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BEFORE THE STATE WATER RESOURCES CONTROL BOARD

In the matter of Douglas and Heidi Cole and Marble Mountain Ranch - Waste and Unreasonable Use Hearing	**Declaration of Stormer Feiler in Support of Order Finding Waste and Unreasonable Use and Public Trust Violations**

I, Stormer Feiler, declare as follows:

1. My testimony, herein provided, identifies my personal knowledge of the evidence, actions, and rationale for the State Water Resources Control Board ("State Water Board") Division of Water Rights' ("Division") recommendation to issue an order ("Order") finding waste, unreasonable method of use, and unreasonable method of diversion of water, as well as public trust violations, and ordering corrective actions against Douglas and Heidi Cole and Marble Mountain Ranch (collectively "the Diverter," "Diverters," "Discharger," or Dischargers"). The Prosecution Team's proposed order ("Draft Order") is offered into evidence as **Prosecution Team Exhibit WR-1**.[1]
2. I have been an employee of the North Coast Regional Water Quality Control Board ("Regional Water Board" or "Region 1") for the past 16 years. I am currently employed as a Senior Environmental Scientist Specialist in the Planning, Stewardship and Compliance Assurance division. My statement of qualifications is offered into evidence as **Prosecution Team Exhibit WR-14**.
3. I acted as lead staff in the Regional Water Board's investigation and enforcement of water quality violations occurring at Marble Mountain Ranch ("MMR") that culminated in the Regional Water Board issuing a final Cleanup and Abatement Order ("Final CAO") R1-2016-0031 on August 4, 2016 after issuing a Draft Cleanup and Abatement Order on December 3, 2015, providing the Discharger ample time in which to consider compliance

[1] Further references to Prosecution Team exhibits will be "WR-[Exhibit Number]."

requirements. A true and correct copy of the Draft CAO is offered into evidence as Prosecution Team Exhibit WR-106. A true and correct copy of the cover letter for the Final CAO is offered into evidence as **Prosecution Team Exhibit WR-143**. A true and correct copy of the Final CAO is offered into evidence as **Prosecution Team Exhibit WR-142**. I conducted a field inspection of MMR on February 12, 2015 with Mr. Skyler Anderson and Mr. Michael Vella from the Division. My role in the inspection was to evaluate potential water quality violations at MMR. A true and correct copy of my inspection report is offered into evidence as **Prosecution Team Exhibit WR-89**.

4. MMR is located at 92520, Highway 96 in Somes Bar, Siskiyou County. MMR is owned and operated by the family of Douglas and Heidi Cole. 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.

5. MMR's point-of-diversion ("POD") is located on Stanshaw Creek, approximately 0.68 miles upstream of the Highway 96 crossing.

6. Stanshaw Creek is a tributary to the Klamath River. Its confluence is at Klamath River mile 76.1.

7. MMR's diversion discharges to Irving Creek. Irving Creek is also a tributary to the Klamath River. Its confluence is at Klamath River mile 75.

8. MMR uses diverted water to run a Pelton wheel for electrical power generation and for domestic water supply on the Marble Mountain Ranch.

9. Stanshaw Creek is within the Stanislaus Creek, California Water Watershed Number 1105.310701. Irving Creek is in the Irving Creek California Water Watershed Number 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.

10. The Middle Klamath River is on the Clean Water Act, section 303, subdivision (d) list of impaired water bodies for nutrient, temperature, and organic enrichment/dissolved oxygen impairments.

11. On September 7, 2010, the State Water Board adopted a resolution approving amendments to the Water Quality Control Plan for the North Coast Region ("Basin Plan") 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 ("USEPA") approved the TMDLs for the Klamath River in California pursuant to CWA section 303, subdivision (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. A true and correct copy of the Basin Plan is offered into evidence as **Prosecution Team Exhibit WR-62**.

12. The 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 MMR's POD potentially impacts are COMM, MIGR, COLD, SPWN, RARE, and CUL.

13. 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 ("Porter Cologne"). The following objectives, with their accompanying descriptions in the Basin Plan, are likely to be associated with water quality violations that occur from the operation and maintenance of MMR's POD.

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

- Settleable Material - Water 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 e 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.
- Temperature - The natural receiving water temperatures shall not altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses of water.
    - At no time or place shall the temperature of any COLD water be increased by more than 5° F above natural receiving water temperature.
    - At no time of place shall the temperature of any WARM water be increased by more than 5° F above natural receiving water temperature.

14. On April 8, 2015 the State Water Board, through Resolution No. 2015-0020, approved Regional Water Board Resolution No. R1-2014-0016, *Amending the Water Quality Control Plan for the North Coast Region to include the Policy for the Implementation of the Water Quality Objectives for Temperature, and Action Plans to Address Temperature Impairments in the Mattole, Navarro, and Eel River Watersheds* ("Temperature Implementation Policy"), adopted by the Regional Water Board on March 13, 2014. The Office of Administrative Law (OAL) approved the State Water Board adoption on July 8, 2016. A true and correct copy of the Temperature Implementation Policy is offered into evidence as Prosecution Team Exhibit WR-185. Attachment 2 of the Temperature Implementation Policy is the Policy Statement for the Temperature Implementation Policy, which includes the following guidance and expectations:

- Increased exposure to solar radiation due to loss of stream shade, physical stream channel alteration in response to elevated sediment loads, and in some cases agricultural tail water, impoundments, and water are among the factors responsible for elevated water temperatures.

- Temperature impairments are predominantly associated with nonpoint source pollution, which is generally defined as pollution that is not a "point source discharge" requiring a National Pollution Discharge Elimination System (NPDES) permit under the federal Clean Water Act. The Regional Water Board has been implementing temperature controls in its region-wide nonpoint source pollution programs and in individual permits on a case-by-case basis, often in the context of sediment discharges.
- Elevated temperature is also caused by factors outside the core regulatory programs of the Regional Water Board that may be addressed by other public agencies, for example water diversions under the jurisdiction of the Division.
- The diversion and storage of water has the potential to elevate water temperatures. The Division issues water right permits for the diversion of surface waters and Regional Water Board staff often work with Division staff to ensure Basin Plan requirements are met. For example, Regional Water Board staff provide recommendations and identify water quality conditions that are necessary to ensure that the activity will comply with water quality standards. This policy directs Regional Water Board staff to continue to work with the Division to ensure that temperature and other water quality concerns are identified and addressed in the water right permitting process in all waterbodies.

15. Under the Temperature Implementation Policy, the Regional Water Board shall take the following actions to ensure compliance with the temperature objectives:

- Use other regulatory tools, as appropriate, to address elevated water temperatures and preserve existing cold water resources.
- Continue to coordinate with the Division of Water rights by participating in the water right petition process, providing monitoring recommendations, conducting joint compliance inspection, submitting data in support of 401 certifications related to water diversions, and/or facilities regulated by Federal Regulatory Energy Commission, and any other appropriate means to help ensure that the terms of water rights permits and licenses are consistent with the water quality objectives for temperature. Continue to employ a range of available regulatory, executive, and enforcement tools to address elevated water temperatures on a case by case basis, as appropriate. The policy directs staff to use all available regulatory, executive, and enforcement tools as appropriate, to address elevated water temperatures, and preserve existing cold water resources.

16. The *Action Plan for the Klamath River Addressing Temperature Dissolved Oxygen, Nutrient, and Microsystin Impairments, in the Klamath River in California and Lost River Implementation Plan* (Action Plan), contained in the Basin Plan (**Prosecution Team Exhibit WR-62)**, provides additional guidance to Regional Water Board staff when addressing potential temperature impairments in the form of:

- Regulatory waste discharge prohibitions - these waste discharge prohibitions establish an enforceable parameter for discharges of waste that violate any narrative or numerical water quality objective that are not authorized by waste discharge requirements or other order or action by the Regional Water Board or State Water Board.
- Designation of thermal refugia - streams that contribute cold water to the Klamath in the hot weather increasing the potential for survival of salmonids and other species. In addition to identifying thermal refugia, the Action Plan assigns a default 500 foot buffer to streams so designated and assigns a greater buffer to those streams deemed of exceptional importance[2] to preserving cold water refugia and the fishery resources.

17. In the Action Plan, Stanshaw Creek is identified as one of the streams requiring a 3000 foot buffer above its confluence with the Klamath River. This is due to the cold water resources provided by the stream and due to the presence of fish in Stanshaw Creek upstream of its confluence with the Klamath River. Streams such as this can provide natural fishery stock as resource to the Klamath Basin through in and out migration, and spawning and rearing of native fish. The Action Plan further provides policy directives and recommendations regarding areas of thermal refugia requiring the Regional Water Board to place heightened scrutiny on permits and 401 water quality certifications for activities with the potential to impact refugia areas, and directs State Water Board staff to consider the impact of increased diversions in tributaries providing thermal refugia when issuing water rights permits to divert surface waters in the Klamath River basin.

18. A gravel and cobble push-up dam diverts water from Stanshaw Creek on MMR. Conveyance is gravity driven, via a lined and unlined ditch, approximately 0.5 miles to a junction where flows are directed either to a water treatment plant that serves domestic and

[2] These streams receiving greater protection were defined as those streams where fish have been found more than 500 feet above the confluence with the Klamath River or where the cold water plume in the Klamath River has been found to extend greater than 500 feet downstream in the Klamath River from the confluence.

irrigation needs or to a forebay and penstock that services the Pelton wheel. Conveyance from the POD to the forebay is via lined and unlined ditch. The lined reaches of the ditch, as observed, consist of various types of shoring materials including sheet metal, buried tanker train cars or tanks and half rounds of corrugated PVC, of approximately 30-inch diameter. Discharge from the Pelton wheel is conveyed via ditch to an onsite pond. Flows from the pond are conveyed into a ditch to the south, across MMR to a steep slope that is headcut caused from erosion, and then discharges to a stream that is tributary to Irving Creek.

19. The constructed diversion structure and transportation of water from one watershed to another constitutes hydro-modification. The USEPA has defined hydromodification as water quality and water resource degradation caused by alterations of a hydrologic characteristics. A dam in a stream is an alteration of a hydrologic characteristic and diversion of a stream from one basin to another is an alteration of a hydrologic characteristic. A true and correct copy of EPA's National Management Measures to Control Nonpoint Source Pollution from Hydromodification is offered into evidence as **Prosecution Team Exhibit WR-192**.

20. During the course of my inspection of MMR on February 12, 2015, I walked from the POD in Stanshaw Creek to the penstock for the pelton wheel (upper ditch). I observed a stretch of the lower ditch from the pond to the gully flowing to Irving Creek (lower ditch), and I observed three established diversion monitoring locations used to measure cumulative daily flows and water losses.

21. Additionally, I observed that 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. 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 is discharged to the ditch from a number of sources, including Stanshaw Creek, as well as hillslope erosion and cutbank slumps. As sediments accumulate, the ditch capacity decreases and this has likely resulted in berm saturation and failure. Cut bank failures into the ditch appear to cause ditch blockage and overtopping which erodes the berm. These construction and maintenance operational characteristics are likely affecting the conveyance capacity both directly (any one individual mechanism can cause ditch failure or erosion)

and indirectly (the factors affecting the ditch's operational capacity can work cumulatively in combination to cause ditch failure). Based on my inspection observations, the outboard berm elevation likely varies at times due to overtopping, hillslope or cut bank slumps and failures, and allegedly has failed due to trampling by Elk as reported by Douglas Cole during the February 12, 2015 inspection.

22. During the inspection, I also identified 19 areas of concern 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 that deliver sediment towards or into Stanshaw Creek. I observed evidence of three primary types of ditch failure: 1) cut bank slumps that block the ditch and cause flows to overtop the berm; 2) water infiltrating into and seeping through the berm, causing the berm to fail and thereby erode underlying soils and hillslopes; and 3) cumulative sediment inputs that reduce the ditch capacity and increase the risk of overtopping as ditch capacity is diminished, which particularly increases the potential for failure in areas where the berm is low or has been damaged.

23. At locations identified as "Point 4" and "Point 5" in my Inspection Report (**Prosecution Team Exhibit WR-89)**, 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 appears to have historically failed at this location, which has likely also contributed to stream channel enlargement.

24. I followed the lower ditch from the pond to its discharge point into a gully that leads to an unnamed tributary to Irving Creek. Along the lower ditch, the primary area of concern for water quality is a headcut erosion, identified as "Point 20" in my Inspection Report, where return flows from MMR discharge to Irving Creek.

25. The list of observation points described in my Inspection Report is not exhaustive, and my inspection was not a complete inspection of the entire diversion system. The points selected for discussion in the Inspection Report provide a basis for analyzing the long-term and short-term sediment-related impacts of the diversion ditch on water quality. 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 fails, 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.

26. Since the ditch is maintained at a low gradient, approximately 3% grade, the ditch is both transporting fine sediments, such as colloidal materials, and storing sediment, such as 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 MMR or possibly to the downstream tributary of Irving Creek.

27. If the diversion system is maintained and operated in the present fashion, it will likely continue to represent a chronic source of sediment discharge to surface waters in the Middle Klamath River watershed and specifically to Irving Creek and Stanshaw Creek.

28. 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 support these allegations, and suggest that such impacts will continue in the future. A true and correct copy of the 2011 complaint is offered into evidence as **Prosecution Team Exhibit WR-187**.

29. MMR's diversion is losing water through evaporation and seepage to surrounding soils. The loss of water through seepage was observed to result in saturation of the berm, which is likely contributing to failures of the berm and erosion resulting in the discharge of sediment into Stanshaw Creek and Irving Creek. In addition, the loss of water is an impact on water quality because the diversion takes cold water from Stanshaw Creek, a native stream, and after use, discharges it into Irving Creek with different habitat values from its original native location. This is an important aspect to consider in this case as the Stanshaw Creek outlet pool in the Klamath River is a known refugia area for salmonids, including Coho salmon. In addition, Stanshaw Creek is identified as cold water thermal refugia in the Klamath River TMDL (**Prosecution Team Exhibit WR-62**). The outlet pool on Stanshaw

Creek has been studied due to the known usage of the pool by juvenile salmonids seeking thermal refugia in the warm seasons. Finally, as the water passes through the MMR diversion system and crosses through the Ranch, it may be subject to changes in characteristics based on potential pollutant inputs or increases in temperature.

30. MMR's 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. My Inspection Report describes recommended actions to achieve these objectives (**Prosecution Team Exhibit WR-89**).

31. On December 3, 2015, Division and Regional Water Board enforcement staff issued a joint letter ("December 3, 2015 Letter") to the Discharger. The December 3, 2015 Letter included a notice of violation ("NOV") and draft cleanup and abatement order ("Draft CAO") from the Regional Water Board describing water quality violations and prescribing corrective actions. The December 3, 2015 Letter also included a report of inspection from the Division identifying unreasonable methods of use and unreasonable methods of diversion resulting in waste and public trust violations. The Division's 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 Dischargers 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 Draft CAO and the Division's report of inspection. A true and correct copy of the December 3, 2015, Letter is offered into evidence as **Prosecution Team Exhibit WR-105**.

32. On January 14, 2016, I, along with Division enforcement staff, met with Mr. Cole and various other stakeholders in Orleans, California. The National Marine Fisheries Service ("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. On January 19, 2016, the Discharger, through legal counsel, responded to the Division's December 3, 2015 Letter. According to the letter, the Discharger had repaired all leaking Water Treatment Tanks. The January 19, 2016, letter also outlined immediate and long-term solutions to address concerns raised in the Regional Water Board's Draft CAO and the Division's report of inspection. Nonetheless, due to the lack of timelines, specificity,

identified consultants, and other factors, the Division and Regional Water Board Staff concluded that the January 19, 2016, letter did not demonstrate any commitments to actions substantially addressing the concerns outlined in the Regional Water Board's Draft CAO and the Division's report of inspection. A true and correct copy of the Dischargers' January 19, 2016 letter is offered into evidence as **Prosecution Team Exhibit WR-110**.

33. On February 12, 2016, the Regional Water Board and Division staff notified the Dischargers in a joint letter that, in light of the Dischargers' January 19, 2016 letter, the Water Boards would pursue formal enforcement action. A true and correct copy of the February 12, 2016 letter is offered into evidence as **Prosecution Team Exhibit WR-112**.

34. On March 24, 2016, the Dischargers responded to the February 12, 2016 letter from the Regional Water Board and the State Water Board. The Dischargers 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 Dischargers 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 Dischargers planned to install a 6" pipe in the conveyance ditch by spring 2016 in order to comply with the preliminary NMFS 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 Dischargers would submit a Restoration and Monitoring Plan ("RMP") by April 15, 2016. A true and correct copy of the Dischargers' March 24, 2016 letter is offered into evidence as **Prosecution Team Exhibit WR-115**.

35. In a letter dated April 15, 2016, the Dischargers, through legal counsel, stated they were finalizing plans and a contract for the 6" pipe. The letter did not propose an RMP. A true and correct copy of the Dischargers' April 15, 2016 letter is offered into evidence as **Prosecution Team Exhibit WR-122**.

36. On April 20, 2016, in response to the March 24, 2016 and April 15, 2016 letters from the Dischargers, Regional Water Board and State Water Board enforcement staff, through legal counsel, e-mailed the Dischargers' legal counsel with questions seeking clarification of the Dischargers' proposed scope of work, project proposals, and project time schedule. A true and correct copy of the April 20, 2016 email correspondence is offered into evidence as **Prosecution Team Exhibit WR-124**.

37. On May 13, 2016, Regional Water Board and State Water Board staff met with Mr. Cole, the Dischargers' legal counsel, NMFS, representatives from the Mid-Klamath Watershed Council, and the Dischargers' 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.

38. The Dischargers' legal counsel sent a letter, dated May 20, 2016, to Office of Enforcement Attorney Kenneth Petruzzelli and copied Regional Water Board and Division enforcement staff and stakeholders. The May 20, 2016, letter answered questions posed by Regional Water Board and Division enforcement staff in the April 15, 2016 e-mail. A true and correct copy of the May 20, 2016, letter is offered into evidence as **Prosecution Team Exhibit WR-135**.

39. On August 3, 2016, the Division received a letter from NMFS, which included the NMFS recommended bypass flows for the Stanshaw Creek diversion. Regional Water Board staff support the recommended flows identified by NMFS, to the extent that the flows diverted from Stanshaw Creek are returned to Stanshaw Creek in a manner adequate to support its Beneficial Uses. A true and correct copy of the August 3, 2016 letter from NMFS is offered into evidence as **Prosecution Team Exhibit WR-141.**

40. By August 2016, although the Dischargers had started taking some steps to eliminate their misuse of water and adverse impacts to public trust resources, they have already fallen behind on their proposed time schedule. The Regional Water Board had no information indicating the Dischargers had:

- Stabilized the head cut and slope at the Irving Creek outfall. The Discharger had proposed completing this task by April 15, 2016.
- Reported completion of stabilizing the head cut and slope at the Irving Creek outfall with photographs. The Dischargers had proposed completing this task by May 1, 2016.
- Installed a six-inch pipe in the diversion ditch and install a headgate at the POD. The Dischargers had proposed completing these tasks by July 1, 2016.
- Completed energy audit and water efficiency study described in January 19, 2016 letter. The Discharger had proposed completing these tasks by July 1, 2016.

41. On August 4, 2016, the Regional Water Board issued the Final CAO (Prosecution Team Exhibit WR-142). Corrective actions subsequently ordered in the Final CAO included:

- Using an appropriately licensed and experienced professional, evaluate and report on the Pelton wheel operation determining whether methods of diversion operation would increase efficiency and reduce the required diversion volume.
- Using an appropriately licensed and experienced professional, evaluate, assess, and develop a Restoration and Monitoring Plan ("RMP") to restore and stabilize the head cut at the outlet of the Stanshaw Creek diversion to the unnamed tributary of Irving Creek.
- Submit the RMP for the Irving Creek outfall for review. The RMP must include a map, a time schedule, and a monitoring plan.
- Using an appropriately licensed and experienced professional, evaluate the ditch system identifying all features and locations susceptible to failure by any physical processes or mechanisms described in CAO R1-2016-0031. Identify whether there is potential for sediment delivery to receiving waters in the event of a failure. Specify appropriate corrective actions, including design and construction standards and an implementation schedule.
- Using an appropriately licensed and experienced professional, develop 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.
- 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.
- 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.
- Submit quarterly progress reports.

42. The time schedule in the Final CAO was based on the time schedule proposed by the Dischargers in their March 24, 2016 letter (**Prosecution Team Exhibit WR-115**). Where the time schedules had already passed, the Final CAO delayed compliance with these deadlines, effectively granting time extensions for some of the corrective actions.

43. On August 26, 2016, the Dischargers sent a letter to the Regional Water Board providing additional information on the Dischargers' corrective actions and proposing further extension of the time schedules in the Final CAO. The Dischargers courtesy copied State Water Board enforcement staff. A true and correct copy of the letter is offered into evidence as **Prosecution Team Exhibit WR-144.**

44. On August 30, 2016, due to lack of progress made by the Dischargers, the Prosecution Team requested that the State Water Board hold a hearing to receive evidence relevant to the Draft Order regarding the Dischargers' waste, unreasonable method of use, and unreasonable method of diversion of water, as well as public trust violations. The time schedule in the Draft Order was developed based on the project timeline the Dischargers proposed in the March 24, 2016 letter and contained in the Final CAO. A true and correct copy of the hearing request is offered into evidence as **Prosecution Team Exhibit WR-2.**

45. On September 6, 2016, the Dischargers filed a request for reconsideration of the Final CAO. A true and correct copy of the Dischargers' request for reconsideration is offered into evidence as **Prosecution Team Exhibit WR-145**. A true and correct copy of the State Water Board's acknowledgment receiving the request for reconsideration is offered into evidence as **Prosecution Team Exhibit WR-151**.

46. On September 9, 2016, the Dischargers submitted a proposed water quality monitoring plan to the Regional Water Board. The Dischargers courtesy copied Division enforcement staff on this correspondence. A true and correct copy of the Dischargers' September 9, 2016 letter is offered into evidence as **Prosecution Team Exhibit WR-146**.

47. On September 30, 2016, the Discharger provided a progress report on its corrective actions to the Regional Water Board and to the Division. The letter stated that the Discharger could not meet the Final CAO time schedule, because it had failed to qualify for public grant

funding and because consultants familiar with the project were unavailable. A true and correct copy of the Dischargers' September 30, 2016 letter is offered into evidence as **Prosecution Team Exhibit WR-147**.

48. On October 17, 2016, the Dischargers sent a letter to Office of Enforcement attorney Kenneth Petruzzelli and courtesy copied to Division and Regional Water Board enforcement staff. In the letter, the Dischargers asserted that their diversion and use of water was not a waste, unreasonable method of use, or unreasonable method of diverting water. The letter further asserted that the State Water Board lacked jurisdiction under the public trust doctrine to "regulate" a pre-1914 water right by requiring a bypass flow. Finally, the Dischargers conceded that it could not comply with the time schedules in CAO R1-2016-0031 or in the Draft Order. A true and correct copy of the Dischargers' October 17, 2016 letter is offered into evidence as **Prosecution Team Exhibit WR-150**.

49. On October 18, 2016, the Regional Water Board issued an NOV to the Dischargers for failing to implement the corrective actions required in the Final CAO. A true and correct copy of the October 18, 2016 NOV is offered into evidence as **Prosecution Team Exhibit WR-152**.

50. On October 26, 2016, the Dischargers sent a letter to the Regional Water Board and courtesy copied to the Office of Enforcement and Division enforcement staff. In the letter, the Dischargers asserted that its current operations addressed the concerns raised in the Regional Water Board's October 18, 2016 NOV. They further requested a meeting with Division and Regional Water Board enforcement staff to discuss a plan for a "permanent physical solution." A true and correct copy of the October 26, 2016 letter is offered into evidence as **Prosecution Team Exhibit WR-154**.

51. On January 4, 2017 the Dischargers submitted a Progress Report to the Division and the Regional Water Board staff updating the parties as to the progress made to come into compliance, and providing a discussion of the December 16, 2016 meeting held with Division and Regional Water Board staff, during which the Dischargers sought relief from the timelines imposed by the Final CAO and Division's compliance requirements. The Progress Report indicated that the Dischargers were retaining a new consultant team, moving forward with an assessment of the diversion structure and streams as required by the Final CAO, and that the assessment was delayed due to their consultant being unavailable. The report also identified possible alternatives for compliance, including a

piping solution and a Farmer's Fish Screen, and expressed an interested in continuing negotiations with the State and Regional Water Board to implement resource improvements at the Ranch. A true and correct copy of the Dischargers' January 4, 2017 Progress Report is offered into evidence as **Prosecution Team Exhibit WR-156.**

52. On January 11, 2017, the Dischargers responded to the questions contained in the November 15, 2016 email submitted by Ken Petruzzelli on behalf of the Division and Regional Water Board. In their response, the Dischargers indicated they were amenable to a resolution of the Final CAO and Division requirements as long as there was funding available for them to make the improvements necessary to comply. In response to ditch maintenance, the Dischargers explained that regular ditch maintenance is necessary to prevent overtopping and failure, and contends that the ditch has never failed during their ownership. The correspondence also included preliminary plans for piping the ditch to support a diversion of 3 cfs, which was submitted as part of a grant application to Mid Klamath Watershed Council. This correspondence also showed Stanshaw Creek flow data for the 2016 monitoring year, which when viewed in the overall context of how much water is lost through diversion, it appears that the Dischargers diverted approximately .65-1.2 cfs for use, which resulted in a late season flow of around 2 cfs into the refugia pool at the confluence of the Klamath River and Stanshaw Creek. Domestic consumption appears to cause a relatively significant loss of flow into the refugia habitat. A true and correct copy of the Dischargers' January 11, 2017 correspondence is offered into evidence as **Prosecution Team Exhibit WR-157**.

53. On February 8, 2017, the Dischargers submitted a request for additional time and requested to implement certain projects without compliance with Final CAO Directive No. 1, which addressed reporting upon energy and water needs and how those needs interacted. The Dischargers claimed that they would address, in whole or in part, Final CAO Directives 2., 3., 4., 5., but proposed eliminating the mitigation planning, reporting and implementation requirements under Directive 3. In addition, the correspondence proposed significant extensions to the due dates for work required under the Final CAO. A true and correct copy of the Dischargers' February 8, 2017 correspondence is offered into evidence as **Prosecution Team Exhibit WR-160**.

54. On March 17, 2017, the Regional Water Board issued NOV No. 2. (2nd NOV), which included a response to the Dischargers' August 28, 2016 correspondence, and addressed the

scope of work and time extension requested in the Dischargers' February 8, 2017 correspondence. The 2nd NOV informed the Dischargers that they were in violation of Directives 1., 2., 3., and 4.a.; that all requirements (e.g. reporting and implementation planning) remained valid and enforceable; and that the Dischargers were subject to potential penalties for failure to comply with the Final CAO directives. In addition, the 2nd NOV refuted allegations raised in the Dischargers' August 26, 2016 correspondence and, explained the applicability of the Final CAO, summarized the case history, provided direction to adequately meet the Final CAO directives, emphasized the necessity of meeting those directives, and summarized the reasons supporting the Regional Water Board's assessment and decisions. A true and correct copy of the Dischargers' March 17, 2017 correspondence is offered into evidence as **Prosecution Team Exhibit WR-162**.

55. On April 10, 2017, the Dischargers responded to the 2nd NOV, disputing the Regional Water Board's determination that the Dischargers were in violation of the Final CAO directives and expressing eagerness to initiate work on the Ranch. The correspondence included as attachments the Fiore Geo Sciences Report, which assessed the diversion ditch and satisfied a portion of the Final CAO, as well as the Dischargers' February 8, 2017 correspondence, and a very preliminary design prepared by ECORP for a root wad structure at the base of the Irving Creek head cut leaving MMR. A true and correct copy of the Dischargers' April 10, 2017 correspondence is offered into evidence as **Prosecution Team Exhibit WR-163**.

56. On April 24, 2017, the Executive Officer of the Regional Water Board submitted a response to the Dischargers' February 8, 2017 letter, informing the Dischargers that the Final CAO is a final order and that the time schedule cannot be changed except through rescission or revision. The letter further informed the Dischargers that the Executive Officer was directing Regional Water Board staff to utilize their enforcement discretion to ensure compliance with the requirements of the Final CAO. A true and correct copy of the Executive Officer's April 24, 2017 letter to the Dischargers is offered into evidence and **Prosecution Team Exhibit WR-165**.

57. On June 27, 2017, the Regional Water Board issued NOV No. 3 (3rd NOV) with attachments to the Dischargers. The 3rd NOV provided a response to the Dischargers' April 10, 2017 letter and reiterated the importance of achieving compliance with the Final CAO directives. In addition, the letter detailed the days of violation for each directive and

elaborated upon why the work directed in the Final CAO was necessary to understand and assess the impacts associated with the diversion of flows and operations of the ditch on MMR. The 3rd NOV further clarified the Regional Water Board's understanding and assessment of the ditches operations and why the ditch, as operated, represents a water quality problem based on the Regional Water Board's observations and the observations by Fiore Geosciences. The 3rd NOV reiterated that the Dischargers were in violation of the Final CAO and subject to potential administrative civil liability as a result. A true and correct copy of the 3rd NOV is offered into evidence as **Prosecution Team Exhibit WR-167**.

58. On June 30, 2017, the Dischargers submitted to the State and Regional Boards a progress report and partial response to the 3rd NOV. This correspondence provided the following information: 1) that the Dischargers installed a culvert to pipe water from the Pelton wheel to Irving Creek; 2) that they did not need any permits to develop a root wad outfall structure at the Irving Creek outfall discharge point, as it would not affect any waters of the State of United States; 3) that they submitted a Form 200 for the work on the Irving Creek outfall, stating that they were awaiting approval of the plan; and 4) that they were in the process of identifying an engineer to help them with piping to line the entire upper section of the diversion ditch. The Dischargers also requested responses to various items they had previously submitted, including: 1) the Coles' ability to pay form, 2) Fiore Geosciences' Report, and 3) the Proposed Improvement Plan for the Irving Creek outfall. While awaiting response from the Regional Water Board, the Dischargers stated they will continue to complete plans to pipe the upper segment of the diversion, research funding opportunities to address the requirements of the Final CAO and Draft Order, and continue to negotiate a lake or streambed alteration agreement with the Department of Fish and Wildlife. A true and correct copy of the Dischargers' June 30, 2017 letter is offered into evidence as **Prosecution Team Exhibit WR-168**.

59. On September 13, 2017, the Regional Water Board received an additional response to the 3rd NOV, which elaborated upon the previous response received on June 30, 2017. The Regional Water Board is in the process of drafting a response to this letter and pursuing progressive enforcement measures to ensure adequate water quality protection. A true and correct copy of the Dischargers' September 13, 2017 letter is offered into evidence as **Prosecution Team Exhibit WR-183**.

60. Based on the Dischargers' January 11, 2017 letter (**Prosecution Team Exhibit WR-157**) and the September 13, 2017 letter (**Prosecution Team Exhibit WR-183)**, it is my understanding that the Dischargers did not operate the diversion ditch for hydropower in the summer of 2016 or at any time in 2017.

61. On or about June of 2017, I contacted Toz Soto with the Karuk Tribe and Leroy Cyr with the United States Forest Service ("USFS") and requested information on historic and current monitoring data associated with Irving Creek and Stanshaw Creek to determine the potential impacts associated with hydromodification, as identified in USEPA's National Management Measures to Control Nonpoint Source Pollution from Hydromodification (**Prosecution Team Exhibit WR-192)** caused by the construction of a diversion dam and the diversion of water from Stanshaw Creek to Irving Creek for consumptive and hydropower generation at MMR. I received a variety of flow and temperature data from these individuals, and was able to draw useful comparisons and inferences regarding the potential impacts of operating the diversion on MMR without meeting the NMFS bypass flow requirements. A true and correct copy of my June 1, 2017 email correspondence and the data that I received is offered into evidence as **Prosecution Team Exhibit WR-188**. A true and correct copy of my June 27, 2017 email correspondence and the data that I received is offered into evidence as **Prosecution Team Exhibit WR-189.**

62. The 2016 temperature data provided by the Karuk Tribe and USFS (**Prosecution Team Exhibit WR-188**) indicates that, in the month of July, the Stanshaw Creek outlet pool in the Klamath River did not exceed 64 degrees and for many days was from 55-58 degrees. The 2016 data also shows that the refugia habitat likely persisted throughout the 2016 summer period. In looking at historic years, I found a correlation between diversion operational periods and high temperatures in the refugia pool at the confluence of Stanshaw Creek and the Klamath River. By cross-referencing temperature with flow and the known dates of diversion operation, it appears that the refugia pool has, on occasion, been drawn down to a level that no longer supports refugia habitat and may, at times, become fully exposed and no longer exist.

63. On June 6, 2017, I received temperature data for the refugia pool from Toz Soto of the Karuk Tribe. The diversion carries roughly 2+ cfs to Irving Creek from Stanshaw Creek, when it is operated. The flow data received from the Karuk Tribe shows instances of significant loss of flow to Stanshaw Creek. For example, on August 3, 2009, at

approximately 50 feet above the diversion, the recorded flow was 1.7 cfs, while at two locations below the diversion, one at 8 feet and one at 100 yards below the diversion, the recorded flow was .3 cfs. I do not have temperature data for August 3, 2009; however, I do have flow data and temperature data from July 1, 2009. The flow data on July 1, 2009 shows .5cfs below the diversion near Hwy 96 and a flow of 1.8 cfs in the outfall of the diversion ditch upstream of the unnamed tributary to Irving Creek. The temperature data for the pool at the confluence of Stanshaw Creek and the Klamath River on July 1, 2009 shows the temperature fluctuating for approximately 5 hours, during which time, the data indicates that the pool went dry or was subject to a draw-down event that exposed the monitoring equipment and subjected the refugia pool to the ambient air temperatures. The data further indicates that the temperature of the pool did not recover for a period of nine hours. Events such as this likely cause mortality and/or increase stress on salmonids utilizing the refugia of the refugia pool. It only takes one event to cause mortality from such an extreme change in flow and temperature, especially when the event occurs in a sensitive habitat such as the refugia pool at the confluence of Stanshaw Creek and the Klamath River, which likely increases the risk of mortality. A true and correct copy of the June 6, 2017 email and the 2009 temperature data[3] is offered into evidence as **Prosecution Team Exhibit WR-190.** A true and correct copy of a graph I created using the 2009 temperature data from the Karuk Tribe is offered into evidence as **Prosecution Team Exhibit WR-191.**

I declare under penalty of perjury to the laws of the State of California that the foregoing is true and correct. Executed September 28, 2017, at Santa Rosa, California.

9-28-2017

STORMER FEILER

[3] The data I received from Toz Soto was originally transmitted in DTF format on June 6, 2017, which I was unable to open. I subsequently requested the data in the form of an Excel spreadsheet. I have included the Excel version for purposes of our exhibit.