

Exhibit 4: Mitigation Monitoring and Reporting Program

**CASPAR CREEK FISH PASSAGE IMPROVEMENT PROJECT
SOUTH AND NORTH FORK MONITORING STATIONS; JACKSON DEMONSTRATION STATE FOREST
MITIGATION MONITORING & REPORTING PROGRAM**

1. MITIGATION MEASURES, TIMING, AND RESPONSIBLE AGENCIES

MM #	MITIGATION MEASURE	TIMING	RESPONSIBLE AGENCY
I.	Biological Resources - Aquatic; Measures shall be taken to: I) reduce injury or harm to coho salmon and steelhead; II) assure that effects to water quality are minimized; III) ensure that the fish ladders are adequately designed and evaluated in order to ensure that salmonid passage is not impeded.	Pre, During, and Post Any Construction Activity	CDF
I. 1.	The USFS must notify the NMFS Santa Rosa Office, by letter, stating the project commencement date at least fourteen days prior to implementation.	Prior to any Construction Activity	USFS
I. 2.	Work within the creek channel may only occur from June 15 to October 15.	Pre, During, and Post Any Construction Activity	CDF
I. 3.	A qualified biologist will be present to conduct fish relocation of any salmonids in the area to be dewatered. Captured salmonids will be relocated as soon as possible to a suitable instream location up or downstream of the work area.	Prior to Dewatering Activities	CDF and CDFG
I. 4.	Water temperature in the holding containers should not exceed 18EC at any time during the fish relocation effort.	Prior to Dewatering Activities	CDF and CDFG
I. 5	Electrofishing will only be utilized once seining is proven ineffective. A minimum of three passes through the entire area to be dewatered will be made with a seiner. Electrofishing will then be used to remove fish that weren't captured by the seine.	Prior to Dewatering Activities	CDF and CDFG
I. 6.	Electrofishing efforts shall start with voltage, pulse width, and pulse rate set at the minimum values needed to capture fish. Setting shall be increased gradually only to the point where fish are immobilized for capture. Individuals that are netting immobilized fish should remove fish immediately from the water, and not allow the fish to remain in the electrical field for an extended period of time.	Prior to Dewatering Activities	CDF and CDFG
I. 7.	The electrofishing guidelines described in I.4, I.5 and I.6 above are consistent with NMFS standards for reducing lethal take of salmonids from 5% to at least 3%. The USFS and their designee(s) shall compare their electrofishing procedures with these guidelines and make every reasonable effort to achieve the level of skill demonstrated by others.	Prior to Dewatering Activities	USFS, CDF and CDFG

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I.8.	For monitoring purposes, the USFS must notify the NMFS Santa Rosa Office, by letter, at least 90 days after project completion detailing any Incidental Take that occurred during the project. This shall include: species taken, date taken, type of take (capture & relocate, injury, mortality), number taken, and fork length of any mortalities.	Prior to Dewatering Activities	USFS
II. 1.	Water that comes in contact with wet concrete, if used, and has a pH greater than 9.0 must not be allowed to enter the ground or stream but may be pumped to a separate, lined basin constructed in the gravel bar and then pumped to a truck or upland for disposal or treatment (not within the bank of any waterway).	During Construction	CDF
II. 2.	Alternatively, water could be re-tested later, and if the pH is less than 9.0, these waters may be discharged in to the upstream sediment stilling basin.	During Construction	CDF
II. 3.	Alternatively, water may be pumped directly to a truck for disposal at a site within the top of bank of any waterway.	During Construction	CDF
II.4.	To reduce sediment turbidity in the South and North Fork Caspar Creek project areas, water will be siphoned from the project areas as much as possible to reduce sediment from washing downstream during project implementation.	Prior To and During Construction Activities	CDF
III.1.	USFS shall submit final ladder designs to NMFS for evaluation and approval prior to implementation.	Prior to Any Construction Activity	USFS
III. 2.	USFS and or their designee(s) shall conduct hydraulic and biological evaluation of the fish ladders (validation of design and project goals) as prescribed by NMFS once upon completion of ladder construction.	Post Construction Activities	USFS and CDF
III.3.	To assess the fisheries impacts of this project and measure the change in fish density in response to ladder replacement: 1) install pit tags in outmigrating fish (part of outmigration study in the watershed conducted by CDFG); 2) install monitoring gates below and above the fish ladders at both sites that track fish movements through pit tag sensory technology.	Post Project Implementation	USFS and CDFG
IV.	All project work will be in accordance with a Section 10(A) Incidental Take Permit issued by NMFS and a 1602 Stream Alteration Agreement issued by CDFG.	Prior to Dewatering and Instream Work Activities	CDF and the 5C Program
V.	Biological Resources: Plants; Measures shall be taken to insure that no listed Sensitive or TES plant species will be negatively affected as a result of this project.	Prior, During, and Post Any Construction Activity	CDF
V.1.	Plant surveys were conducted within the project areas in 2001 & 2003 and no Sensitive or TES species were located. Botanical surveys will be conducted in the spring of the Project Year to make sure that no listed species are present in the action areas. If Sensitive or TES plant	Prior to Any Construction Activity	CDF and the 5C Program

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	populations are located, they will be marked with 50' boundary flagging to prevent disturbance.		
VI.	Hazardous Materials; Equipment will need to be refueled near the project sites due to their remote location. To reduce the potential of fuel spills into the environment, operators will follow safe and proper fueling and servicing procedures.	During Construction	CDF
VI.1.	All equipment will be refueled and serviced up the road at a flat area, where an accidental spill could be contained and cleaned up before entering a waterway.	During Construction	CDF
VI.2	There will be no on-site storage of fuel or chemicals.	During Construction	CDF
VII.	Hydrology and Water Quality. A bypass system will be utilized to dewater the work sites for the duration of project activities in order to reduce the effects of sedimentation and turbidity in the downstream areas of both North and South Fork Caspar Creek (NFC and SFC).	Prior To and During Construction Activity	CDF
VII.1.	An existing bypass system is in place at both NFC & SFC that is used during weir pond cleanouts. This system will be expanded to siphon water from the concrete weir dams to downstream of the work sites.	Prior to Construction Activity	USFS and CDF
VII.2.	An 8-inch smooth walled pipe will channel the stream around the weir pond and past the weir dam to 50' downstream of the project area at both NFC & SFC. The bypassing is not expected to significantly impact hydrology or water quality due to the timing of operations (low flows).	Prior to Fish Relocation and During Construction Activity	USFS and CDF
VII.3.	The lower pond sediments used to create natural channel streambanks may cause a temporary increase in turbidity in the SFC & NFC. Stored sediments will be excavated back to each side of the channel and stabilized with revegetation and straw waddle bales seeded with riparian trees. The boulder weirs will also help stabilize the new channel banks.	Prior To Removing the Dewatering System	USFS and the 5C Program
VII.4.	The revegetation, boulder placement, and straw waddle installation will be completed prior to removing the dewatering system, thus reducing the amount of sediment released into the downstream areas of both SFC & NFC.	Prior To Removing the Dewatering System	USFS and the 5C Program
VIII.	Other Issues Discussed in the Mitigated Negative Declaration that were found to NOT HAVE A SIGNIFICANT EFFECT AS A RESULT OF THE PROPOSED PROJECT include Aesthetic/Visual, Archaeological/Historical, Noise, Recreation/Parks and Traffic Circulation. These issues warrant no mitigation measures.	N/A	N/A

2. MITIGATION MEASURE MONITORING & REPORTING

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Monitoring will be performed by the California Department of Forestry and Fire Protection (CDF) staff at the Jackson Demonstration State Forest and they will ensure implementation of the mitigation measures. Subsequent monitoring of specific measures, as depicted in Section 1, will be conducted by the California Department of Fish and Game (CDFG), the USFS (Redwood Sciences Lab) and the Five Counties Salmonid Conservation Program (5C Program).

Monitoring of each respective mitigation measure will be initiated according to the project phase listed in the table above under “Timing.” Monitoring will consist of an initial compliance check as each mitigation measure is implemented, and will further include ongoing compliance checks as appropriate or necessary to ensure that the mitigation measures are successful. Respective staff noted under “Responsible Agency” above will document implementation of each mitigation measure and will provide a copy of such documentation to the Five Counties Salmonid Conservation Program, for incorporation into a mitigation activity report. The Five Counties Salmonid Conservation Program will maintain the mitigation activity report in the project file, and will update the report to reflect the completion or modification of all mitigation measures. Upon project completion, the Five Counties Salmonid Conservation Program will provide a copy of the report to the approving body and agencies.