coast Regional Water Quality Control Board (Regional Water Board) staff Stormer Feiler, Environmental Scientist, accompanied Division staff Skyler Anderson and Michael Vella on an inspection of the Stanshaw Creek diversion. The diversion originates on Stanshaw Creek and discharges to Irving Creek, both tributaries to the Klamath River, near Somes Bar. Diverted water is used for electrical power generation with a pelton wheel and for domestic water supply and irrigation on the Marble Mountain Ranch.

The diversion has reportedly been in place since the 1800s, supplying a variety of uses to landowners over the years. We understand that the Division is presently reviewing various aspects of the diversion in response to complaints that allege public trust impacts and unauthorized diversion in excess of pre-1914 water rights. The objective of the Regional Water Board's inspection was to evaluate the existing and potential impacts to water quality and beneficial uses associated with operation of the diversion.

As documented in Mr. Feiler's inspection report (attached), he observed 19 points in the upper ditch where the outboard berm has been or may be compromised by either erosion of the berm, saturation of the berm, or sediment loading to the ditch from cut bank failures. In addition, Mr. Feiler observed evidence of significant active erosion occurring at the downstream discharge point to Irving Creek, representing a chronic source of sediment delivery into Irving Creek and, thence, to the Klamath River. All features observed are controllable sources of sediment and appear to represent or comprise violations or threatened violations of various water quality requirements, as summarized below.

Applicable Requirements and Alleged Violations

Clean Water Act Violations

Section 301(a) of the Clean Water Act provides that subject to certain exceptions, "the discharge of any pollutant by any person shall be unlawful." 33 U.S.C. § 1311(a). One of the exceptions allowed for under the Clean Water Act is the discharge from a point source as authorized by a permit granted pursuant to the National Pollutant Discharge Elimination System (NPDES) under § 402 of the Clean Water Act. 33 U.S.C. § 1342. The Clean Water Act prohibits the discharge of any pollutant from a point source into waters of the United States without an NPDES permit. Evidence observed by staff along the upper ditch indicated that the ditch had overtopped or caused the berm to fail at several locations. While staff did not follow the erosion path below each failure point to confirm that flows reached downstream surface waters, staff did observe a number of points where the flows reached Stanshaw Creek. In each case, such a flow, carrying sediment and/or other mobilized materials and delivering them into a surface water represents a point source discharge of waste, requiring an NPDES permit.

Water Code Violations

Water Code section 13376 requires any person discharging or proposing to discharge pollutants to waters of the United States to file a report of the discharge. Each case where the ditch has failed and flows have discharged into Stanshaw Creek or the Klamath River, represents a violation of Water Code section 13376 associated with the discharge of sediment-laden water into waters of the state and the United States without first filing a report of discharge. In addition, the chronic discharge of sediment into Irving Creek associated with the erosion feature at the ditch outfall represents an ongoing violation, and a discharge of waste without a report of waste discharge and/or waste discharge requirements.

All earthen fill material discharged into Stanshaw Creek, Irving Creek, and/or the Klamath River as a result of operation, maintenance, and/or failure of the Stanshaw Ditch subjects you to administrative civil liability and orders for cleanup and abatement.

Penalties for water code violations are based upon a per gallon and per day basis, and can reach \$10,000/day per violation and \$10/gallon for discharge violations.

Basin Plan Violations

The Water Quality Control Plan for the North Coast Region (Basin Plan) contains specific discharge prohibitions to protect the beneficial uses. The Basin Plan's Action Plan for Logging, Construction and Associated Activities (Action Plan) includes two discharge prohibitions (Page 4-29.00 of the 2011 Basin Plan):

- i. **Prohibition 1** - "The discharge of soil, silt, bark, slash, sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature into any stream or watercourse in the basin in quantities deleterious to fish, wildlife, or other beneficial uses is prohibited."
- ii. **Prohibition 2** - "The placing or disposal of soil, silt, bark, slash, sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature at locations where such material could pass into any stream or watercourse in the basin in quantities which could be deleterious to fish, wildlife, or other beneficial uses is prohibited."

Evidence observed by staff during the inspection suggests that flow in the ditch chronically overtop portions of the ditch berm and, at times, cause the ditch berm to fail, and potentially transport that berm material into Stanshaw Creek or the Klamath River. Ditch maintenance/repair by rebuilding or reinforcing the berm with additional material can cause or contribute to discharges into watercourses in the event of a ditch failure.

Recommended Actions

We recognize that operation of the ditch and the associated issues have been occurring over the course of many years, and that a number of parties and agencies including the Division have been in continued discussions with you about alternatives to improve the efficiency of your water delivery system and to reduce the impacts and threatened impacts to water resources, including water quality and beneficial uses of Stanshaw and Irving creeks and the Klamath River. Whether you continue to operate the Stanshaw Ditch in its present form or make improvements to the system that allow you to decommission the ditch, it will be necessary for you to address the water quality violations we have identified and to take appropriate measures to correct features that represent chronic discharges or threatened discharges of waste to receiving waters. The enclosed water quality inspection report identifies features of concern and provides recommendations to address those.

The Regional Water Board is coordinating closely with the Division on this matter, and providing its inspection report and this Notice together with an inspection report prepared by the Division that specifies corrective action measures that you shall take in order to

prevent the waste and unreasonable use of water, unreasonable method of diversion of water, and harm to public trust resources. We would prefer that corrective actions you take in response to the direction from the Division consider and incorporate appropriate mitigations and corrective actions to address the Water Quality recommendations as well. Furthermore, we would prefer to continue to coordinate with the Division in working with you to address both of our agencies' concerns. Accordingly, as directed in the transmittal letter accompanying this document package, we expect a response from you and/or your attorney, within 30 days of receiving this Notice, describing your plans to address the collective water resource violations identified by Division staff and Water Quality staff.

Your failure to respond within 30 days and/or to demonstrate your plans to address those violations will lead to additional enforcement action and may cause the Regional Water Board to proceed under its own enforcement authority, including, but not limited to issuing an order directing the development and implementation of corrective actions to address violations or potential violations throughout the ditch system. We have enclosed a draft Cleanup and Abatement Order (Order) for your reference, subject to revision in the event we deem it appropriate to develop and issue such an Order.

We look forward to your response in this matter. If you have any questions, please contact Stormer Feiler of my staff by email at Stormer.Feiler@waterboards.ca.gov, or by phone at (707) 543-7128, or his supervisor, Diana Henriouille, by email at Diana.Henriouille@waterboards.ca.gov, or by phone at (707) 576-2350.

Sincerely,


Digitally signed by Joshua R.
Curtis
Date: 2015.12.03 12:24:53
08'00'
Water Boards

Joshua Curtis, EPM, Chief
Planning, Stewardship, and Compliance Assurance Division

151203_SRF_ef_Marble_Mountain_NOV

Enclosures: Inspection Report
Draft Cleanup and Abatement Order

North Coast Regional Water Quality Control Board

Inspection Report
Stanshaw Creek Diversion
Marble Mountain Ranch
Douglas and Heidi Cole, Landowners
92520 Hwy 96, Somes Bar
Siskiyou County
WDID No. 1A15024NSI

Date: March 9, 2015

To: Diana Henriouille – Senior Water Resource Control Engineer
Shin-Roei Lee – Supervising Water Resource Control Engineer
David Leland – Assistant Executive Officer
Taro Murano – Division of Water Rights, Senior Environmental
Scientist, Public Trust Unit

From: Stormer Feiler, Environmental Scientist

Inspection Date: February 12, 2015

Mailing and
Physical Address: 92520 Hwy. 96, Somes Bar, CA 95568

Assessor's Parcel
Number: 026-290-200,

Landowner: Douglas and Heidi Cole

Watershed: Stanshaw Creek and Irving Creek watersheds within the
Ukonom Hydrologic Subarea of the Middle Klamath River
watershed

Introduction

At the request of staff of the State Water Resources Control Board's Division of Water Rights Public Trust Unit (DIV), on February 12, 2015, I accompanied DIV staff Skyler Anderson and Michael Vella on an inspection of the Stanshaw Creek diversion. The diversion originates on Stanshaw Creek and discharges to Irving Creek, both tributaries to the Klamath River, near Somes Bar. Diverted water is

used for electrical power generation with a pelton wheel and for domestic water supply on the Marble Mountain Ranch.

The diversion has reportedly been in place since the 1800s, supplying a variety of uses to landowners over the years with the most recent landowners being the current owners of the Marble Mountain Ranch, Douglas and Heidi Cole. The DIV is presently in the process of reviewing various aspects of the diversion, in response to complaints of public trust impacts and unauthorized diversion in excess of pre-1914 water rights. The objective of this inspection was to evaluate the existing and potential impacts to water quality and beneficial uses associated with operation of the diversion.

Diversion Description

As noted above, the diversion originates in Stanshaw Creek (tributary to Klamath River at river mile 76.1) and discharges into Irving Creek (tributary to Klamath River at river mile 75). The Point of Diversion (POD) is located on Stanshaw Creek, about 0.68 miles upstream of the Highway 96 crossing¹. A gravel and cobble push-up dam diverts water from Stanshaw Creek. When flow in Stanshaw Creek is less than approximately 3-4 cfs (typical late spring, summer, and fall flow conditions), most of the creek flow is diverted into the ditch. Conveyance is gravity driven, via lined and unlined ditch, approximately 0.5 miles to a junction where flows are directed either to a water treatment plant or to a forebay and penstock that services the power generation facility and a pressurized irrigation system. Conveyance from the junction to the forebay is via lined and unlined ditch. Lined ditch reaches reportedly consist of half rounds of corrugated PVC, of approximately 30-inch diameter. Discharge from the power plant is conveyed via ditch to an onsite pond. Flows from the pond are conveyed in a ditch to the south across the Ranch to a steep slope that has headcut and is discharging to a tributary stream to Irving Creek.

Watershed and Beneficial Uses Information

Stanshaw Creek is within the Stanislaus Creek, Cal Water Watershed No. 1105.310701, and Irving Creek is in the Irving Creek Cal Water Watershed No. 1105.310702 (Cal Water version 2.2). Both of these streams are tributary to the Ukonom Hydrologic Subarea of the Middle Klamath River Hydrologic Area. The Middle Klamath River is federal Clean Water Act section 303(d)-listed for nutrient, temperature, and organic enrichment/dissolved oxygen impairments. On September 7, 2010, the State Water Resources Control Board adopted a Resolution approving amendments to the Water Quality Control Plan for the North Coast Region to establish: (1) Site Specific Dissolved Oxygen Objectives for the Klamath River; (2) an Action Plan for the Klamath River Total Maximum Daily Loads Addressing Temperature, Dissolved Oxygen, Nutrient, and Microcystin Impairments in the Klamath River; and (3) an Implementation Plan for the Klamath and Lost River Basins. On December 28, 2010, the US Environmental Protection Agency approved the TMDLs for the Klamath River in California pursuant to CWA Section 303(d)(2). The Action Plan indicates that temperature impairments in the Klamath are

¹ Diversion description drawn from information contained in "Marble Mountain Ranch Water Rights Investigation: Water Use Technical Memorandum," prepared by Cascade Stream Solutions, LLC, November 18, 2014.

attributable in part to excess sediment loads from anthropogenic sources, and encourages parties responsible for existing sediment sources to take steps to inventory and address those sources.

The Water Quality Control Plan for the North Coast Region (Basin Plan) designates the following existing and potential beneficial uses for the Middle Klamath River and its tributaries within the Ukonom Hydrologic Subarea: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Service Supply (IND), Industrial Process Supply (PRO), Ground Water Recharge (GWR), Freshwater Replenishment (FRSH), Navigation (NAV), Power Generation (POW), Water Contact Recreation (REC-1), Non-Contact Water Recreation (REC-2), Commercial and Sport Fishing (COMM), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species Habitat (RARE), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), Aquaculture (AQUA), and Native American Culture (CUL). Through direct site observation, it appears that the primary beneficial uses the diversion potentially impacts are COMM, MIGR, COLD, SPWN, RARE, and CUL.

The Basin Plan includes a series of water quality objectives designed and intended to protect the beneficial uses of water and guide determining violations of the Basin Plan and Porter Cologne Water Quality Control Act. The following objectives are likely to be associated with water quality violations that occur from the operation and maintenance of the Stanshaw Diversion as observed and discussed herein.

Color

Water shall be free of coloration that causes nuisance or adversely affects beneficial uses.

Floating Material

Water shall not contain floating material, including solids, liquids, foams, and scum in concentrations that cause nuisance or adversely affect beneficial uses.

Suspended Material

Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.

Settleable Material

Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses.

Sediment

The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

Turbidity

Turbidity shall not be increased more than 20% above naturally occurring background levels. Allowable zones of dilution within which higher percentages can

be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.

Inspection Observations

On February 12, 2015, I accessed the Marble Mountain Ranch and Stanshaw Diversion with Skyler Anderson and Michael Vella. During the course of my inspection, I walked the Diversion from the Point of Diversion in Stanshaw Creek to the penstock for the power plant (upper ditch), I observed a stretch of the lower ditch from the pond to the gully that discharges to Irving Creek (lower ditch), and I observed three established diversion monitoring locations used to measure cumulative daily flows and water losses.

The upper ditch is located upslope of and runs southwest, roughly parallel to Stanshaw Creek, gradually diverging away at an approximately 15-20 degree angle as it approaches the junction before turning southeast and heading toward the forebay and penstock. As noted above, this segment is comprised of lined and unlined reaches. Unlined and lined reaches are confined by an earthen berm on the outboard (downslope) side. Sediment from a number of sources, including Stanshaw Creek, hillslope erosion, and landsliding reportedly deposits in this segment of channel, affecting conveyance capacity. The outboard berm elevation reportedly varies at times due to overtopping, slumping, hillslope failure, and trampling by wildlife.

During the February 12 inspection, I identified 19 areas of concern (Points) on the upper ditch where the outboard berm or upslope cut banks have the potential to fail or have failed, diverting some or all in-channel flows onto native slopes causing erosion and formation of channels delivering sediment towards or into Stanshaw Creek. I observed evidence of three primary types of ditch failure: 1) cut bank slumps block the ditch and cause flows to overtop the berm; 2) water infiltrates into and seeps through the berm, and causes the berm to fail eroding underlying soils and hillslopes; and 3) as noted above, cumulative sediment inputs reduce the ditch capacity and increase the risk of overtopping as ditch capacity is diminished, particularly increasing the potential for failure in areas where the berm is low or has been damaged.

As discussed below, at inspection Points 4 and 5, and visible in image 1, the upper ditch crosses over an unnamed tributary to Stanshaw Creek. The tributary is conveyed under the ditch via culvert. At this location, there is also a culvert that drains a portion of the water in the ditch and discharges it through a shotgunned outlet onto the slope a short distance below the outfall for the stream crossing culvert. The combination of uncontrolled discharges and additional flows into the unnamed tributary has caused significant streambank erosion and channel widening in the tributary downstream of the culvert. The ditch may have historically failed at this location, which has likely also contributed to stream channel enlargement.

I followed the lower ditch from the pond to its discharge point into the gully leading to the unnamed tributary to Irving Creek. Along the lower ditch, the primary area of concern for water quality is Point 20, the headcut erosion where return flows from the Ranch are discharged to Irving Creek.

I do not have GPS coordinates for the points I observed and report on herein; however, the photos provided below include a description of the observed conditions.

Image 1 provides general locations for the Point of Diversion at Stanshaw Creek (Point 1), and the discharge point above Irving Creek (Point 20), which are the start and end points of inspection observations as ordered below.

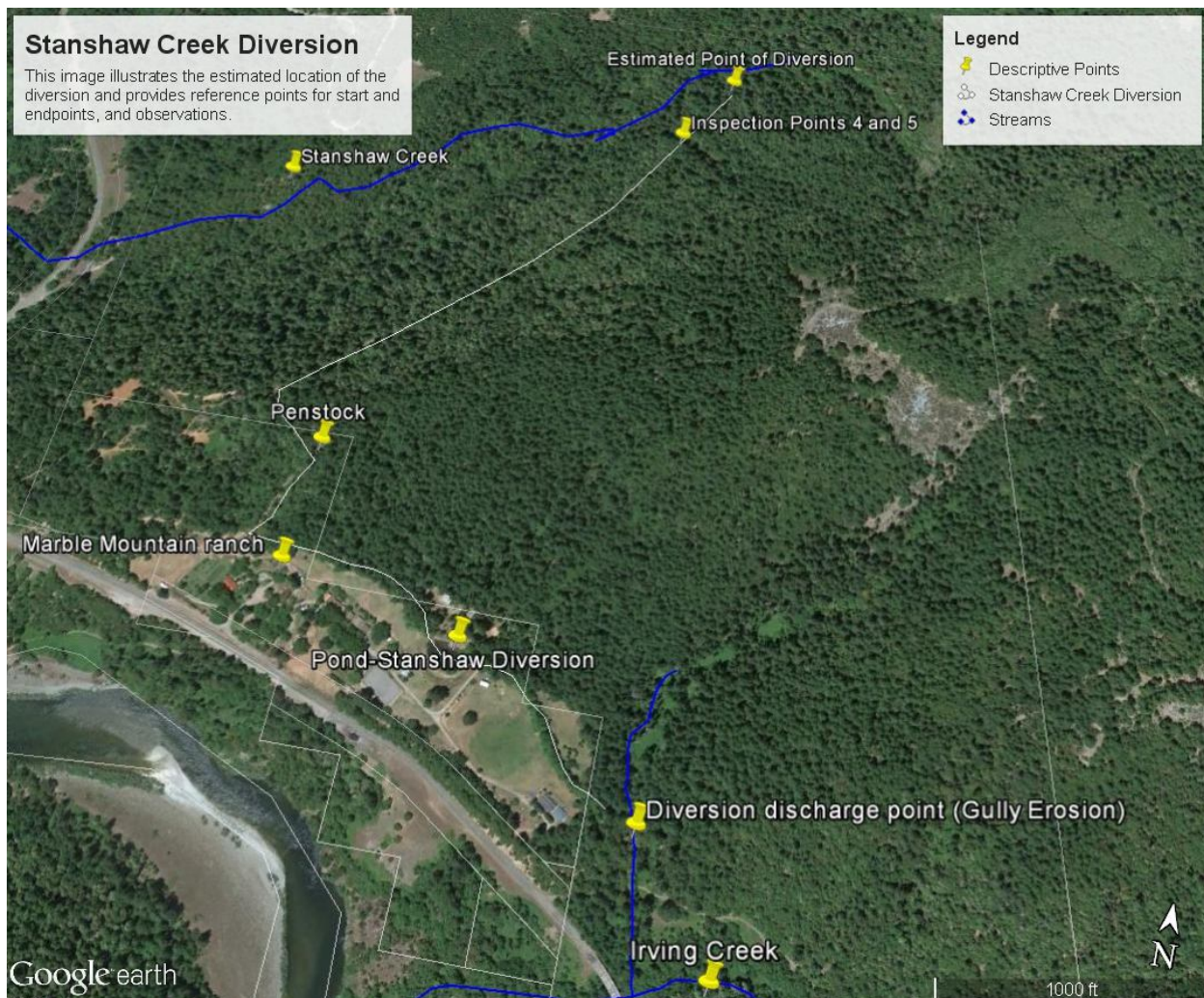


Image 1- shows an overview of the Stanshaw Diversion route and Marble Mountain Ranch. The locations identified are estimated based upon visual observation of the area during the inspection and through subsequent comparison with existing 6/6/2013 Google Earth Pro imagery, Arcview GIS topographic maps, and historic maps of the diversion.

Inspection Photographs and Observations

I have presented photographic images below in order proceeding down the diversion from the point of diversion to the diversions' discharge point into an unnamed tributary to Irving Creek. I took all photos on February 12, 2015. At many of the

Points, I observed multiple issues within a short reach of the ditch, likely posing an increased risk of ditch failure and downslope erosion.



Image 3- shows Point 1, the Point of Diversion. The Stanshaw Diversion flows toward the lower right corner of this image. It appears the rock and cobble diversion structure fails episodically and likely requires periodic modification as Stanshaw Creek's flows change, in order to maintain a diverted flow. (Photos 8459, 8460 and 8461 stitched)



Image 4- shows Point 2, a failure along the outboard berm, approximately 70 feet downstream of Point 1, allowing some of the water in the ditch to flow down to Stanshaw Creek, potentially resulting in erosion and sediment transport. This location appears to have failed repeatedly in the past. The instream flume in the Ditch just downstream of this failure is used to measure flows entering the diversion. (Photo 8454 and 8455)



Image 5- shows Point 3, a tank or railroad tank car buried in the ditch channel, likely intended to trap sediment. The tank car is full of sediment. Water flowing in the ditch appears to have overtopped the outboard berm at this location and caused some erosion on the slopes below. (Photo 8467)



Image 6- shows the erosion channel downslope of Point 3.



Image 7- shows the erosion channel downslope of Point 3. The void is visible here in the foreground; the erosion extends downslope an unknown distance.



Image 8- at Point 3, shows a closer view of the buried tank car with stored sediments visible. (Photo 8450)



Image 9- at Point 4, shows the partial diversion of the ditch into an unnamed tributary to Stanshaw Creek through the inlet of a 12-inch culvert, before the diversion ditch is routed across the stream in a lined ditch. The culvert is shotgunned, which appears to have caused significant instream erosion in the downslope channel. The stream above the crossing is 3-4 feet wide at bankfull width; the eroded stream channel below the diversion crossing is 12-14 feet wide, and does not appear stable. At this location, I also observed muddy soils in the berm adjacent to the ditch, indicating that seepage from the ditch is saturating surrounding soils, which may lead to catastrophic failure of the ditch. (Photo 8441)



Image 10- at Point 4, shows a closer look at the seepage in the berm; note the muddy soils in the foreground. (Photo 8441 cropped)

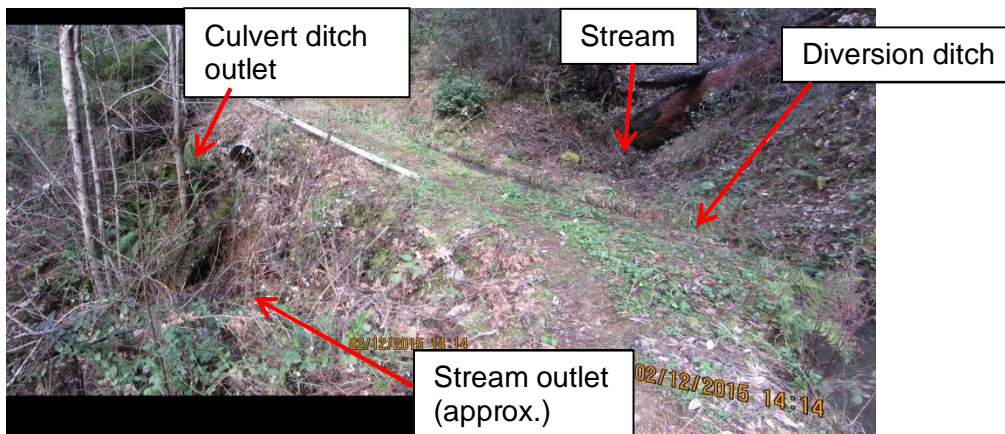


Image 9- at Point 5, shows the shotgunned 12-inch ditch culvert outlet, diversion ditch and native stream channel flowing under the diversion ditch. (Photos 8442, 8443, 8444, 8445 composite)



Image 10- shows the unnamed stream channel above Points 4 and 5; the upslope active bankfull stream channel width is approximately 3-4 feet.

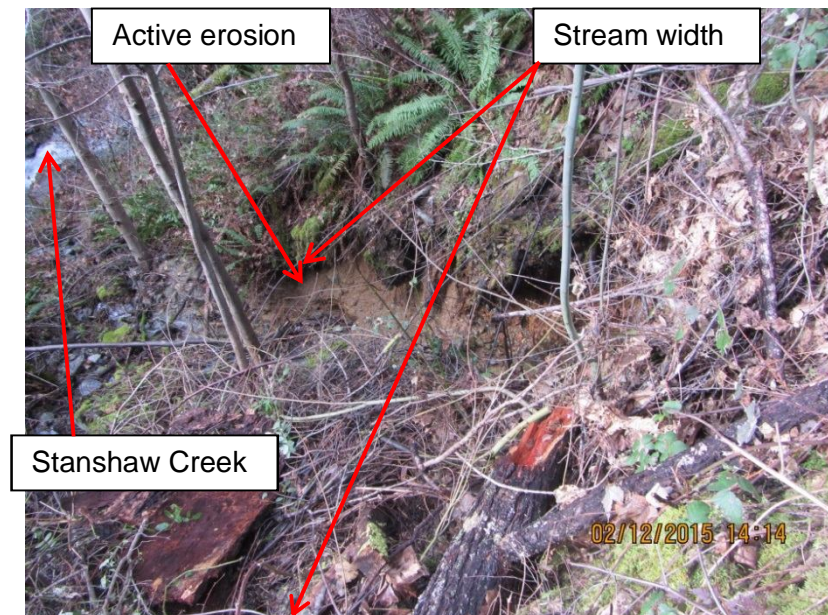


Image 11- shows the unnamed stream channel downstream of Point 5, and the erosion caused by water draining from the shotgunned culvert. Stanshaw Creek can be seen a short distance downslope. I conservatively estimate that this site has delivered 150-300yds³ of sediment and debris to Stanshaw Creek over the life of the Diversion. (Photo 8478)



Image 12- shows Point 6, where the diversion channel is full, leaving no freeboard should it rain or the ditch receive a bank slump upstream. It appears the outboard berm may have failed in this area in the past, and at present is seeping, indicating that a portion of the berm may be saturated. Stanshaw Creek is within 200 feet; any failure here likely results in direct delivery of sediment and erosional debris. The flume section visible in the photo appears to have been installed to remedy previous ditch failures and/or to prevent future failures.



Image 13- point 7, shows the end of the flume in the previous photo; note the black plastic sheeting on the outboard slope face, and the low outboard berm as the diversion ditch exits the flume. The lack of freeboard creates a high potential for overtopping and erosion. The presence of the pipe section and plastic sheeting in the area suggests that the berm or underlying slope in this area has likely failed in the past. (Photo 8483)



Image 14- shows point 8, an approximately 150-foot section of the channel downstream of Point 7, where the low berm and full ditch likely creates a high potential for berm or slope failure, erosion, and sediment transport downslope. I observed concrete blocks at various locations along the outboard edge of the berm throughout this segment, likely to rebuild or reinforce berm sections. (Photo 8486)



Image 15- shows Point 9, a significant failure point, likely caused by a cut bank slump filling the diversion channel and diverting the stream flow. Note the cut bank slump above and the erosion void downslope. This failure likely accelerated erosion on lower slopes and into the nearby streams. (Photo 8490 and 8491 composite)

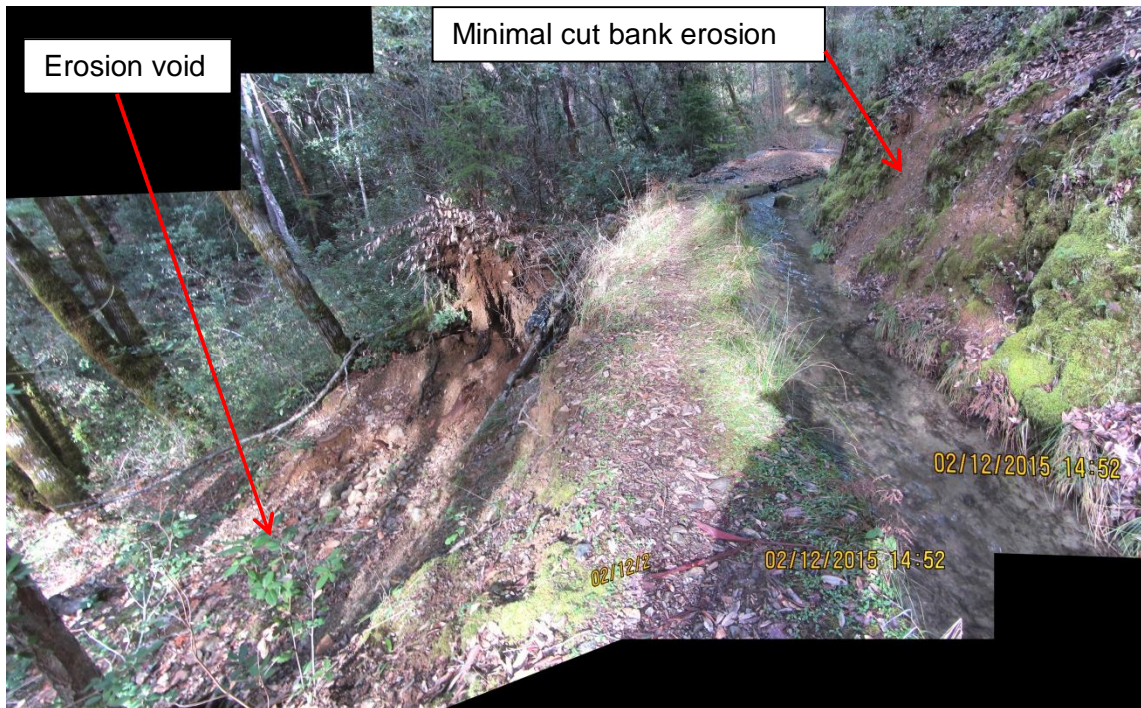


Image 16- Point 10 is an area of concern that includes an erosional channel likely formed by a berm failure and active erosion visible on the cut bank. I observed active cut bank erosion on many of the upper slopes above the diversion ditch and expect that bank slumps have and are contributing significantly to ditch failures. (Photos 8495, 8496, 8497, and 8498 composite image).



Image 17- Point 11 is another 150-200 feet of ditch with a low freeboard and evidence of past failures; this ditch segment leads to a section of ditch subject to a recent bank failure. I observed erosion scars on the lower slopes that are now overgrown with ferns and small shrubs. (Photo 8499)



Image 18- Point 12 shows evidence of a recent bank failure that caused water to overtop the outboard berm and erode slopes below the ditch. The outboard ditch shows signs of seepage throughout this length. Note the sand bags and fresh soils along the outboard berm, indicating recent repairs. Also, note the 50-75 foot section of the cut bank with exposed soils. (Photo 8503)



Image 19- Point 12, closer view of berm repair made with ready crete concrete sacks and soils. Note the saturated soils along the outboard berm where water is seeping. (Photo 8510)



Image 20- Point 13 shows a large continuous cut bank slump that extends for approximately 220 feet. Based on my observations, it appears the cut bank slumped along this stretch over this past winter, delivering approximately 10 yds³ of sediment into the ditch, blocking the channel, and causing water to overtop the berm

and erode the lower slopes. Cut banks are often chronic sources of erosion, delivering additional sediment to streams and ditches each year.



Image 21- Point 14, a cut bank that appears to have slumped in the recent past, causing water to overtop the berm and erode the berm and lower slopes. (Photo 8520 and 8521 composite)



Image 22- Point 15 shows an active cut bank slump, and evidence of recent repairs to the ditch and berm. (Photo 8523)



Image 23- Point 16, another cut bank that has a high risk of failure. Note the steep, near vertical slope of this cut bank, which indicates that the bank is still likely to erode. The roots hanging out of the cut bank are indicators of the erosion that has occurred. Most cut banks are originally constructed in a planar form with no visible roots protruding. Over time the cut bank erodes, exposing the roots, and leaving an indicator as to the amount of soil that has eroded or slumped. (Photo 8525)



Image 24- Point 17 shows a segment of channel with an active cut bank slump and evidence of recent repairs to the outboard berm.

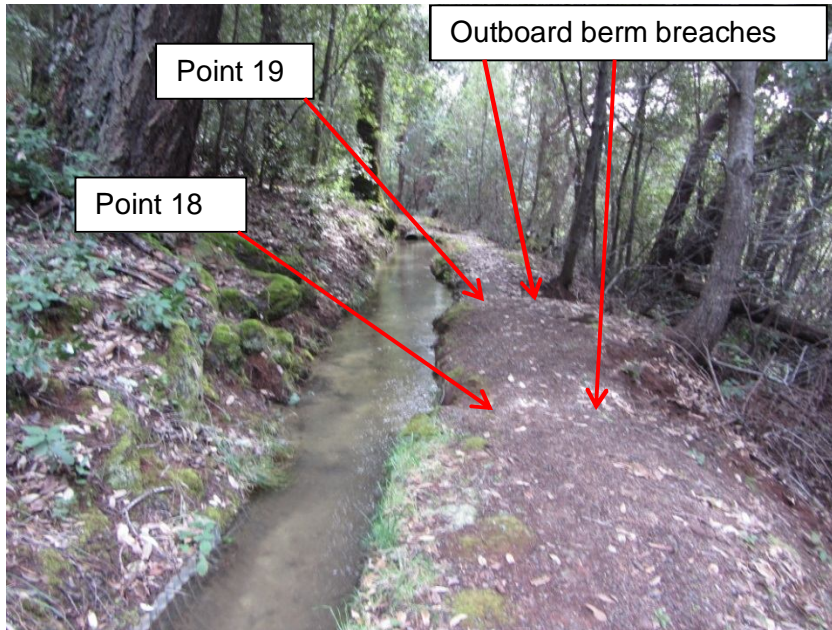


Image 25- shows two locations, points 18 and 19, where the outboard berm has apparently breached in the past, resulting in gully erosion on lower slopes. The failure at Point 19 resulted in the formation of a gully channel for a long distance down the slope, and may have contributed a significant sediment load to the Klamath River and possibly Stanshaw Creek. I did not follow the gully all the way down the slope, but did see an erosion channel from the lower road.



Image 26- Point 20 is the headcut upslope from Irving Creek. This is where tailwater from the Stanshaw Diversion is discharged to an unnamed stream, tributary to Irving Creek. This area is actively eroding. Several trees appear to have fallen recently through erosion of their root masses. I estimate that the headcut erosion has delivered between 1500-2200 yds³ of sediment to the Irving Creek watershed. (Photo 8529)

Summary

In summary, I observed 19 Points in the upper ditch where the outboard berm has been or may be compromised by either erosion of the berm, saturation of the berm, or sediment loading to the ditch from cut bank failures; the ditch retains the potential to fail in the future from one or a combination of these mechanisms.

On the lower ditch, I observed evidence of significant active erosion occurring at the downstream discharge point to Irving Creek, representing a chronic source of sediment delivery into Irving Creek and, thence, to the Klamath River.

This list of observation points is not exhaustive, and my inspection was not a complete inspection of the entire diversion system. The points selected for discussion provide a basis for analyzing the long term and short term sediment-related impacts of the diversion ditch on water quality. Based upon the observations as provided in the body of this report, portions of the outboard berm and/or the upper ditch have likely been failing periodically since the original construction of the diversion ditch, delivering sediment and debris to Stanshaw Creek. Each time the berm or slope fail, there is the potential for mass erosion of earthen material from lower slopes. In some locations, these erosional gullies are visible and show the age of the failure through the relative recovery of vegetation and duff recruitment within the features.

As the ditch is maintained at a low gradient, approximately 3% grade, the ditch is both transporting fine sediments (colloidal materials) and storing sediment (coarse sediment and consolidated earthen deliveries). Storing sediment reduces the capacity of the ditch and increases the risk of mass failure of the berm through saturation and through berm overtopping and erosion. When sediment is transported out of this ditch system the result is a direct delivery into the pond on the Marble Mountain Ranch, or possibly to the downstream tributary to Irving Creek.

It is apparent that if the diversion system is maintained and operated in the present fashion, it will continue to represent a chronic source of sediment discharge to surface waters in the Middle Klamath River watershed. The Regional Water Board has received at least one complaint over the years regarding water quality impacts associated with the Diversion, specifically, in January 2011 staff received a complaint alleging that repeated failures of the diversion were impacting aquatic resources in the Klamath River and its tributaries through excessive sediment loading. My observations tend to support these allegations, and suggest that further such impacts will occur in the future. In my opinion, the diversion ditch likely represents a chronic source of sediment discharge to Stanshaw Creek and Irving Creek.

I did not inspect the reaches of Stanshaw Creek or Irving Creek downstream of the Stanshaw Diversion, so did not confirm evidence of recent sediment discharges to either Creek or to the Klamath River; however, I did inspect the site of a 2013 Fisheries Restoration Grant (FRGP), Grant # P1110319, which involved the removal of 560 cubic yards of stored sediments at the confluence of Stanshaw Creek and the Klamath River to restore a large backwater pool to provide refugial habitat for salmonid species. A report

describing this project indicates, in part, that “[o]riginating from Stanshaw Creek, the bulk of the sediment plug was deposited during the 2005/2006 flood event when the upstream ditch diversion to Marble Mountain Ranch overtopped causing severe gully erosion.” Here, I confirmed that at least at present, the backwater pool still appears to be functioning as intended.

The ditch has been in operation for a number of years and, as noted above, supplies water for domestic needs and power generation for the Marble Mountain Ranch. I briefly researched the alternator in use to generate electricity for the ranch. Upon initial evaluation, it appears that there may be opportunities to more efficiently operate the pelton wheel, which would result in significant reductions in the volume of water necessary for power generation.

Water quality is affected by a number of mechanisms, in this case observations indicate that 1) the operation of the Stanshaw Creek Diversion is likely influencing increased sediment loading on the Klamath River, and 2) the flows in Stanshaw Creek provide an important source of water to a refugial habitat for all life stages of salmonids occupying the Klamath River. Cold clean water is the basis of salmonid survival and properly functioning conditions supportive of all beneficial uses. The diversion is losing water through evaporation and seepage to surrounding soils, the loss of water is likely contributing to failures of the berm and erosion resulting in sediment contributions to Stanshaw Creek and Irving Creek. In addition, the loss of water is an impact on water quality when one considers that the diversion takes cold water from a native stream, and after use, places it in another location without the apparent habitat values of its original native location. Finally, as the water passes through the Stanshaw diversion system and crosses through the Marble Mountain Ranch, it may be subject to changes in characteristics based on potential pollutant inputs or increases in temperature. I did observe potential pollutant sources of concern while viewing the diversion system on the Marble Mountain Ranch, primarily domestic livestock grazing. I did not note any locations where the ditch was exposed to run off from livestock grazing or that the ditch was prone to intercepting pollutants generated on the ranch. However, I did not evaluate the entire system on the Ranch, nor collect any samples or take any measurements.

Recommendations

This diversion and its operation can likely be improved significantly, to both reduce sediment discharges, and increase native instream cold water resources in Stanshaw Creek, and the Klamath River basin. To facilitate such an improvement to the benefit of water quality, I recommend the following information be considered in evaluating the current and future operation of the Stanshaw Creek Diversion. Some of this information may already be available or may be under development. Information should be developed by a California licensed professional or professionals with relevant experience.

- Water balance, i.e., how much water enters the Stanshaw diversion, how much discharges, how much is demonstrably applied to consumptive uses within the Marble Mountain Ranch

- Water quality review, i.e., sampling/testing of water entering the Stanshaw diversion and discharging from the Marble Mountain Ranch, identification of factors or features that may be contributing to changes, if any, to water quality– in vs. out
- Review onsite water needs for domestic uses
- Review opportunities to optimize water needs for power generation (this may include reviewing operational requirements for the existing pelton wheel to identify ways to optimize efficiency and/or consideration of alternative hydropower generation systems)
- Review opportunities to reduce water loss or head loss
- Design a delivery system that optimizes water conservation while fulfilling onsite water needs

Outfall/Irving Creek tributary

Regional Water Board staff recommend that an appropriately qualified California licensed professional experienced in Geology and stream restoration evaluate the diversion outfall tributary to Irving Creek and develop a stream restoration plan to restore stream side vegetative and hydrological functions of the tributary, if applicable, and to ensure the long term recovery of the affected streams; and 2) replant slopes and streamside areas with native vegetation to prevent erosion and sediment delivery. The plan shall include provisions to ensure that continued use of this tributary, either for diversion outfall flow or for transport of seasonal flows through the ranch property, does not create new or exacerbate existing erosion.

Upper Ditch

Water quality recommendations regarding the upper ditch will vary depending on whether the ditch or ditch alignment is to be maintained to any degree as part of the delivery system, or whether it is to be taken out of service altogether. Specifically, if/when the ditch is to be taken out of service, Regional Water Board staff recommend that a licensed California professional (or professionals) with experience including hydraulic engineering, geology, and instream and hillslope restoration, develop a plan to decommission the ditch by removing the outboard berm, outslping the channel as appropriate/necessary to disperse drainage, and stabilizing and replanting all bare soils as necessary on the upslope, channel, berm material, and slopes below the ditch to minimize the potential for continued or future erosion, slope failure, and/or sediment delivery to downslope receiving waters.

Alternatively, for any delivery system that will require that the ditch, ditch alignment, or segments thereof be retained in service, Regional Water Board staff recommend that an appropriately qualified California Licensed professional (or professionals) with experience including hydraulic systems analysis; design, construction and maintenance of water transport and delivery systems; stream and hill slope restoration; and geologic analysis of slope stability:

- a) Evaluate the entire ditch system, identify all features and locations susceptible to failure by any of the physical processes and mechanisms described herein, (including but not limited to ditch seepage, berm fill saturation, upslope cutbank stability), identify locations where there is potential for sediment delivery to receiving waters in the event of a failure, develop mitigations including design and construction standards and an implementation schedule as necessary to complete the defined

scope of work,

- b. Develop and submit for approval a ditch operation and maintenance plan that includes an inspection and maintenance schedule, specifying those measures to be incorporated/ constructed and steps to be taken to ensure that the slopes above the ditch do not fail into and block the ditch, that water seepage from the ditch does not saturate underlying materials and result in failure, that the ditch does not overtop the berm, that the berm does not fail, and that sediment does not deliver from the ditch to waters of the state.

For either alternative, the ditch repair or decommissioning plan shall include specifications to restore the affected stream/unnamed tributary that crosses at inspection points 4/5, replant with native vegetation, and to protect streams from any further impacts or discharges associated with the ditch.

Additional Measures to Protect Water Quality

Regional Water Board staff recommends that an appropriately qualified licensed California professional or professionals conduct the following reviews and develop plans to ensure or implement the following:

- a) Assess slopes between the upper ditch and Stanshaw creek and identify any erosional issues associated with the ditch that should be corrected to prevent or minimize sediment delivery to Stanshaw Creek and/or to the Klamath River, and propose and provide a schedule for implementing corrective measures.
- b) Assess segments of Stanshaw and Irving Creeks downstream of the diversion inlet & outlet points to identify and map any evidence of damage or sediment storage with potential for restoration. In the event the survey identifies areas where stored sediments can be remediated, or past discharges from the ditch have created erosional features that have the potential to actively erode with rainfall and transport sediment into downstream receiving waters, then develop a plan to remediate and describe any potential concerns with implementing the scope of restoration work identified.
- c) Assess the potential for pollutant inputs and/or changes to water quality over the segment of lower ditch passing through the property and discharging at the outfall to Irving Creek. A visual assessment to identify potential locations where pollutants may be added or temperatures may increase coupled with samples collected at the upstream and downstream end of this segment may be adequate for an initial assessment and help to focus additional assessment if necessary. Constituents of concern for sampling/testing may include but are not necessarily limited to nutrients, fecal coliform, total coliform, BOD, temperature, blue green algae and any other potential contaminant of concern identified through the visual assessment.

General Recommendations for Restoration Plans

Restoration plans prepared per recommendations above should include or specify, as applicable/appropriate:

- a) Design and construction standards specifications and designs for stream restoration, surface drainage controls, erosion control methods and standards for unanticipated precipitation during restoration, compaction standards, an implementation schedule, a monitoring and reporting plan, and success criteria.
- b) Map(s) and/or project designs at 1:12000 or larger scale (e.g., 1:6000) that delineate existing site conditions including existing channels, the projected restored slopes and stream channels, illustrating all restoration plan work points, spoil disposal sites, re-vegetation planting areas, and any other factor that requires mapping or site construction details to complete the scope of work
- c) Best management practices to be applied for all work associated with construction activities affecting, or having the potential to impact, surface waters.
- d) Proposed time schedules for completing work, taking into account time needed to receive any necessary permits from State, County and/or federal agencies. In the event that the Water Boards impose deadlines for work completion, proposed work schedules must adhere to those deadlines.
- e) Proposed program to monitor, assess, maintain, and report on the success of restoration efforts. Restoration monitoring plans should include regularly scheduled inspections, and established monitoring photo points of sufficient number to document the site recovery for five years or until the Site is restored, mitigation is complete, vegetation is reestablished, erosion is no longer ongoing and monitoring is no longer necessary.

Areas that have been revegetated with native plants must be monitored for five years following planting, including a minimum of two years of monitoring following irrigation, if any. Revegetation success criteria for tree and shrub plantings is a minimum of 85%, and may require one or more replanting efforts, weeding, exotic species removal, watering, etc.

Photo-documentation points should include restoration work areas, revegetation areas, and affected tributaries, up and downstream of restoration sites, and individual work sites where construction occurs within the ditch (upper or lower). Monitoring plans should include a site map with the photo-documentation points clearly marked. Restoration sites, affected watercourse segments, and other photo-documentation points should be photographed immediately prior to and immediately after implementing restoration and/or mitigation work, and pre- and post-project photos should be included with the map as part of the as-built report, to be submitted with the next regular monitoring report following the completion of restoration work.

Restoration sites should be monitored periodically including, at a minimum, inspections prior to, during, and towards the end of each rainy season (for example: October 15, January 5, and March 1 of each year), and monitoring reports should be submitted within 30 days of each inspection. Monitoring Reports should include a summary of any monitoring observations or results

(in the event that monitoring includes sampling); describe any corrective actions made or proposed to address any failures of the Site and restoration measures (features to be assessed for performance and potential failure should include, but are not limited to, erosion controls, stream bed and bank erosion, sediment discharges, work, and re-vegetation); and include narrative and photo documentation of any necessary mitigation and evidence of successful restoration and Site recovery for five years, or until Site recovery is considered complete.

Staff recommend that when applicable restoration sites are stable and monitoring programs have been fulfilled, a Summary report be submitted for staff review, and that a site representative arrange for an inspection with Regional Water Board staff to determine whether restoration has been adequately completed and conditions representing water quality violations have been successfully corrected.

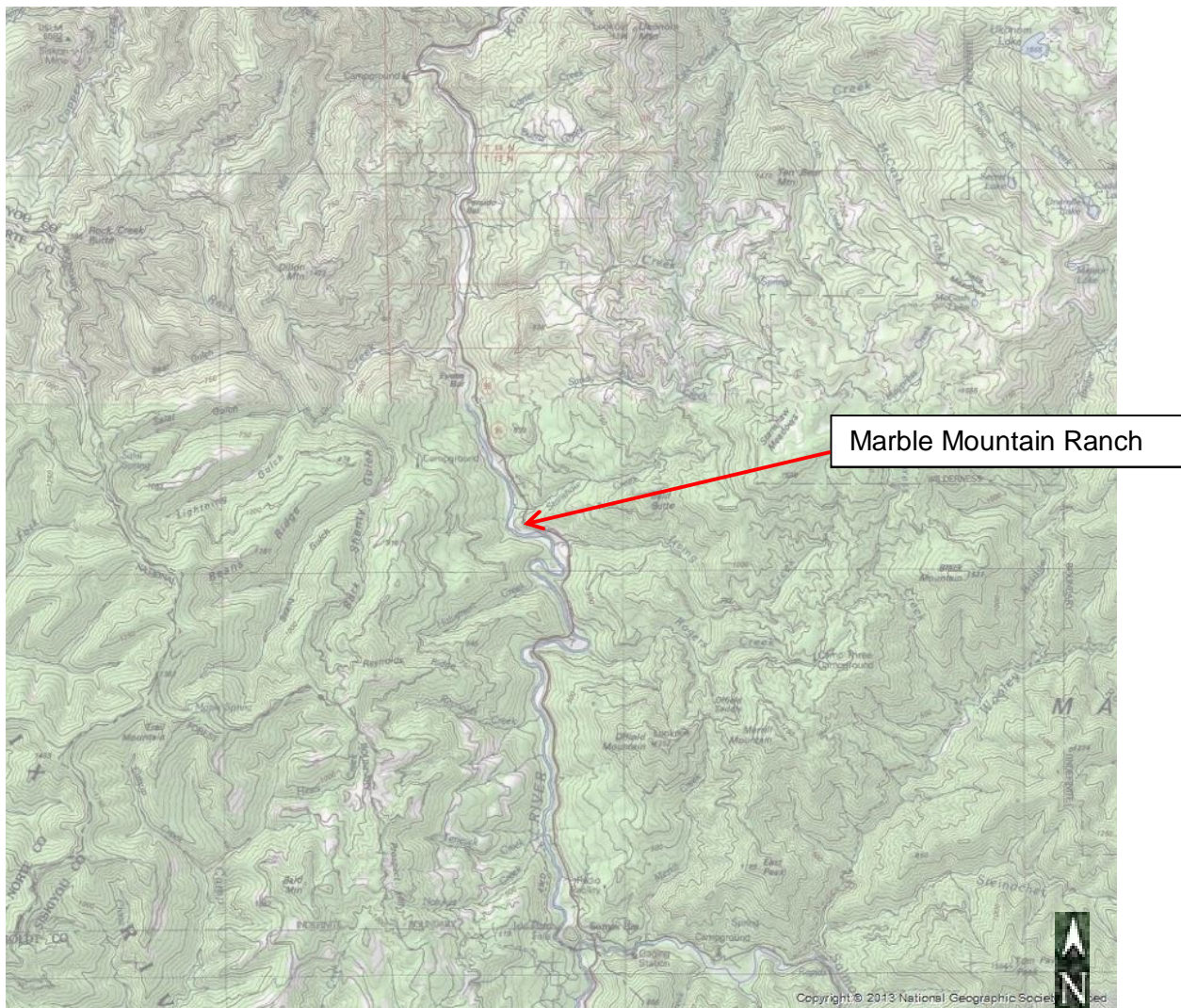


Image 27 shows the general location of the Marble Mountain Ranch.

North Coast Regional Water Quality Control Board

August 4, 2016

Douglas Cole, et al
100 Tomorrow Rd.
Somes Bar, CA 95569

Dear Douglas and Heidi Cole:

Subject: **Final Cleanup and Abatement Order and Request for Technical Reports pursuant to Water Code section(s) 13267 and 13304: Siskiyou County APN 026-290-200 - WDID No. 1A15024NSI**

File(s): Douglas and Heidi Cole, Marble Mountain Ranch, 92520 Highway 96, Somes Bar: Siskiyou County APN 026-290-200, Klamath River Watershed

Enclosed is a Final Cleanup and Abatement Order, No. R1-2016-0031 (Order), (Water Code section 13304) issued by the California North Coast Regional Water Quality Control Board (Regional Water Board) to you. The Order is in response to water quality violations associated with operation and maintenance of the Stanshaw Creek diversion ditch on the subject property.

Based on observations made by Water Board staff during a February 12, 2015 inspection, the Order directs you to take steps to clean up and abate the discharge of earthen materials and debris to the Klamath River and its tributaries. In response to the inspection referenced above, on December 3, 2015, a Draft Cleanup and Abatement Order was issued to you. Subsequent to the issuance of the draft Order negotiations between you and the Regional Water Quality Control Board and the State Water Resources Control Board have been ongoing. These negotiations have resulted in some progress; however, the bulk of the corrective work required by the Order remains unaddressed. We recognize that you are working on and have partially completed some of the necessary steps to move forward with correction of the violations.

However, we have not received the required plans in a format that allows our approval, thus enabling you to move forward with receiving required permits, and implementing corrective actions. As such, we are issuing this final Order to facilitate compliance with the Water Code and Clean Water Act.

The enclosed Order is a final Order. The timelines are enforceable. The tasks are defined in the directives of the attached Order. The Order requires plans be developed and submitted for approval prior to implementation. Due to the many issues at the site associated with the operation and maintenance of the Stanshaw Creek diversion ditch, there are multiple requirements; please pay attention to requirements specified in the Order and their due dates.

If you have any questions, please contact Stormer Feiler of my staff by phone at (707) 543-7128 or by email at Stormer.Feiler@waterboards.ca.gov.

Sincerely,

Digitally signed
by Matthias
St. John
Date: 2016.08.04
17:57:29 -07'00'

Matthias St. John
Executive Officer

160804_SRF_ef_ColeMarbleMountainRanch_CAO_cover_letter

Enclosure: Cleanup and Abatement Order No. R1-2016-0031

Certified-Return Receipt Requested

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cc list: electronic copies continued next
page.

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION

WR-3

CLEANUP AND ABATEMENT

AND

WATER CODE SECTION 13267(b) ORDER NO. R1-2016-0031
DOUGLAS AND HEIDI COLE, ASSESSOR PARCEL NUMBER 026-290-200
WDID 1A15024NSI

SISKIYOU COUNTY

This Order is issued to Douglas and Heidi Cole (hereinafter referred to as Dischargers) based on provisions of Water Code section 13304, which authorizes the North Coast Regional Water Quality Control Board (Regional Water Board) to issue a Cleanup and Abatement Order ("Order"), and Water Code section 13267, which authorizes the Regional Water Board to require the preparation and submittal of technical and monitoring reports.

The Executive Officer finds, with respect to the Dischargers' acts, or failure to act, the following:

- 1. Purpose of the Order:** This Order requires the Dischargers 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. These watercourses are considered waters of the state, as well as waters of the United States. (References hereinafter to waters of the United States are inclusive of waters of the state.)¹ The Dischargers maintain a diversion ditch from Stanshaw Creek to Irving Creek. The Dischargers operate the ditch to provide water to the Marble Mountain Ranch (Ranch), for domestic uses, as well as to generate electricity, and to fill and maintain a small pond for recreational use and potentially fire protection. The upper segment of the ditch carries water from Stanshaw Creek to the Marble Mountain Ranch. Tailwater from the Pelton wheel used for power generation flows through the property to the pond. Overflows from the pond flow to a discharge point where they enter Irving Creek. Water in the upper segment of the ditch periodically overtops or breaches portions of its outboard containment berm, eroding slopes below the ditch.

¹ The Regional Water Board administers and enforces the Clean Water Act (CWA). The CWA regulates what it refers to as "navigable waters" and defines those waters as "waters of the United States." Waters of the United States have been interpreted broadly by the agencies responsible for implementing the CWA to include all traditionally navigable waters and their tributaries. (40 C.F.R. § 122.2) The Porter-Cologne Water Quality Control Act (Porter-Cologne) provides the Regional Water Board additional authority to regulate discharges of waste into "waters of the state." (Water Code § 13260.) The term "water of the state" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." (Water Code § 13050(3).) All waters of the United States that are within the boundaries of California are also waters of the state for purposes of Porter-Cologne.

In some cases, water escaping from the ditch flows to and transports earthen material into downslope watercourses, including Stanshaw Creek and, potentially, the Klamath River.

Outflows to Irving Creek have created a significant active erosional feature, representing a chronic source of sediment discharges into Irving Creek. Point source discharges of sediment-laden waters associated with ditch containment failures and chronic sediment discharges from the Irving Creek outfall occur without authorization from applicable federal, state, and local agencies, including the Regional Water Board. This Order requires investigation and cleanup in compliance with the Water Code, the Water Quality Control Plan for the North Coast Region (Basin Plan), and other applicable Regional Water Board plans, policies, and regulations.

2. **Responsible Parties:** The Dischargers, as the property owners and operators of the ditch are discharging or creating a threat of discharge, and are responsible parties for purposes of this Order.
 - a. Per records from the Siskiyou County Assessor-Recorder's Office, Douglas and Heidi Cole are the owners of record for the property identified as Assessor Parcel 026-290-200.
 - b. The Regional Water Board reserves the right to amend this CAO to add additional responsible parties when/if those parties are identified.
3. **Location and Description:** The Marble Mountain Ranch is located approximately 8 miles north of Somes Bar, in Siskiyou County at 92520 Highway 96. The ditch supplying water to the Ranch originates in Stanshaw Creek (tributary to Klamath River at river mile 76.1) and discharges into Irving Creek (tributary to Klamath River at river mile 75). The Point of Diversion (POD) is located on Stanshaw Creek, about 0.68 miles upstream of the Highway 96 crossing.
4. **History:** According to records from the Siskiyou County Assessor-Recorder's Office, Douglas and Heidi Cole purchased the Ranch in March of 2007. There is no record of the Ranch or the diversion ditch having prior regulatory oversight or history with the Regional Water Board. The diversion has reportedly been in place since the 1800s, supplying a variety of uses to landowners over the years with the most recent landowners being the Dischargers.
5. **Basis of Order:** Periodic failure of the ditch, and the Dischargers' activities to operate and maintain the ditch, as detailed below, created and/or threaten to create, conditions of pollution or nuisance in waters of the state by unreasonably impacting water quality and beneficial uses.

- a. During an inspection of the diversion ditch and the Ranch on February 12, 2015, Regional Water Board staff identified 19 locations along the upper ditch where the ditch has failed or has the potential to fail.
 - b. The primary failure mechanisms were identified as: 1) cut bank slumps that block the ditch and cause flows to overtop the berm; 2) water infiltrates into and seeps through the berm, and causes the berm to fail eroding underlying soils and hillslopes; and 3) as noted above, cumulative sediment inputs reduce the ditch capacity and increase the risk of overtopping as ditch capacity is diminished, particularly increasing the potential for failure in areas where the berm is low or has been damaged. Due to the operation and maintenance of the ditch, failures and repairs constitute an annual and chronic discharge of sediment to waters of the state, including Stanshaw and Irving Creeks, and potentially directly to the Klamath River.
 - c. The diversion ditch outfall discharges onto a steep slope with an abrupt drop into a short unnamed tributary to Irving Creek. This discharge causes significant slope erosion and chronic delivery of substantial volumes of sediment into Irving Creek and the Klamath River.
- 6. Beneficial Uses and Water Quality Objectives:** The Basin Plan designates beneficial uses, establishes water quality objectives, contains implementation programs for achieving objectives, and incorporates by reference, plans and policies adopted by the State Water Resources Control Board. Stanshaw and Irving creeks are tributaries of the Klamath River within the Middle Klamath River Hydrologic Area, which under section 303(d) of the federal CWA is listed as impaired for sediment, temperature, microcystin, organic enrichment/low dissolved oxygen, and nutrients. On September 7, 2010, the State Water Resources Control Board adopted a Resolution approving amendments to the Water Quality Control Plan for the North Coast Region to establish: (1) Site Specific Dissolved Oxygen Objectives for the Klamath River; (2) an Action Plan for the Klamath River Total Maximum Daily Loads (TMDLs) Addressing Temperature, Dissolved Oxygen, Nutrient, and Microcystin impairments in the Klamath River; and (3) an Implementation Plan for the Klamath and Lost River basins. On December 28, 2010, the United States Environmental Protection Agency approved the TMDLs for the Klamath River in California pursuant to CWA section 303(d)(2). The Action Plan indicates that temperature impairments in the Klamath are attributable in part to excess sediment loads from anthropogenic sources, and encourages parties responsible for existing sediment sources to take steps to inventory and address those sources. Existing and potential beneficial uses for the Ukonom Hydrologic Subarea of the Middle Klamath River Hydrologic Area potentially affected by the activities described herein include the following: Municipal and Domestic Supply (MUN); Agricultural Supply (AGR); Industrial Service Supply (IND); Industrial Process Supply (PRO); Ground Water Recharge (GWR); Freshwater Replenishment Groundwater Recharge (GWR); Freshwater Replenishment (FRSH); Navigation (NAV); Hydropower Generation (POW);

Water Contact Recreation (REC-1); Non-contact Water Recreation (REC-2); Commercial and Sport Fishing (COMM); Warm Freshwater Habitat (WARM); Cold Freshwater Habitat (COLD); Wildlife Habitat (WILD); Rare Threatened or Endangered Species (RARE); Migration of Aquatic Organisms (MIGR); Spawning, reproduction, and/or Early Development (SPWN); and Aquaculture (AQUA) and Native American Culture (CUL). Beneficial uses of any specifically identified water body generally apply to all of its tributaries. These include Stanshaw Creek, Irving Creek, and any tributaries thereto.

Section 3 of the Basin Plan contains water quality objectives that specify limitations on certain water quality parameters not to be exceeded as a result of waste discharges. These include, but are not limited to the following:

- a. **Suspended Material:** Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.
 - b. **Settleable Material:** Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.
 - c. **Sediment:** The suspended sediment load and suspended discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
 - d. **Turbidity:** Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.
7. **Failure to Obtain Necessary Permits:** Regional Water Board staff determined that discharges of waste earthen material associated with ditch operation, maintenance, and failure, including point source discharges of sediment-laden water to waters of the state has occurred without coverage under either a National Pollutant Discharge Elimination System (NPDES) permit, waste discharge requirements, or a waiver thereof.
8. **Clean Water Act Violations:** Section 301(a) of the CWA provides certain exceptions to "the discharge of any pollutant by any person shall be unlawful." (33 U.S.C. § 1311(a).) One of the exceptions allowed for under the CWA is the discharge from a point source as authorized by a permit granted pursuant to the National Pollutant Discharge Elimination System (NPDES) under section 402 of the CWA. (33 U.S.C. § 1342.) The CWA prohibits the discharge of any pollutant from a point source into waters of the United States without an NPDES permit. Evidence observed by staff along the upper ditch indicated that the ditch had overtopped or caused the berm to fail at several locations.

While staff did not follow the erosion path below each failure point to confirm that flows reached downstream surface waters, staff did observe a number of points where the flows reached Stanshaw Creek. In each case, such a flow, carrying sediment and/or other mobilized materials and delivering them into a surface water represents a point source discharge of waste, requiring an NPDES permit.

9. Water Code Violations:

a. Water Code section 13376 requires any person discharging or proposing to discharge pollutants to waters of the United States to file a report of waste discharge. Each case where the ditch has failed and flows have discharged into Stanshaw Creek or the Klamath River represents a violation of Water Code section 13376 due to the discharge of sediment-laden water into waters of the United States without first filing a report of waste discharge. In addition, the chronic discharge of sediment into Irving Creek associated with the erosion feature at the ditch outfall represents an ongoing violation, and a discharge of waste without a report of waste discharge and/or waste discharge requirements.

b. Water Code section 13304(a) states, in relevant part:

“Any person who has discharged or discharges waste into waters of this state in violation of any waste discharge requirements or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and causes, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including, but not limited to, overseeing cleanup and abatement efforts....Upon failure of any person to comply with the cleanup or abatement order, the Attorney General, at the request of the board, shall petition the superior court for that county for the issuance of an injunction requiring the person to comply with the order. In the suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent, as the facts may warrant.”

c. Sediment, when discharged to waters of the state, is a “waste” as defined in Water Code section 13050. The Dischargers have discharged waste directly into surface waters of Stanshaw Creek, an unnamed tributary to Irving Creek, and to Irving Creeks, which are tributaries of the Klamath River.

d. The beneficial uses of the Klamath River discussed above in Finding 6 also apply to Stanshaw and Irving creeks.

- e. "Pollution" is defined by Water Code section 13050, subdivision (l)(1) as, an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following:
 - i. The waters for beneficial uses; or
 - ii. Facilities which serve these beneficial uses.

- f. "Nuisance" is defined by Water Code section 13050, subdivision (m) as, anything which meets all of the following requirements:
 - i. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
 - ii. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
 - iii. Occurs during, or as a result of, the treatment or disposal of wastes.

- g. The Dischargers' ditch operations and maintenance activities, and chronic ditch failures result in the relatively continuous unauthorized discharge of waste into surface waters and have created, and threaten to create, a condition of pollution by unreasonably affecting the beneficial uses of waters of the state.

10. Basin Plan Violations: The Water Quality Control Plan for the North Coast Region (Basin Plan) contains specific standards and provisions for maintaining high quality waters of the state that provide protection to the beneficial uses listed above. The Basin Plan's Action Plan for Logging, Construction and Associated Activities (Action Plan) includes two prohibitions (Page 4-29.00 of the 2011 Basin Plan):

- a. **Prohibition 1** - "The discharge of soil, silt, bark, slash, sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature into any stream or watercourse in the basin in quantities deleterious to fish, wildlife, or other beneficial uses is prohibited."
- b. **Prohibition 2** - "The placing or disposal of soil, silt, bark, slash, sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature at locations where such material could pass into any stream or watercourse in the basin in quantities which could be deleterious to fish, wildlife, or other beneficial uses is prohibited."

Evidence observed by staff during the inspection suggests that flows in the ditch chronically overtop portions of the ditch and, at times, cause the ditch berm to fail, and potentially transport that material into Stanshaw Creek or the Klamath River.

Ditch maintenance/repair includes rebuilding or reinforcing the berm, in effect placing additional material at locations where it can be transported into watercourses in the event of a ditch failure.

- 11. Cleanup and Abatement Action Necessary:** Sediment discharges associated with improperly constructed and maintained ditches and chronic erosion and sedimentation at the Irving Creek outfall, operated by the Dischargers have occurred, and have the potential to continue to occur. Restoration, cleanup, and mitigation action is required on the part of the Dischargers to ensure that the existing conditions of pollution or nuisance are addressed, that threatened unauthorized discharges from the ditch are prevented, and that any impacts to beneficial uses are mitigated. The current conditions represent priority violations and the issuance of a cleanup and abatement order pursuant to Water Code section 13304 is appropriate and consistent with policies of the Regional Water Board.

- 12. Technical Reports Required:** Water Code section 13267(a) provides that the Regional Water Board may investigate the quality of any water of the state within its region in connection with any action relating to the Basin Plan. Water Code section 13267 (b) provides that the Regional Water Board, in conducting an investigation, may require Dischargers to furnish, under penalty of perjury, technical or monitoring program reports. The technical reports required by this Order are necessary to assure compliance with this Order and to protect the waters of the state. The technical reports are further necessary to demonstrate that appropriate methods will be used to clean up waste discharged to surface waters and watercourses and to ensure that cleanup complies with Basin Plan requirements. In accordance with Water Code section 13267(b), the findings in this Order provide the Dischargers with a written explanation and evidence with regard to the need to implement cleanup, abatement and restoration actions and submit reports. The Dischargers named in this Order own and/or operate the feature from which waste was discharged, and thus are appropriately responsible for providing the reports.

- 13. California Environmental Quality Act:** Issuance of this Order is being taken for the protection of the environment and to enforce the laws and regulations administered by the Regional Water Board and as such is exempt from provisions of the California Environmental Quality Act (CEQA) (Public Resources Code § 21000 et seq.) in accordance with California Code of Regulations, title 14, sections 15061 (b) (3), 15306, 15307, 15308, and 15321. This Order generally requires the Dischargers to submit plans for approval prior to implementation of cleanup and restoration activities at the Site. CEQA exempts mere submittal of plans as submittal will not cause a direct or indirect physical change in the environment and/or cannot possibly have a significant effect on the environment. CEQA review at this time is premature and speculative, as there is simply not enough information concerning the Discharger's proposed remedial activities and possible associated environmental impacts.

If the Regional Water Board determines that implementing any plan required by this Order will have a significant effect on the environment that is not otherwise exempt from CEQA, the Regional Water Board will conduct the necessary and appropriate

environmental review prior to approval of the applicable plan. The Dischargers will bear the costs, including the Regional Water Board's costs, of determining whether implementing any plan required by this Order will have a significant effect on the environment and, if so, in preparing and handling any documents necessary for environmental review. If necessary, the Dischargers and a consultant acceptable to the Regional Water Board shall enter into a memorandum of understanding with the Regional Water Board regarding such costs prior to undertaking any environmental review.

REQUIRED ACTIONS

IT IS HEREBY ORDERED that, pursuant to Water Code sections 13304 and 13267, Douglas and Heidi Cole (Dischargers) shall clean up and abate the impacts to water quality in accordance with the scope and schedule set forth below and provide the following information. The Dischargers shall obtain all necessary permits for the activities required in this Order.

1. Retain an appropriately licensed and experienced California Licensed Professional(s) to evaluate, and provide recommendations on the following:

Evaluate the operation of the Pelton wheel to determine if there are methods of diversion operation that would increase efficiency and reduce the required volume of the diversion, such as piping the diversion flow for example. Provide a report including recommendations based upon this evaluation. The evaluation shall consider the following:

- a. Water balance – in vs. out;
- b. Water quality review – in vs. out;
- c. Review onsite water needs and usage, and hydropower generation;
- d. Review opportunities to optimize water needs and usage for power generation;
- e. Review opportunities to reduce water loss or head loss; and
- f. Design a delivery system that optimizes water conservation.

In the event that this evaluation concludes that a piped delivery system is appropriate, develop a plan to decommission the ditch by removing the outboard berm and restoring all affected watercourses. In addition, provide design standards for slope restoration and outsloping to ensure evenly distributed surface flows. All bare soils shall be stabilized with erosion controls and replanted with native vegetation. **Submit all information and recommendations as described above on or before 5:00 pm October 15, 2016.**

2. Retain an appropriately licensed and experienced California- licensed professional to evaluate, assess, and develop a Restoration and Monitoring Plan (RMP) to restore and stabilize the head cut and slope at the outlet of the Stanshaw Creek diversion to the unnamed tributary of Irving Creek. Submit

the plan by **September 10, 2016** to the Executive Officer for review and approval.

- a. The RMP shall (1) restore the vegetative and hydrological functions of the damaged streams to ensure the long term recovery of the affected streams; and (2) replant the slopes and streamside areas with native vegetation to prevent erosion and sediment delivery to streams.
- b. The RMP shall include and apply best management practices for all current and planned work associated with construction activities affecting, or having the potential to impact, the ditch outfall, unnamed tributary and Irving Creek. The RMP shall contain, at a minimum, design and construction standards, specifications, and designs for stream restoration, surface drainage controls, erosion control methods and standards for unanticipated precipitation during restoration, compaction standards, an implementation schedule, a monitoring and reporting plan, and success criteria meeting the requirements specified herein.
- c. The RMP shall include map(s) and/or project designs at 1:12000 or larger scale (e.g., 1:6000) that delineate existing site conditions including existing channels, the projected restored slopes and stream channels, illustrating all restoration plan work points, spoil disposal sites, re-planting areas, and any other factor that requires mapping or site construction details to complete the scope of work.
- d. The RMP shall include a time schedule for completing the work including receiving any necessary permits from State, County and/or federal agencies that may be required. The time schedule must adhere to any regulatory deadlines prescribed by the State Water Resource Control Board or North Coast Regional Water Quality Control Board.
- e. To ensure a successful re-vegetation/earthen stabilization effort, site restoration and mitigation, the Discharger shall monitor and report for five years. All tree and shrub plantings must have a minimum of 85% success of thriving growth at the end of five years with a minimum of two consecutive years (two growing seasons) of monitoring after the removal of irrigation. Planting shall be adequately spaced to ensure adequate vegetative cover to control surface erosion and increase soil stability. In the event the re-planting fails, re-planting is required and the monitoring shall be extended for another five years until the 85% success rate of vegetation re-establishment is accomplished. The Dischargers are responsible for replacement planting, additional watering, weeding, invasive/exotic eradication, or any other practice to achieve the success criteria.
- f. The RMP must include a time schedule for completing the work, including receiving any necessary permits from State, County and/or federal agencies that may be required. The time schedule must describe and include installing temporary erosion control measures prior to October 15, 2016 and completion of slope and ditch outlet restoration by October 15, 2017.
- g. A monitoring plan is required for all site restoration and replanting to determine the success of stream restoration efforts and re-vegetation. The monitoring plan

must include regularly scheduled inspections, and established monitoring photo points of sufficient number to document the site recovery for five years or until the Site is restored, mitigation is complete, vegetation is reestablished, erosion is no longer ongoing and meets the success criteria in the approved RMP. These photo-documentation points shall be selected to document the stability of the tributaries. The Dischargers shall prepare a site map with the photo-documentation points clearly marked. Prior to and immediately after implementing the restoration and/or mitigation, the Dischargers shall photographically document the pre- and post-conditions of the tributaries at the pre-selected photo-documentation points. The Dischargers shall submit the pre-restoration photographs, the post-restoration photographs, and the map with the locations of the photo-documentation points to the Water Board as part of the as-built report as defined below.;

- h. The monitoring plan must include regularly scheduled inspection dates. We recommend October 15, January 5, and March 1 of each year, and a monitoring report is required within 30 days of each inspection. Monitoring Reports shall summarize monitoring results; describe any corrective actions made or proposed to address any failures of the Site and restoration measures (features to be assessed for performance and potential failure include, but are not limited to, erosion controls, stream bed and bank erosion, sediment discharges, work, and re-vegetation); and include narrative and photo documentation of any necessary mitigation and evidence of successful restoration and Site recovery for five years, or until Site recovery meets the approved success criteria. At the conclusion of restoration work, when the site is stable and the monitoring program has been fulfilled, submit a Summary report by **January 1, 2021 or the year that site remediation and replanting meets the approved success criteria**. The Executive Officer or designee will review the report and determine if the site meets all the requirements and the Order can be terminated.

3. In the event that the delivery system will require continued operation of all or a portion of the diversion ditch, retain an appropriately qualified and experienced California-licensed professional to evaluate and submit a report to the Executive Officer for review and approval by **October 15, 2016**. The report shall include the following:

- a. Evaluation of the entire ditch system, identifying all features and locations susceptible to failure by any of the physical processes and mechanisms described herein, (including but not limited to ditch seepage, berm fill saturation, upslope cutbank stability), and identifying where there is potential for sediment delivery to receiving waters in the event of a failure.

Specify appropriate corrective action measures or steps to take, including design and construction standards and an implementation schedule to complete the

defined scope of work. In addition, assess all areas of past failures to determine if the features reach Stanshaw Creek and deliver sediment and represent future delivery routes that require mitigation, propose mitigation as necessary to control sediment delivery and surface flows in the event of future failures or during annual rainfall events.

- b. A ditch operation and maintenance plan that includes an inspection and maintenance schedule and identifies any permits required for the scope of work anticipated. The plan should include proposed measures to ensure that the slopes above the ditch do not collapse into or block the ditch, that water seepage from the ditch does not saturate underlying materials and result in failure, that the ditch does not overtop the berm, that the berm does not fail, and that sediment does not deliver from the ditch to waters of the state. The plan must also include specifications for measures to be constructed and/or incorporated to prevent further erosion and sediment delivery from the discharge point to Irving Creek, and to restore and stabilize the channel between the discharge point and Irving Creek.
4. Regardless of the ultimate water delivery system, the following additional measures shall be taken by **September 10, 2016** to protect water quality:
- a. Assess slopes between the upper ditch and Stanshaw creek and the streambed of Stanshaw Creek and Irving Creek and the unnamed tributary to Irving Creek for stored sediment deposits and erosional sources associated with the past and current failures of the ditch. Identify all erosional issues and those that should be corrected, propose corrective measures and provide a schedule for implementing corrective measures.
 - b. Ensure that water used onsite, conveyed in the ditch and discharged does not adversely impact waters of the state. Develop a sampling plan to assess the quality of water in the ditch as it passes through the ranch property for potential sources of fecal coliform, total coliform, total petroleum hydrocarbons, temperature, and nutrients. The sampling plan shall assess water quality above the diversion and ranch complex, and below the ranch complex to evaluate if there are any pollutants entering the surface waters from the ditch or pond. Submit the Sampling Plan for approval by the Executive Officer by **September 10, 2016**. Upon approval implement the sampling plan and provide results of the sampling by **November 1, 2016**. In the event that sampling identifies inputs of constituents of concern, then develop a plan to remedy the discharges and submit the plan by **December 1, 2016** to the Executive Officer for review and approval.
5. Progress reports are due quarterly the first of the month starting on **October 1, 2016**. Quarterly progress report deadlines shall be January 1, April 1, July 1, and October 1 through January 1, 2022. Progress reports should include an update on project development and permitting, a description of steps taken to develop and

implement the required plans, and any unforeseen circumstances that may affect progress on meeting the deadlines and requirements of this Order. Progress reports will continue until the RMP is fully implemented.

6. **By October 15, 2018**, complete all approved restoration and mitigation measures.
7. **By December 15, 2018**, submit a Completion Report for the Restoration, and Monitoring Plan including an as built report. The Completion Report shall accurately depict all restoration and/or mitigation measures and document that the above plan(s) to restore, compensate for, avoid and minimize any further impacts to waters of the state and United States have been fully implemented.

GENERAL REQUIREMENTS AND NOTICES

8. **Duty to Use Qualified Professionals:** The Dischargers shall have the documentation, plans, and reports required under this Order prepared under the direction of appropriately qualified professionals. As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. The Dischargers shall include a statement of qualification and registration numbers, if applicable, of the responsible lead professionals in all plans and reports required under this Order. The lead professional shall sign and affix their registration stamp, as applicable, to the report, plan, or document.
9. **Signatory Requirements:** All technical reports submitted by the Discharger shall include a cover letter signed by the Discharger, or a duly authorized representative, certifying under penalty of law that the signer has examined and is familiar with the report and that to his or her knowledge, the report is true, complete, and accurate. The Discharger shall also state if they agree with any recommendations/ proposals and whether they approve implementation of said proposals. Any person signing a document submitted under this Order shall make the following certification:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

10. **Notice of Change in Ownership or Occupancy:** The Discharger shall file a written report on any changes in the Site's ownership or occupancy and/or any changes in responsible party or parties operating the ditch. This report shall be filed with the

Regional Water Board no later than 30 days prior to a planned change and shall reference the number of this Order.

11. Submissions: All monitoring reports, technical reports or notices required under this Order shall be submitted to: the Assistant Executive Officer and Stormer Feiler:

Assistant Executive Officer - Shin-Roei Lee

Shin-Roei.Lee@waterboards.ca.gov

Stormer.Feiler@waterboards.ca.gov

By mail to: North Coast Regional Water Quality Control Board, 5550 Skyline Blvd. Suite A, Santa Rosa, CA 95403

12. Other Regulatory Requirements: The Dischargers shall obtain all applicable local, state, and federal permits necessary to fulfill the requirements of this Order prior to beginning the work.

13. Cost Recovery: Pursuant to Water Code section 13304, the Regional Water Board is entitled to, and may seek reimbursement for, all reasonable costs it actually incurs to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order.

14. Delayed Compliance: If for any reason, the Dischargers are unable to perform any activity or submit any document in compliance with the schedule set forth herein, or in compliance with any work schedule submitted pursuant to this Order and approved by the Assistant Executive Officer, the Dischargers may request, in writing, an extension of the time specified. The extension request shall include justification for the delay. Any extension request shall be submitted as soon as a delay is recognized and prior to the compliance date. An extension may be granted by revision of this Order or by a letter from the Assistant Executive Officer.

15. Potential Liability: If the Dischargers fail to comply with the requirements of this Order, this matter may be referred to the Attorney General for judicial enforcement or may issue a complaint for administrative civil liability. Failure to comply with this Order may result in the assessment of an administrative civil liability up to \$10,000 per violation per day, pursuant to California Water Code sections 13268, 13350, and/or 13385. The Regional Water Board reserves its right to take any enforcement actions authorized by law, including but not limited to, violation of the terms and condition of this Order.

16. No Limitation of Water Board Authority. This Order in no way limits the authority of the Regional Water Board to institute additional enforcement actions or to require additional investigation and cleanup of the Site consistent with the Water Code. This Order may be revised as additional information becomes available.

17. Modifications. Any modification to this Order shall be in writing and approved by the Executive Officer of the Regional Water Board, including any potential extension requests.

18. Requesting Review by the State Water Board: Any person aggrieved by this or any final action of the Regional Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and Title 23, California Code of Regulations, section 2050 et al. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the State Water Board must receive the petition on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

This Order is effective upon the date of signature.

Matthias Digitally signed by
St. John Matthias St. John
Date: 2016.08.04
18:06:55 -07'00'
Water Boards

Matthias St. John
Executive Officer

16_0031_MarbleMountainRanch_CAO



WR-3
UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

West Coast Region
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404

August 3, 2016

Refer to NMFS No: 150307WCR2016AR00269

Barbara Evoy, Deputy Director
Enforcement Unit 5, Division of Water Rights
State Water Resources Control Board
1001 I Street, 14th Floor
Sacramento, California 95814

Dear Ms. Evoy:

Thank you for requesting technical assistance from NOAA's National Marine Fisheries Service (NMFS) to develop a flow recommendation for Stanshaw Creek that will protect listed coho salmon and their habitat and other important aquatic ecosystem functions. Stanshaw Creek, a tributary to the Lower Klamath River, supports Southern Oregon/Northern California Coast (SONCC) coho salmon (*Oncorhynchus kisutch*) evolutionarily significant unit (ESU) (70 FR 37160, June 28, 2005) and SONCC coho salmon ESU critical habitat (64 FR 24049, May 5, 1999) designated under the Endangered Species Act (ESA) (Figure 1). Stanshaw Creek is a critical cold water tributary to the Klamath River. Protecting low flow has been identified in the SONCC coho salmon recovery plan as a priority in the Klamath River for coho salmon recovery (NMFS 2014). In addition to listed coho salmon, Stanshaw Creek also supports amphibians and other aquatic life.

In 2001, NMFS submitted a water right protest to the California State Water Resources Control Board, Division of Water Rights (Division of Water Rights) in response to the Marble Mountain Ranch application for an appropriative water right from Stanshaw Creek. The NMFS protest letter identified a minimum bypass flow protective of coho salmon and their critical habitat. Since the original application and NMFS protest, the Division of Water Rights completed the *Division of Water Right Report of Inspection, Registration: D030945*. The inspections occurred on December 17, 2014 and February 12, 2015. The Division of Water Rights investigated the water right and found that the Marble Mountain Ranch has a pre-1914 right to divert up to 3.0 cubic feet per second (cfs). In addition to this finding, the Division of Water Rights also described the Marble Ranch diversion as "a potential waste and unreasonable use of water, an unreasonable method of withdrawal, and a harm to public resources." The Division of Water Rights requested assistance from the California Department of Fish and Wildlife and NMFS to establish a bypass flow on Stanshaw Creek that is protective of listed coho salmon and riparian ecology, both of which are considered Public Trust Resources.



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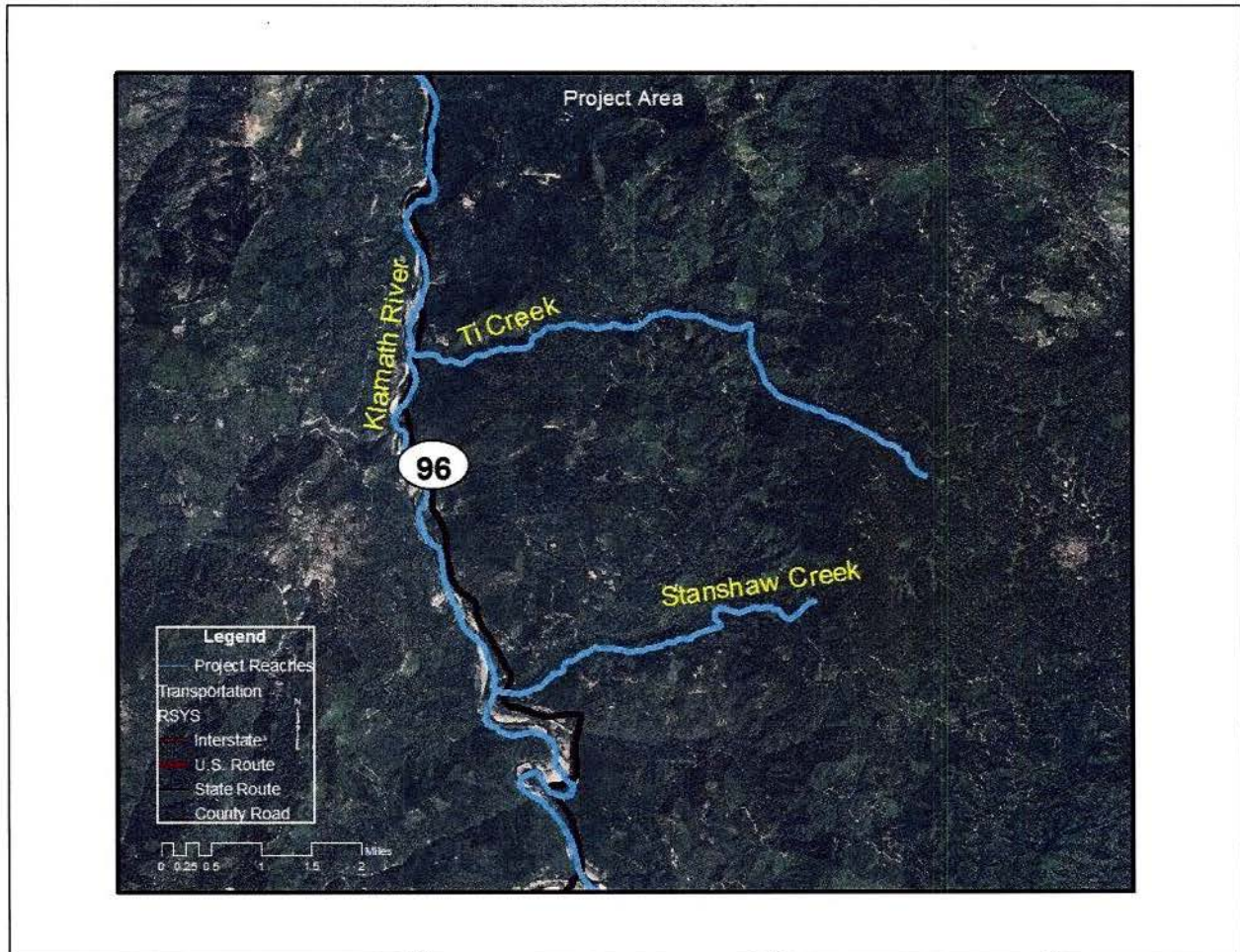


Figure 1 Stanshaw Creek Diversion Project Area.

Importance of Stanshaw Creek Flows to Coho Salmon and Stream Ecology

Juvenile coho salmon and other salmonids in the Klamath River rely on the cold water refugia provided by off channel habitat and tributaries such as Stanshaw Creek (NMFS 2014). When the mainstem Klamath River temperatures rise and flows recede, juvenile coho salmon seek cooler off-channel habitat where they may remain throughout the warm season (May through October). The off-channel pond at the Stanshaw Creek confluence with the Klamath River provides important rearing habitat for juvenile coho salmon, as well as for Chinook salmon and steelhead. In the Klamath River, mainstem temperatures can range from 21 – 27 °C in July and August with daily extremes as high as 29.5 °C (Belchick 1997, Bartholow 2005). Preferred temperature ranges for juvenile coho salmon rearing have been reported from 11.4 - 14.6 °C (Brett 1952, Coutant 1977, Beschta *et al.* 1987) with lethal temperatures occurring at 25.8 °C (Beschta *et al.* 1987) and cessation of growth at a temperature of 20.3 °C (Brett 1952, Reiser and Bjornn 1979). Besides directly causing physiological stress, elevated water temperatures in the Klamath River are correlated with an increased prevalence of diseases, including *Ceratonova shasta*, that cause mortality in Klamath River coho salmon (Hallett *et al.* 2012, Ray *et al.* 2012)

The flow volume in Stanshaw Creek is important during the late spring and summer to provide attraction flow and access for juvenile coho salmon and other salmonids to cold water refugia. Access to tributaries becomes increasingly important as water temperatures in the Klamath River begin to reach levels that cause stress and limit juvenile coho salmon growth, typically starting in mid-May and continuing through October (Bartholow 2005, Belchik 1997). Water temperatures lethal to coho salmon and other salmonids occur in the mainstem Klamath River in July and August, reaching exceedence levels of over 50 percent (Asarian 2013). As such, coho salmon and other salmonids need access to cold water tributaries before the mainstem water temperature reaches stressful or lethal levels if they are to survive in the Klamath River.

The connectivity between the Klamath River and the off-channel pond and stream is most important to coho salmon in this warm transition period, but coho salmon may continue to use the mainstem Klamath River for feeding opportunities even as the mainstem reaches lethal levels during some portions of the day. Witmore (2014) documented a daily migration pattern of juvenile coho salmon from Tom Martin Creek (a coldwater tributary) into the mainstem Klamath River, presumably to access food resources. This migration pattern continued throughout the summer as flows from Tom Martin Creek created a cold water plume in the mainstem Klamath River.

In addition to access to Stanshaw Creek, streamflow from Stanshaw Creek is important for coho salmon after flows recede below the point of connectivity to the Klamath River. The low flow in Stanshaw Creek maintains the off-channel pool water quality and provides a source of food supply to the pool.

Stanshaw Creek Stream Flow Estimate

The Stanshaw Creek watershed is almost 100% forested and flows in a westerly direction to its confluence with the Klamath River. The watershed area is 4.3 square miles above the confluence with the Klamath River and approximately 4.0 square miles above the point of diversion (POD). A diversion ditch runs from the POD on Six Rivers National Forest land to the Marble Mountain Ranch. Stanshaw Creek is ungagged, therefore, the low flow hydrograph was estimated by correlation with USGS hydrographic data for Ti Creek, located in a 9.46 square mile watershed to the east of Stanshaw Creek. The streams are expected to have a similar hydrologic response because of their similar size, elevations, vegetation, geology, soil type, and both flow in a westerly direction into to the Klamath River.

Daily average stream flow for Stanshaw Creek was estimated by prorating the Ti Creek flow data with the proportional watershed area (*i.e.*, $Q_{Stanshaw} = Q_{Ti} \times \frac{Area\ Stanshaw}{Area\ Ti}$). Table 1 lists the estimated minimum 7-day average flow for each low flow month and year. Based on this calculation, Stanshaw Creek has an estimated average annual flow of 10.1 cfs and an average 7-day minimum low flow of 2.6 cfs at the point of the Marble Mountain Ranch diversion. The lowest flow typically occurs in October though the estimates show that streamflow begins to recede toward low flow as early as May and the lowest flow may occur as late as November.

Table 1 Stanshaw Creek annual minimum 7-day average streamflow estimates based on prorating the Ti Creek flow data by proportional watershed area.

Minimum of 7-day average per year						
month	1960	1961	1962	1963	1964	Min. for month
May		11.3	4.7	14.1	7.6	4.7
June		6.3	4.6	8.9	5.2	4.6
July		4.2	3.2	5.7	3.9	3.2
August		3.5	2.8	4.3	3.3	2.8
September		3.2	2.5	3.9	2.7	2.5
October	2.4	3.2	1.5	3.5		1.5
November	2.7	3.7	1.3	4.9		1.3
December	5.1	4.7	9.1	8.0		4.7
Min. for year	2.4	3.2	1.3	3.5	2.7	1960-1964 Overall min. = 1.3 cfs Average annual min. =2.6 cfs

The Ti Creek daily streamflow record used for these estimates spans only four years (WY 1961-1964). Therefore, the Ti Creek data was further assessed to ensure that the period of record for Ti Creek did not represent an abnormal period of record for stream flow.

The water year type during the 1960 through 1964 period was evaluated by comparing to the full record of nearby longer term gages that included the many years before and after the 1960-1964 period. The gages used for comparison and their period of record are listed in Table 2.

Table 2 Period of record of long term gages near Stanshaw and Ti Creek.

USGS Stream gage	Period of record evaluated
# USGS 11521500 INDIAN C NR HAPPY CAMP CA	1957-2014
# USGS 11523000 KLAMATH R A ORLEANS	1927-2015
# USGS 11522500 SALMON R A SOMES BAR CA	1929-2015

Figure 2 shows the annual minimum 7-day average flow per square mile for the available stations. The figure includes the Stanshaw Creek estimates for 1960-1964. The data indicate that watershed area is negatively correlated with low-flow per square mile where there is a higher minimum flow per square mile in the smaller watersheds. The watershed area of Ti Creek is two orders of magnitude smaller than Indian Creek, which is reflected in the much higher minimum flows per square mile. Despite the differences in minimum low flow based on watershed size, the low flow for the all gages follow a similar pattern from year to year which helps verify that the streams have a similar hydrologic response based on the water year type. Redwood Creek, which is located on the coast of Northern California near Orick, is included on the figure to show that inland Klamath River streams have a higher and more constant low flow per square mile than the coastal streams.

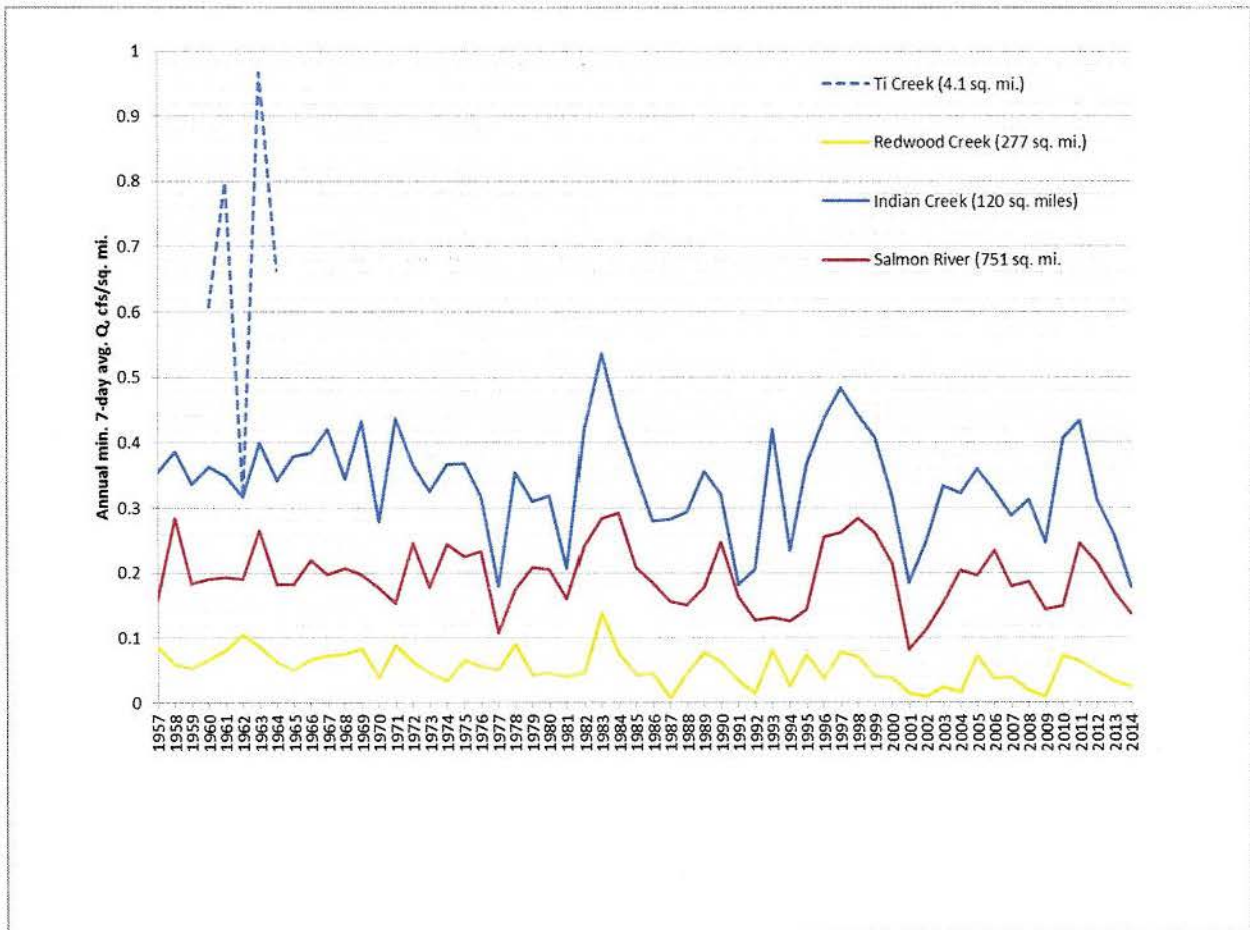


Figure 2 Comparison of annual minimum of 7-day average flow per square mile.

Flow duration curves were developed for the annual minimum 7-day average flow for each of the gages (Figure 3). The annual minimum 7-day average stream flows for 1960 through 1964 period are highlighted on each duration curve, and show the 1960 through 1964 period represents a range of moderate years in the low flow season. A flow duration curve for Redwood Creek is included on

Figure 3. Redwood Creek is located in the coastal range where snow has a much smaller effect on the hydrology and the geology is different. The figure helps verify that the hydrologic response of the inland streams is relatively similar, while the coastal Redwood Creek is different. The inland gages tend to have less variation at low flow from year to year. Figure 2 and Figure 3 work together to demonstrate that Stanshaw Creek has a similar hydrologic response as the other Klamath River watershed gages and that the 1960-1964 period represent moderate flow years and not an abnormal period of record.

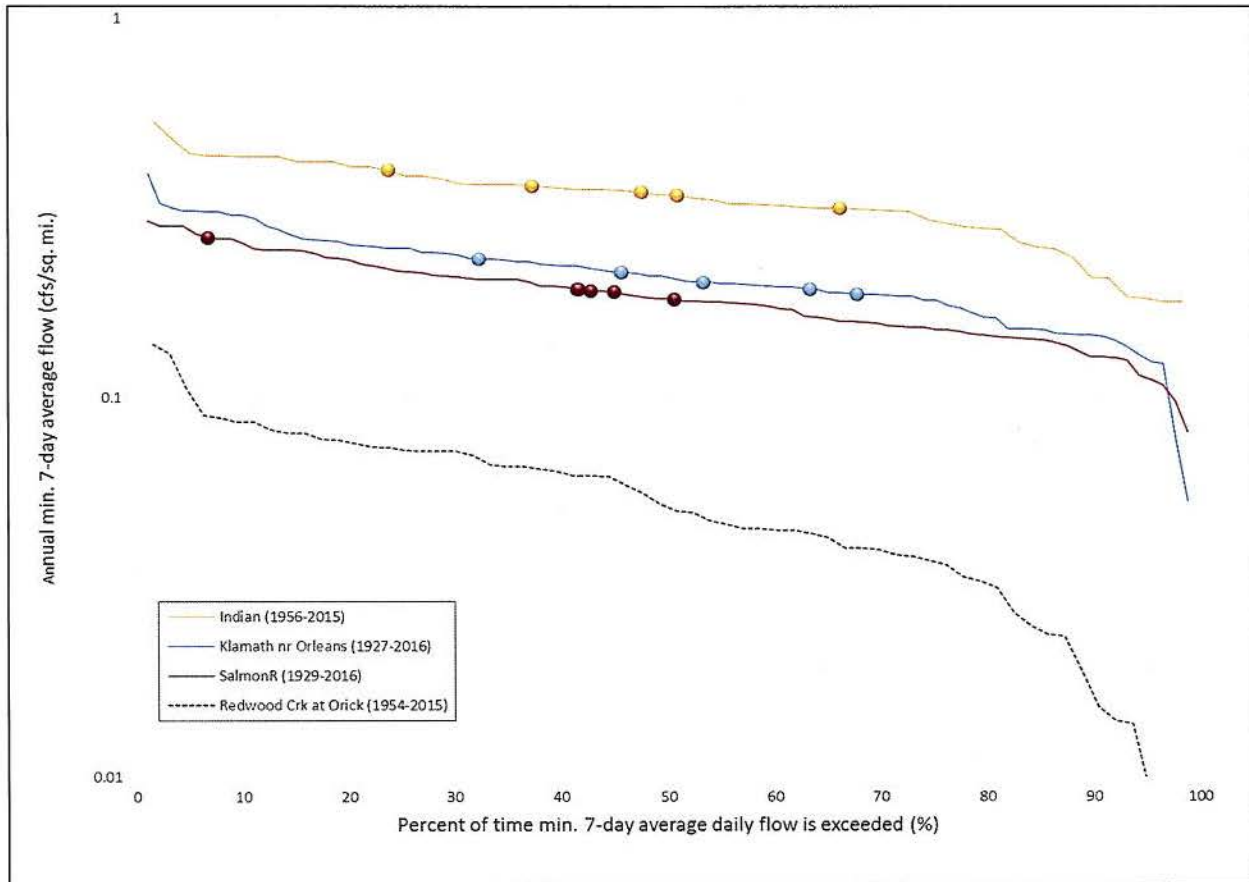


Figure 3 Annual Minimum 7-day average exceedence curves for long-term stream flow gages near Stanshaw and Ti Creek with years 1960-1964 marked.

Streamflow was measured in Stanshaw Creek several times from 2001-2014 above the POD (Table 3). Flow measurements were taken during low flow, but not necessarily at the lowest flow of the year. Two measurements were taken in 2012 showing a 0.5 cfs recession from September to October. Assuming recession at this rate from September to October, the lowest annual minimum flow for Stanshaw Creek in 2003 would have receded to 1.9 cfs, and the average of the years measured would have been 2.2 cfs. The average and minimum of the measured values are similar to the calculated average of 2.6 cfs and minimum of 1.3 cfs for Stanshaw Creek shown in Table 1 when using Ti Creek as a reference stream. The minimum flows of Salmon River and Indian Creek for each year from 2001 through 2014 are shown in Figure 4. From the Indian Creek and Salmon River

comparison in Figure 4, the measured flows from 2001-2014 likely span a full range of water year types. Therefore, NMFS is confident that using Ti Creek hydrologic data prorated by proportional watershed area provides a viable surrogate to estimate low flows for Stanshaw Creek for wet through dry years.

Table 3 Stanshaw Creek flow measurements at the POD

Date	Stanshaw Creek flow above POD (cfs)	Measured by
9/4/2003	2.4	Orleans RD
9/13/2011	3.2	Karuk
9/20/2012	2.5	NMFS
10/4/2012	2.0	Orleans RD

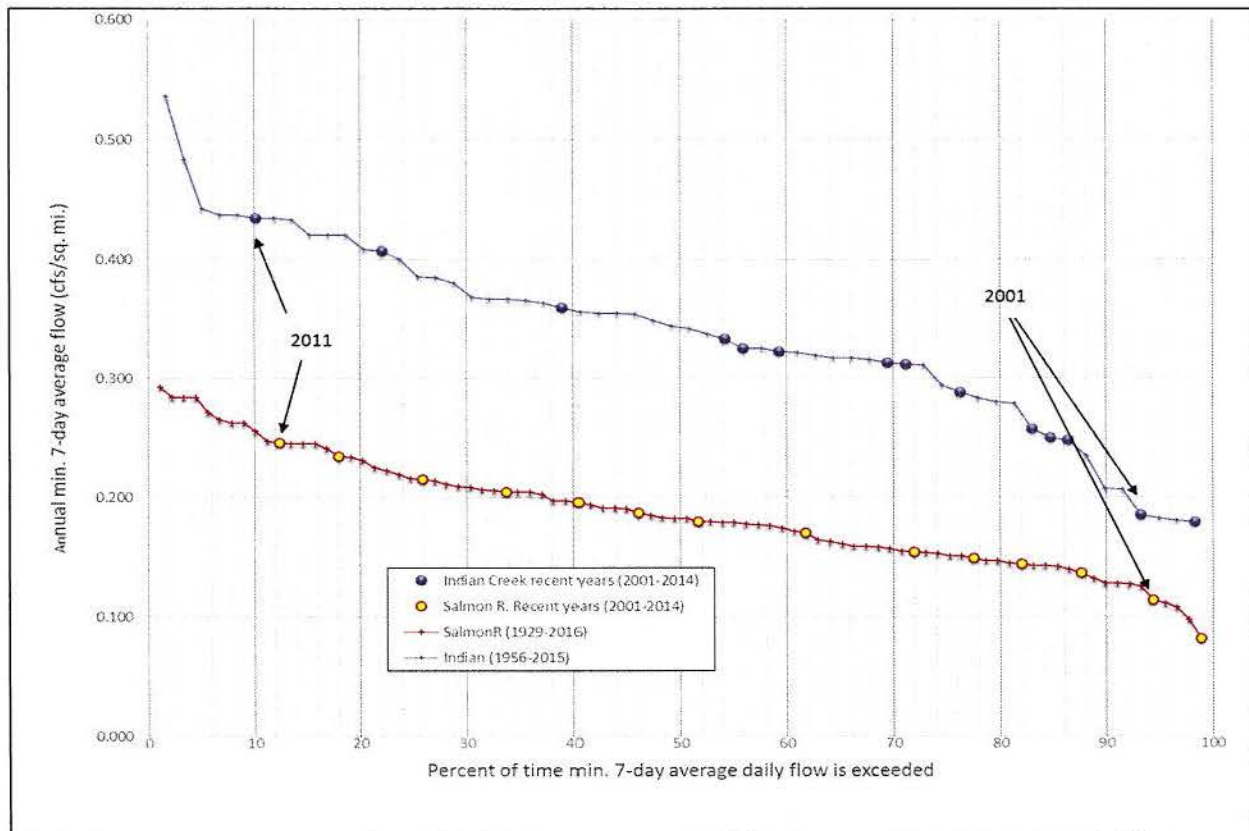


Figure 4 Data points for recent years are highlighted on the Salmon River and Indian Creek annual minimum 7-day average flow duration curve. The data show that 2001-2015 contained a full range of summer low flow from above average in 2011 to very dry in 2001.

Instream flow recommendation

The Marble Mountain Ranch diversion from Stanshaw Creek consists of both consumptive and non-consumptive use. The consumptive diversion is used to provide domestic and irrigation water for the Marble Mountain Ranch owners and business. The non-consumptive diversion is used to generate hydroelectric power. Currently, the diversion for hydroelectric generation is routed out of Stanshaw Creek watershed and discharged into Irving Creek, a tributary to the Klamath River to the west of Stanshaw Creek.

NMFS recommended bypass stream flow for the Marble Mountain Ranch diversion on Stanshaw Creek is based on an unimpaired hydrograph and includes rerouting the non-consumptive use back to Stanshaw Creek. Stanshaw Creek watershed is almost 100% forested with two small upstream diversions that State Water Board determined to be insignificant for this analysis. Based on this assumption, Stanshaw Creek streamflow just above the point of diversion is considered unimpaired for this bypass flow recommendation.

“Unimpaired hydrograph” is the term used to represent the hydrograph that should exist without diversions. The distinction between the term “unimpaired hydrograph” and the “natural hydrograph” (with no human caused alterations) is made to acknowledge that there may be human caused watershed-wide changes (*e.g.*, roads, vegetation changes, human caused climate change) that have also altered the natural hydrograph, but are not in direct control by the water users.

Reductions in the various components of the unimpaired hydrograph are assumed to correspond to reductions in stream habitat (Richter *et al.* 1996, Poff 1997). While any diversion may have an impact, a diversion of only a small percentage of unimpaired flow will maintain the natural variability of the hydrograph. A variable diversion rate that maintains the natural shape of the hydrograph is preferred over a minimum bypass flow recommendation that would flatten the receding part of the annual hydrograph. Diversions that “flatline” the receding part of the hydrograph, as is the case with a single bypass flow recommendation, will negatively affect juvenile fish outmigration as well as the quality of juvenile rearing habitat when their growth rate is high. Fish size is a critical factor in coho salmon smolt survival when migrating into the ocean (Holtby *et al.* 1990).

By analyzing case studies where ecologic goals were used to set the magnitude of water diversions, Richter *et al.* (2011) found that diversions limited to 6-20% of the unimpaired flow provided protection to the 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 natural structure and function of the riverine ecosystem. Klamath River SONCC coho salmon have a critical need for the 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, NMFS recommends a bypass flow that maintains at least 90% of the unimpaired flow. In addition to the critical need for cold water refugia in the Klamath, other considerations in setting this high standard for a bypass flow is that the actual flows at the point of diversion may already be somewhat impaired by existing and past land use, unaccounted diversions, and changing

climate. Also, streamflow measurements used to direct the diversion could have measurement errors which may result in unintentionally diverting a higher percentage of flow.

Since the POD is above the anadromous reach, an additional non-consumptive diversion for hydropower generation may occur in the reach between the POD and upper limit of anadromy provided that a minimum bypass flow is maintained in this reach to protect the low flow channel and edgewater important for macro-invertebrate production. An additional requirement is that the non-consumptive portion of the diversion is returned to Stanshaw Creek at the upper limit of anadromy and that the stream water temperature remains consistent with the stream temperature above the diversion to maintain the low temperature benefit of the cold water refugia.

There is no single flow identified as the flow that maintains connectivity of Stanshaw Creek and the Klamath River since the connection depends on site features that vary with each water year (*e.g.*, groundwater flow, water level in both the Klamath and Stanshaw Creek, and the size of the sediment berm at the confluence). Taylor (2015) estimated a Stanshaw Creek flow of 1.3 cfs when the pond was not connected to the mainstem on November 17, 2014. The lowest flow in Stanshaw Creek that ensures connectivity is probably between 2.0 and 3.0 cfs considering the annual variation in the groundwater and berm configuration. Depending on the water year type and associated timing of the spring recession period, there is a large range of the annual 7-day low flow minimum and maximum from May through October which is the beginning and end of the warm season. For the moderate water year types analyzed, the pond may become disconnected by late July or the flow may stay connected to the Klamath throughout the low flow season during a wet year. Although connection to the pond would be beneficial at all times, it is most important at flows that occur in May and June as the Klamath River temperatures begin to rise when juvenile coho salmon are seeking refuge in the cooler water. Based on the flow analysis, an unimpaired Stanshaw Creek should stay connected to the Klamath River throughout May and June in all but the driest years.

Each component of the receding hydrograph has an important biological role to provide good water quality to the Klamath River, to provide an attractive flow and access for juvenile coho salmon to Stanshaw Creek and the off channel pond before temperatures rise in the mainstem, and to maintain good water quality and food supply to the pond and Stanshaw Creek throughout the low flow period. Flows need to be conserved on wet years to provide the tributary connection, improved water quality, and cold water attractive flow into the Klamath. Flows need to be conserved on dry years to maximize the water quality and food supply to the off-channel pond and cold water seep to the Klamath. Because of the thermal sensitivity and connectivity needed throughout the summer, the Marble Mountain Ranch diversion should be limited to zero or a small fraction of the flow as the flows recede and water temperatures rise. 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. By design, a 10% diversion will decrease in size as the flow decreases. For example, as the flow drops from 3 cfs to 2 cfs the allowable diversion would decrease from 0.3 cfs to 0.2 cfs. As discussed previously, diversions of 10% or less of the unimpaired flow are considered to be protective of stream ecology (Richter *et al.* 2011).

The upper reaches of Stanshaw Creek provide important macro-invertebrate production and a food source to the Klamath River, the off-channel pond, and the anadromous reach of Stanshaw Creek. The topography of five cross sections were surveyed in 2002 in the reach above the Highway 96 culvert, above the assumed upper limit of anadromy. Hydraulic analyses of the five cross sections demonstrate the changing channel width as the flows recede. Figure 5, Figure 6, and Figure 7 show an inflection in the water surface width as the flows drop between about 1.5 to 2.0 cfs for three representative cross sections (the other two cross sections are more affected by assumed boundary conditions in the hydraulic analysis). The inflection on the curve represents the point where the wetted channel width drops off relatively quickly with flow. Maintaining a flow above the inflection point is important to protect macro-invertebrate production and to provide a minimum level of edge water rearing area. Based on this analysis, a two cubic feet per second bypass flow should protect the edge water in the reach between the POD and the upper limit of anadromy. The minimum bypass of 2.0 cfs at the POD assumes a that the non-consumptive diversion of up to 3.0 cfs will be returned to Stanshaw Creek above the upper limit of anadromy. Even with 2.0 cfs minimum bypass flow, NMFS anticipates natural variation in the bypass flow at the POD as demonstrated on the example diversion shown in Figure 8.

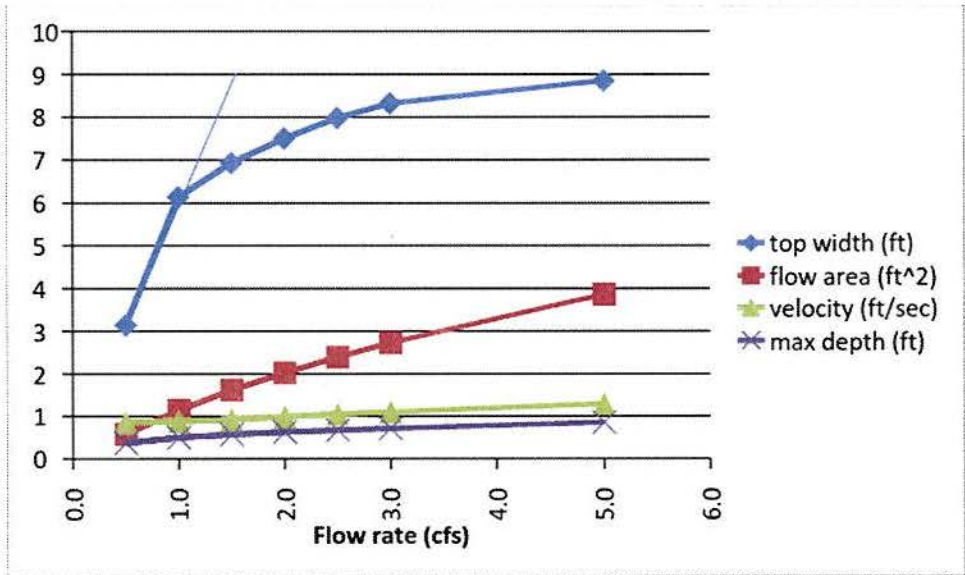


Figure 5 Cross Section 2 of Stanshaw Creek.

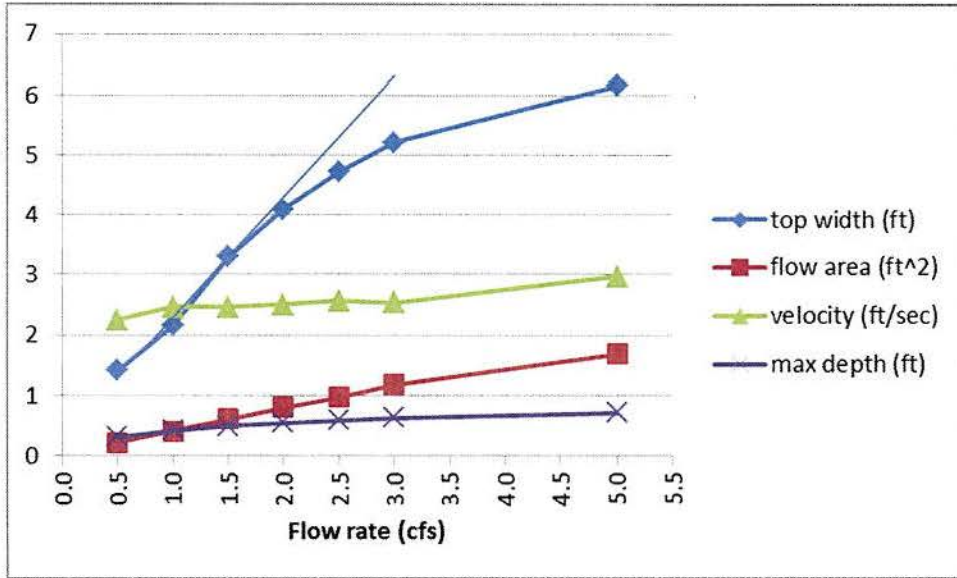


Figure 6 Cross Section 3 of Stanshaw Creek.

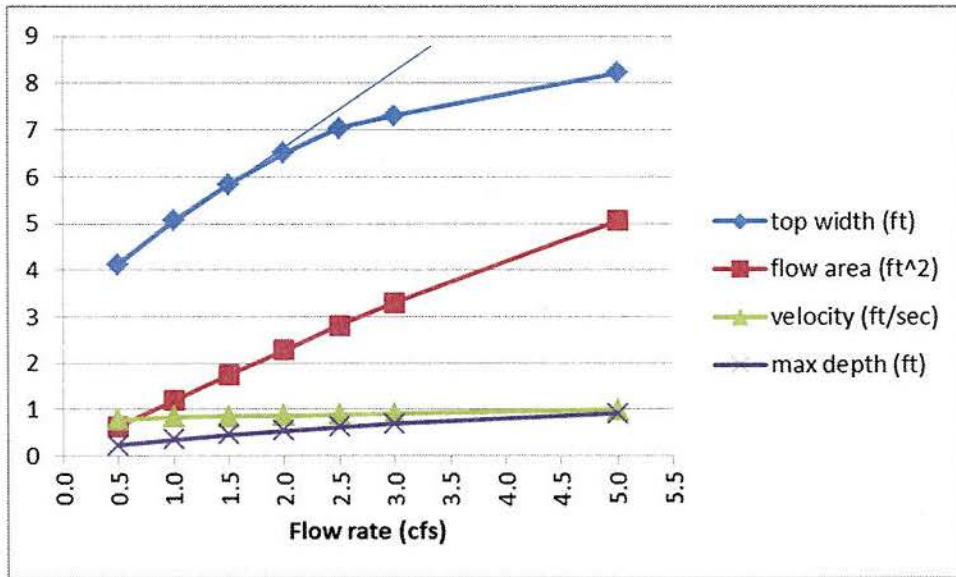


Figure 7 Cross Section 4 of Stanshaw Creek.

In summary, Stanshaw Creek low flows provide critical cold water to the Klamath River and access to cold water, off-channel refugia and food supply during low flow months. A maximum 3.3 cfs diversion that bypasses at least 90% of the unimpaired streamflow into the anadromous reach throughout the year will provide habitat to help conserve and protect listed coho salmon. In reaches above anadromy, a 2 cfs minimum bypass flow will be protective of listed salmonid habitat provided the non-consumptive diversion is returned to Stanshaw Creek with a negligible increase in water

temperature. The non-consumptive (*i.e.*, hydropower) diversion is expected to only occur when streamflow is relatively high prior to the low flow season. The non-consumptive diversion is dependent on the ability to use the water and return it to Stanshaw Creek above the anadromous reach while maintaining a minimum of 2 cfs in the stream to maintain important ecosystem functions. The non-consumptive diversion used for hydropower would be limited to the minimum operating threshold of the turbine. After the threshold is reached, the non-consumptive diversion would cease, so the diversion would be limited to consumptive use and a 90% bypass would occur at the POD.

Figure 8 shows an example of the bypass flow recommendation using the Stanshaw Creek daily average stream flow estimates. The figure shows the estimated unimpaired hydrograph for the 1962 recession period and throughout the low flow season, along with the 90% bypass flow after the non-consumptive diversion is returned and the bypass at the POD with a minimum of 2 cfs. Also, shown are the diversions for consumptive and non-consumptive use. Under this bypass flow recommendation, at least 90% of the unimpaired hydrograph is preserved in the anadromous reach. This bypass flow recommendation has a daily variation as the flows naturally recede. If methods to control diversion on a real-time basis cannot be developed, further analysis could be done to establish seasonal diversions that would cover all water year type on a weekly or biweekly or monthly basis to allow manual control of the diversion.

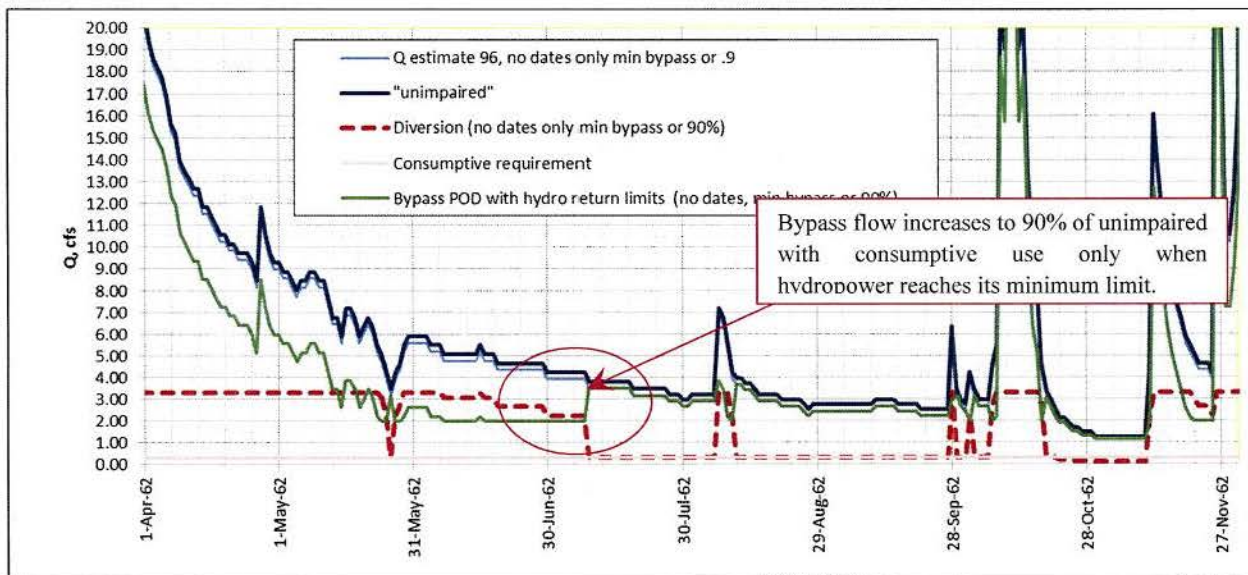


Figure 8 Example of bypass flow recommendation with assumed 0.3 cfs consumptive use and maximum 3.0 cfs non-consumptive use.

Please contact Margaret Tauzer, NMFS hydrologist/hydraulic engineer in Arcata, California at (707) 825-5174 for any additional questions concerning this flow recommendation.

Sincerely,



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References

- Asarian, E. K., Jacob PhD. 2013. Synthesis of Continuous Water Quality Data for the Lower and Middle Klamath River, 2001-2011. Klamath Basin Tribal Water Quality Group.
- Bartholow, J. M. 2005. Recent water temperature trends in the lower Klamath River, California. *North American Journal of Fisheries Management* **25**:152-162.
- Belchick, M. 1997. Cool Water Areas of the Klamath River. Yurok Tribal Fisheries Program, Klamath, CA.
- Beschta, R. L., R. E. Bilby, G. W. Brown, L. B. Holtby, and T. D. Hofstra. 1987. Stream temperature and aquatic habitat: Fisheries and forestry interactions. *Streamside Management: Forestry and Fishery Interactions* **57**:191-232.
- Brett, J. R. 1952. Temperature tolerance in young Pacific salmon, genus *Oncorhynchus*. *Journal Fishery Resource Board of Canada* **9**:265-323.
- Coutant, C. C. 1977. Compilation of Temperature Preference Data. *Journal of the Fisheries Research Board of Canada* **34**:739-745.
- Hallett, S. L., R. A. Ray, C. N. Hurst, R. A. Holt, G. R. Buckles, S. D. Atkinson, and J. L. Bartholomew. 2012. Density of the Waterborne Parasite *Ceratomyxa shasta* and its Biological Effects on Salmon. *Applied and Environmental Microbiology* **78**:3724-3731.

- Holtby, L. B., B. C. Anderson, and R. Kadowaki. 1990. Importance of Smolt Size and Early Ocean Growth to Interannual Variability in Marine Survival of Coho Salmon (*Onchorhynchus kisutch*). Canadian Journal of Fish Aquatic Science:14.
- NMFS. 2014. Final Recovery Plan for the Southern Oregon/Northern California Coast Evolutionarily Significant Unit of Coho Salmon (*Oncorhynchus kisutch*). National Marine Fisheries Service, Arcata, CA.
- Poff, N. L. A., J. David; Bain, Mark B.; Karr, James R.; Prestegard, Karen L.; Richter, Brian D.; Sparks, Richard E.; Stromberg, Julie C. 1997. The Natural Flow Regime. BioScience 47:15.
- Ray, R. A., R. A. Holt, and J. L. Bartholomew. 2012. Relationship between Temperature and Ceratomyxa Shasta-Induced Mortality in Klamath River Salmonids. Journal of Parasitology 98:520-526.
- Reiser, D. W. and T. C. Bjornn. 1979. Influence of Forest and rangeland management on anadromous fish habitat in the Western United States and Canada. University of Idaho, Moscow, Idaho Cooperative Fishery Research Unit.
- Richter, B. D., J. V. Baumgartner, J. Powell, and D. P. Braun. 1996. A method for assessing hydrologic alteration within ecosystems. Conservation biology:1163-1174.
- Richter, B. D., M. M. Davis, C. Apse, and C. Konrad. 2011. A Short Communication A Presumptive Standard for Environmental Flow Protection. The Nature Conservancy, Charleston, Virginia.
- Taylor, R. 2015. Findings report for Stanshaw Creek habitat and instream flow assessment.