

**DIVISION OF WATER RIGHTS  
REPORT OF INSPECTION**

**REGISTRATION: D030945**

**STATEMENTS: S015022 & S016375**

**Date of Inspection:** 12-17-2014 and 2-12-2015

**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 appropriate 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.4<sup>th</sup> 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.4<sup>th</sup> at 903.) Although instream public trust resources may constitute a conflicting claim (see, e.g., *Millview*, 229 Cal.App.4<sup>th</sup> 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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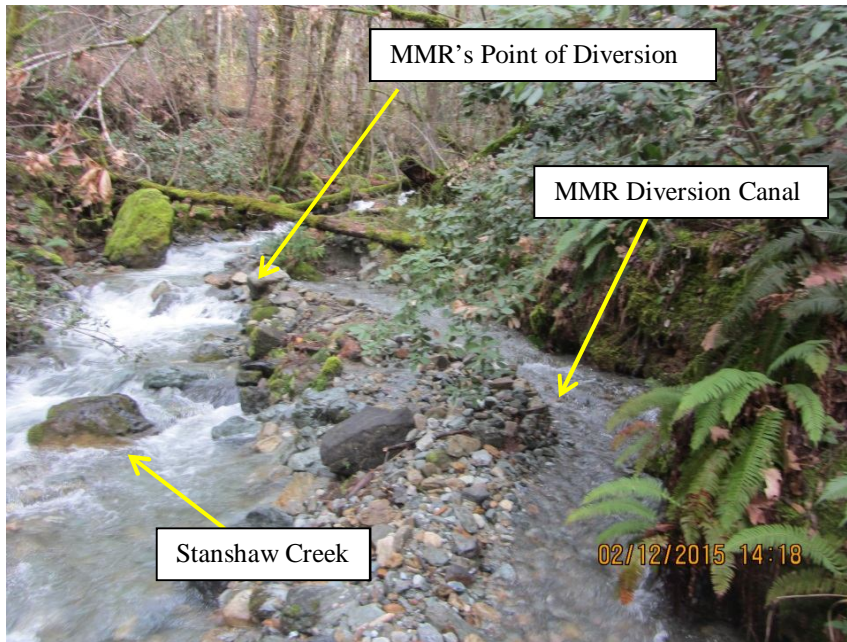


Photo 3 – MMR POD on Stanshaw Creek



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

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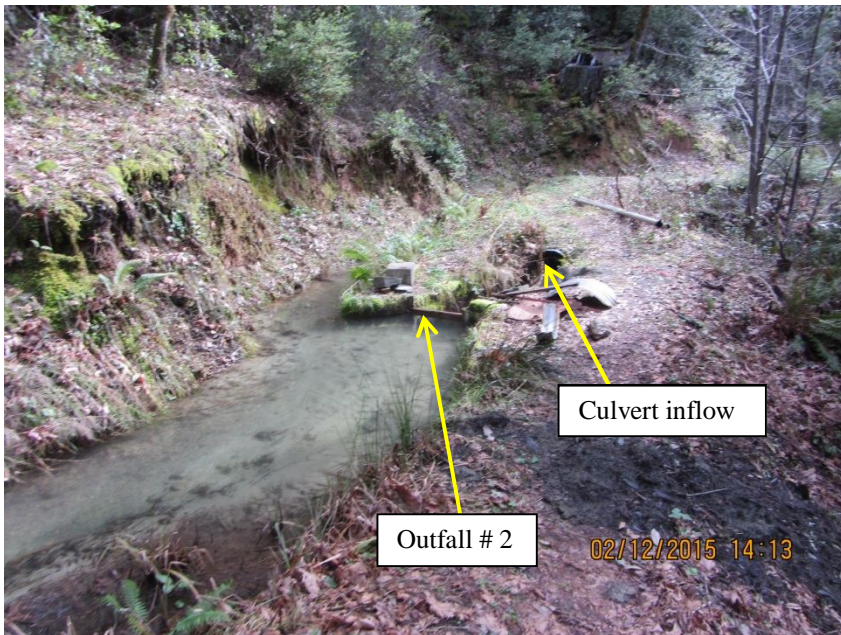


Photo 5 – Second outfall structure in diversion ditch.



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

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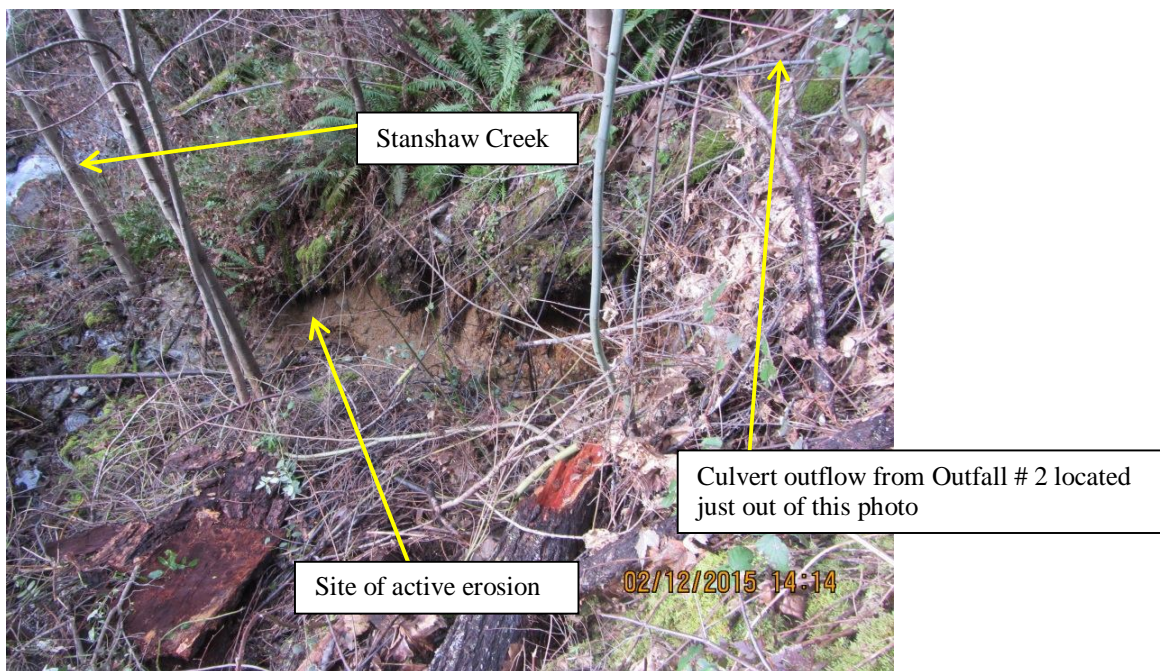


Photo 7 – Large erosion feature caused by outfall # 2.

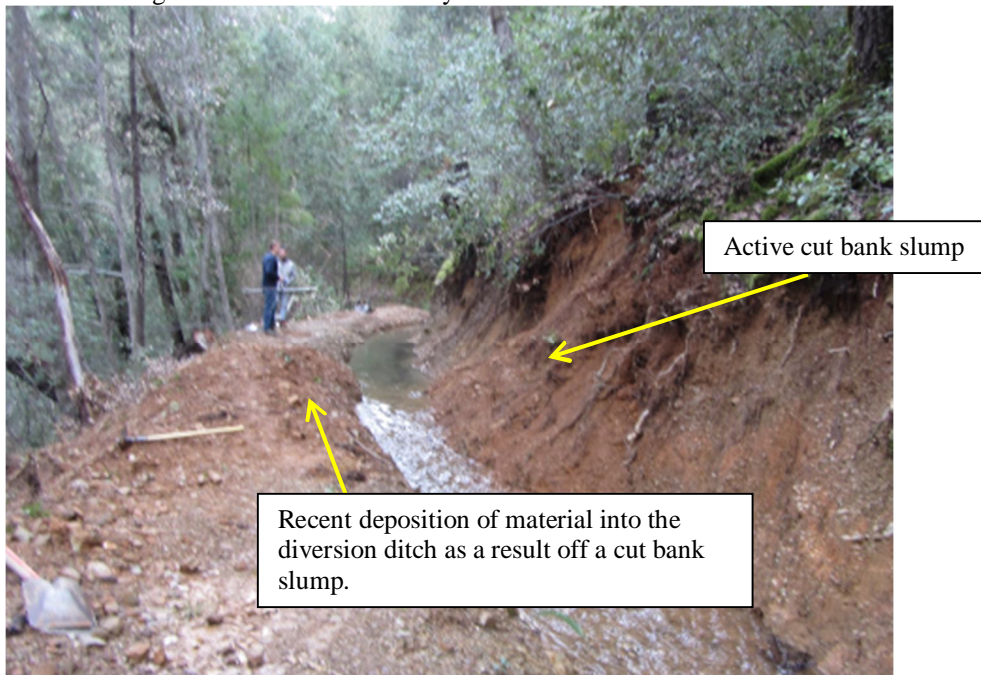


Photo 8 – Area of active cut bank slumping.

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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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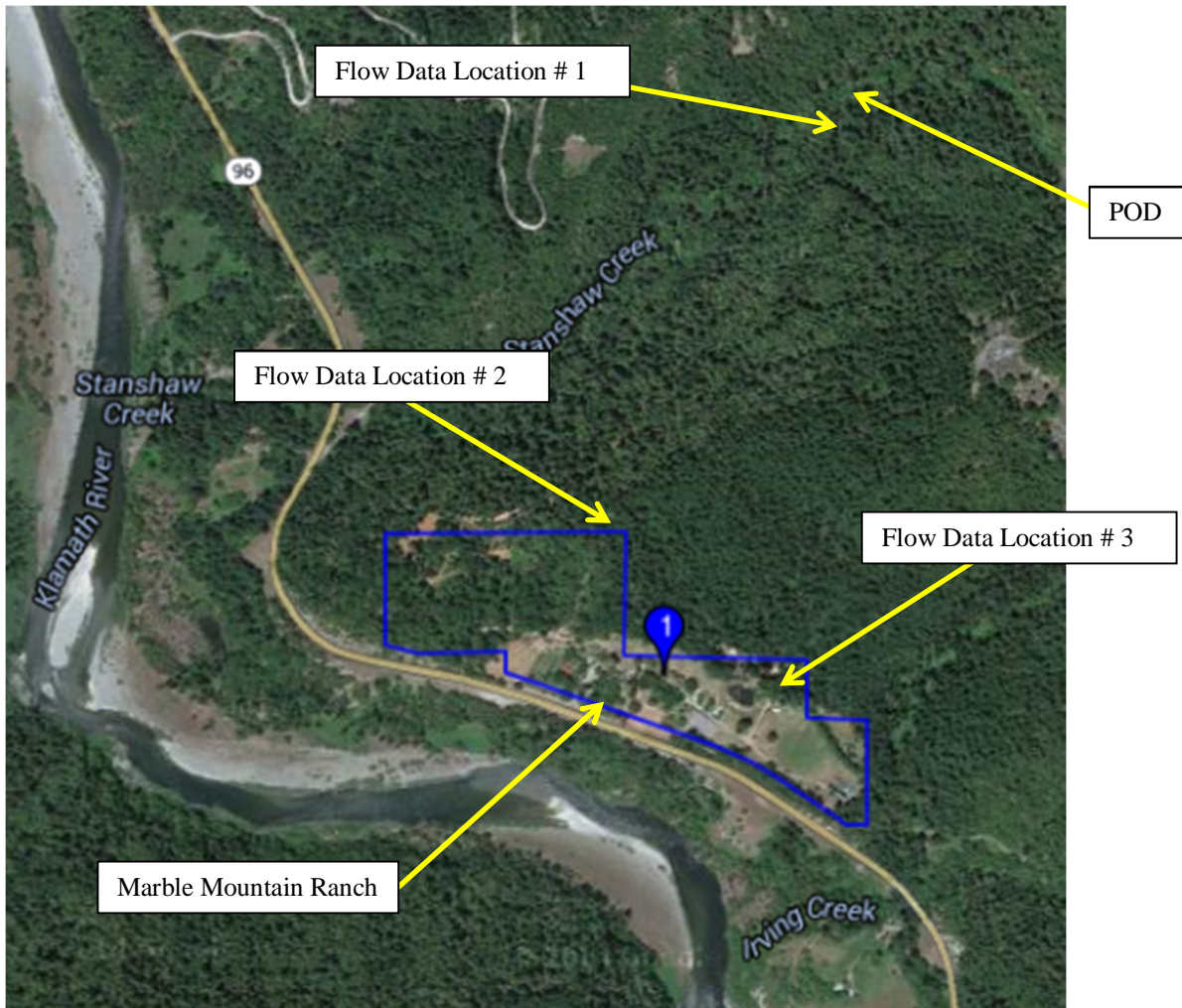


Photo 21 – Aerial photo identifying locations where flow velocity was recorded.

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