

**STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

STAFF REPORT FOR REGULAR MEETING OF MARCH 18, 2010

Prepared on February 11, 2010

ITEM NUMBER: 9

SUBJECT: Individual Conditional Waiver of Waste Discharge Requirements for Timber Harvesting Plan 1-08-018 SCR Young, Santa Cruz County - Order No. R3-2009-0063

KEY INFORMATION

Harvest Type: Selective Harvest – Timber Harvesting Plan

Project Area 41 acres **Watershed** Bear Creek

Harvest Area 41 acres **Subwatershed** Starr Creek

Water Courses Class I 100 feet
(Class and Length) Class II 1,550 feet **Forester** Gary Paul, RPF
Class III 1,650 feet

Eligibility Criteria Tier IV **Landowners and Discharger** Norman, Helen, Anne, and Cathy Young

This Action: Adopt Order No. R3-2009-0063

SUMMARY

Staff recommends the Central Coast Water Board (Water Board) adopt an Individual Conditional Waiver of Waste Discharge Requirements for Timber Harvesting Plan (THP) 1-08-018 SCR Young in Santa Cruz County. Site conditions where the Discharger proposes to harvest timber in accordance with this THP require intensified oversight and monitoring to help prevent excessive sediment erosion and temperature gains in an impaired watercourse, Bear Creek. The proposed Order therefore requires the Discharger to intensively monitor its timber harvest operations, and to maintain and to immediately repair failed erosion control measures. Based on results of site inspection and consideration of other relevant factors, staff removed recommendations for turbidity and temperature monitoring requirements that were in the draft monitoring and reporting program. Staff finds the proposed management practices, mitigation measurements, requirements for immediate corrective actions in the event of practice failure or sediment release, oversight and visual and photo monitoring will adequately protect beneficial uses in Bear Creek. Staff plans to inspect the site again after harvest to verify if the Discharger adequately implemented erosion control measures. Staff recommends the Water Board adopt proposed Order No. R3-2009-0063.

BACKGROUND

Basin Plan, 303(d) list, TMDL. The Water Quality Control Plan for the Central Coast Region (Basin Plan) assigns beneficial uses to Bear Creek, including Wildlife Habitat (WILD), Cold Fresh Water Habitat (COLD), Migration of Aquatic Organisms (MIGR), and Spawning Reproduction and/or Early Development (SPWN).

The Starr Creek watershed is a sub-watershed of Bear Creek, which drains to the San Lorenzo River. On February 19, 2004, the Water Board adopted Resolution No. R3-2002-0063: the *San Lorenzo River (including Carbonera Creek, Lompico Creek, and Shingle Mill Creek) Sediment Total Maximum Daily Load (TMDL) Basin Plan Amendment*. The Office of Administrative Law approved the TMDL on December 18, 2003, the effective date.

Section 303(d) of the 1972 federal Clean Water Act requires states to identify waterbodies that do not meet water quality objectives and/or do not support their beneficial uses. The Water Board added Bear Creek to the 303(d) list, citing sedimentation as the cause for its impairment. On June 28, 2007, USEPA gave final approval to the list. The Water Board has not yet adopted a TMDL resolution to address Bear Creek's impairment. However, the San Lorenzo River (SLR) Sediment TMDL's implementation plan depends on sediment discharge control in tributary watersheds such as Bear Creek and a tributary, Starr Creek. Therefore, consistent with the SLR TMDL, the proposed Order requires the Discharger to implement erosion control measures in the Starr Creek watershed to prevent sediment loading from this timber operation.

General Timber Order. On July 8, 2005, the Water Board adopted Order No. R3-05-0066: *General Conditional Waiver of Waste Discharge Requirements – Timber Harvest Activities in the Central Coast Region* (General Timber Order).

At its July 10, 2009 public meeting, the Water Board agreed with staff's proposal to revise the Notice of Intent (NOI) to increase its applicability and efficiency. The changes shifted responsibility for using the "Eligibility Criteria" procedure discussed below to the Discharger from staff and required the dischargers to submit this information earlier so staff could prioritize their review, inspections and evaluations of timber harvest operations with the most significant threat to water quality. To verify whether dischargers correctly employ the procedure, staff evaluates whether dischargers use correct information. The Water Board also agreed with staff's proposal to reduce monitoring; staff's review of data from several years showed most properly operated timber harvests did not impair beneficial uses of watercourses. Also, during that review, staff determined that inspections, reporting, and correction of management practices more effectively protected beneficial uses than instream turbidity and temperature monitoring. However, the Executive Officer may require additional monitoring on a case-by-case basis.

General Timber Order Condition No. 1.b requires a discharger proposing to harvest timber in the Central Coast Region to submit a NOI for review by the Executive Officer (EO). The NOI requires dischargers to use the EC to evaluate a proposed timber harvest's threat, mainly posed by soil erosion, to the beneficial uses of streams on the harvest site. The Eligibility Criteria procedure is a numerical procedure that ranks each proposed timber harvest's threat to water quality by considering factors specific to each project. The factors considered include the extent the project may disturb site soils (the Soil Disturbance Factor), its likely contribution to cumulative adverse effects on the watershed's water quality (the Cumulative Effects Ratio), and the number and type of streams in the proposed harvest area (the Drainage Density Index). The Water Board's website provides the Eligibility Criteria procedure as an interactive spreadsheet into which a discharger enters information specific to the harvest site and THP. Dischargers then print the results and attach them to the NOI for EO review.

The Eligibility Criteria procedure assigns each plan to one of four monitoring tiers. The first three tiers specify monitoring requirements for plans eligible for enrollment under the General Timber Order. When a plan is assigned to Tier IV, it is ineligible for the General Timber Order. For Tier IV projects, staff drafts an Individual Conditional Waiver of Waste Discharge Requirements Order (Individual Timber Order).

Proposed Project. On August 3, 2009, the Discharger submitted a NOI for the Young THP, which describes a selective harvest of 41 acres in the Starr Creek Watershed. The NOI includes a complete Eligibility Criteria procedure and a geology report, which discusses soil erodibility and measures to stabilize erodible sites. The Eligibility Criteria procedure determined that the Young THP requires Tier IV monitoring under an Individual Timber Order. Draft Order No. R3-2009-0063 (Attachment 1) is an Individual Timber Order.

This Individual Timber Order's Condition No. 1.c requires the Discharger to obtain approval from the California Department of Forestry and Fire Protection (CalFire) for the proposed project. On March 18, 2009, CalFire approved the 1-08-018 SCR Young THP.

The proposed harvest, which is in the Starr Creek watershed, covers less than one-half percent of the 10,392 acres in the Bear Creek Watershed. Approximately 16 percent of the watershed has been selectively harvested within the last 15 years. The THP describes around 5,000 feet of road, 2,300 feet of skid trails, and five landings. The THP also describes five Starr Creek road crossings.

DISCUSSION

Bear Creek contains runs of steelhead trout, a 'threatened' species in accordance with the federal Endangered Species Act. Steelheads rely on clean gravel in stream bottoms to spawn. If storm runoff is allowed to erode excessive amounts of earthen materials from exposed land surfaces, the sediment can clog gravel beds. The fish cannot use gravels so clogged for spawning. The Order's goal is to help ensure the proposed harvest does not cause excessive erosion, a possible factor in the decline of this species.

To minimize erosion from the site, the Discharger proposes to harvest timber using a combination of ground-based tractor, rubber-tired skidder yarding and forwarding, and skyline cable harvesting. When correctly employed, these practices for transporting sawlogs from harvest sites reduce the extent and magnitude of soils disturbed by logging operations.

The THP plans to use 1,600 feet of an existing road and to build 1,100 feet of new temporary road to the ridge top to install the cable yarder there. The road crosses Starr Creek at several locations. All the crossings are unprotected fords of varying conditions. The road drains poorly and soil continually erodes from it. To allow future use, control erosion, and support logging equipment, the THP proposes to upgrade the road section leading to a water intake structure. A permanent rock ford will be installed at the lowest Starr Creek crossing and the remaining crossings will be removed when harvesting is complete. The Discharger will install erosion control measures to control runoff of fine-grained sediment; the measures will include frequent cross-drains, mulch, and straw rolls. Also, when harvesting is complete, the Discharger will abandon the new road to the ridge by removing road materials, installing water breaks, and mulching road sections within the protection zone.

The Young THP is the sixth that staff has designated as Tier IV based on application of the Eligibility Criteria (Attachment 2). Staff and the discharger computed that the THP poses a high threat to water quality based on all three factors. The Eligibility Criteria procedure's Cumulative Effects Ratio was 16 percent; any ratio above 15 percent is considered a high threat. The Eligibility Criteria assigned the harvest area a high Drainage Density Index due to the numerous perennial and ephemeral streams in and near the plan area. The Eligibility Criteria procedure calculates the Drainage Density Index by comparing the length and types of streams with the size of the proposed harvest area. The Young THP Drainage Density Index is 123; the Eligibility Criteria procedure considers any index above 100 to be high.

A major contributor to the Young THP's Tier IV designation is the high Soil Disturbance Factor, which resulted from the THP's proposed 5,000 feet of roads and 2,300 feet of new skid trails. The harvest area would contain approximately 120 feet of new road per acre and 56 feet of new skid trail per acre. Plans enrolled under the General Timber Order average 63 feet of road per acre and 71 feet of skid trail per acre. Finally, the number of proposed landings is substantially higher than average per acre. The Young THP proposes approximately 3.2 landings per 10 acres compared to the average 0.6 landings per 10 acres in plans enrolled under the General Timber Order.

The length of new roads and skid trails proposed for this relatively small site indicate an increased potential for excessive soil disturbance and erosion both during and for a long time after the harvest. Moreover, the number of landings exceeds the average by six times, which also emphasizes the need to provide adequate long-term site stabilization.

Therefore, staff proposes conditions in the Individual Timber Order (Attachment 1) and a Monitoring and Reporting Program (MRP, Attachment 2) for Water Board consideration. Conditions include the following: for the term of the Order, the Discharger shall:

- Develop a long-term road inventory and erosion control inspection and maintenance program (road program). The road program must outline how the discharger will utilize, inspect, and maintain the road system and associated timber harvest infrastructure for the long-term protection of water quality. Long-term means 15 years from the acceptance of the CDF Work Completion Report, or until the next Timber Harvesting Plan is implemented, whichever comes first.
- Conduct visual and photo monitoring.
- Take immediate action to repair failed crossings, culverts, roads and other sources of sediment as soon as possible (including photo-documentation and reporting), maintain all erosion and sediment control devices, management measures and mitigations prescribed in the THP.
- Monitor and report on road conditions including stability and the number and state of repair of road erosion controls.
- Notify the Water Board concurrently when notifying CalFire of Commencement of Operations.

Monitoring to evaluate the effectiveness of erosion control measures includes visual observation of roads, watercourse crossings, landings, skid trails, water diversions, watercourse confluences, known landslides, and mitigation sites in the THP area. Such monitoring also includes photo-monitoring and forensic monitoring. Visual and photo monitoring are triggered by storm-events. The MRP identifies all monitoring locations.

Monitoring begins at the onset of timber harvest operations and ends when the MRP is revised or rescinded. The Discharger must submit annual reports to the Water Board by November 15

of each year. The Discharger must notify the Water Board within 72 hours of a significant erosion event and submit reports within ten days of these events that includes a description of the sediment release, impact to water quality, actions to correct the problem, or non-compliance with the conditional waiver requirements.

As found by the Water Board on July 10, 2009, based on the Board Meeting Staff report for Item No. 15, *Regulation of Timber Harvest Activities in the Central Coast Region*, visual inspections are effective at indicating proper function and effectiveness of sediment control practices and site management; visual inspection is more likely than water column turbidity grab sampling to trigger improved sediment control or to determine the location or nature of a failed or ineffective control structure or practice. Therefore, the proposed MRP requires the Discharger to conduct visual inspections based on monitoring and reporting protocols that ensure the Discharger will repair failed or ineffective management practices, such as a breached water bar, before occurrence of a sediment discharge.

Based on the results of staff inspection of the site of the proposed timber harvest and additional review of the THP, the proposed MRP does not require the Discharger to conduct temperature or turbidity monitoring. During the inspection, staff found no water in Starr Creek although the day of the inspection followed soon after a large rainfall event. Staff inferred that Starr Creek likely contributes little to no flow, even during winter months, relative to the much larger flows in Bear Creek so has little to no affect on Bear Creek's temperature or turbidity during normal conditions. Therefore, provided the Discharger implements and maintains adequate erosion control measures during and after the proposed timber harvest, timber harvest operations will have no impact on temperature in Starr or Beard Creek and sediment is unlikely to be discharges to Starr or Bear Creek. Even in the event that some sediment is released into Starr Creek, its low flow is highly unlikely to mobilize sediment and transport it to downstream to Bear Creek.

Consistent with the staff report presented to the Board on July 10, 2009, staff bases its approach to achieving the Water Board's goal and duty of protecting the beneficial uses of Starr Creek and Bear Creek on inspections of erosion control measures at the high priority timber harvest sites. Staff plans to inspect erosion control measures at these harvest sites shortly after dischargers complete harvests and before winter rains begin. Staff plans to also inspect these sites well after harvests to ensure dischargers maintain erosion control measures.

At each post-harvest inspection, staff answers a number of questions from an inspection report form at each mitigation site specified in the approved THP. Staff enters the responses into a spreadsheet, which it can query to evaluate the success of or failure of erosion control measures, compliance with Orders, and effectiveness of program activities (e.g. inspection methods) at protecting beneficial uses. For example, a query of all the questions answered during all the inspections might be: "What is the percentage of "yes" answers to the question 'Is this water bar intact?'" Staff will then be able to report to the Water Board in the future on general conditions and compliance based on the answer to this question and other similar questions, which number around 30 to date. To date, staff has conducted three such inspections at other sites and plans to conduct post-harvest inspection at the timber harvest site governed by the proposed Order or if otherwise necessary.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

CalFire is the lead agency with respect to CEQA. Accordingly, CalFire reviewed and considered recommendations by the interdisciplinary review team, including Water Board staff, on the Young THP. CalFire determined the plan conforms to the Forest Practices Act and

Board of Forestry Regulations, and found the timber operations will not have a significant adverse effect on the environment. The THP approval process is a certified regulatory program under CEQA. In accordance with CEQA, the Young THP serves as a substitute Negative Declaration for the timber harvest project. The Water Board is a responsible agency under CEQA and has considered the CEQA documents prepared by CalFire pursuant to its certified regulatory program. This Individual Timber Order incorporates requirements for the protection of water quality consistent with the Water Board's authority under the Water Code.

COMMENTS AND STAFF RESPONSES

Gary Paul, Consulting Forester

1. The Draft MRP is contrary to the Board's intent as indicated in its Order of July 10, 2009. At that meeting, the Board eliminated requirements for photo, turbidity, and temperature monitoring for all plans enrolled in the General Waiver, including those covered by an Individual Waiver (Tier IV).

Staff Response At the July 10, 2008, public hearing, the Regional Board agreed with staff's proposal to eliminate water column turbidity and temperature monitoring for timber harvest plans ranked from Tier 1 through Tier III. The Regional Board did not eliminate such monitoring for timber harvests assigned to Tier IV, although staff may propose to reduce monitoring for individual timber harvests.

2. As to the photo-monitoring requirement in the draft MRP, staff site inspections would be more useful and less time consuming for staff and Mr. Paul. In particular, the repeated photos of sites of the road reconstruction at 50-foot stations would provide no exact information on the road's stability as a whole.

Staff response Photo-documentation provides general information on the stability of restored roads, skid trails and other potential sources of eroded sediment. Therefore, staff proposes to retain the photo-documentation requirement included in the proposed Order.

3. We have learned over the past six years of monitoring required by the Board, that turbidity grab samples have shown that properly mitigated timber harvests do not result in elevated turbidity levels in local streams. We have also learned that timber harvesting, as practiced in the Santa Cruz Mountains, does not lead to increased temperature levels in local streams. In fact, due to the high level of canopy in this area, no streams are 303d listed as impaired for temperature.

Staff response Staff concurs. In the winter of 2009-2010, staff inspected timberlands where dischargers had completed harvests in accordance with THPs and installed post-harvest erosion control measures. Several inches of rain had fallen a few days before two inspections at sites where water ran off continually from the roads and landings into the surrounding natural vegetated areas. Since the erosion control measures – including water bars and swales, rock fords and culverts, slash-covered skid trails, and reseeded landings – removed runoff quickly from roads, skid trails, and landings and protected them, staff found them to be stable. The timberlands appeared to be insignificant contributors of eroded sediment to watercourses. Surface water quality appeared to be excellent.

4. As to this site in particular, Starr Creek is an intermittent and very small tributary to the greater Bear Creek system. The drainage area involved on the site is 80 acres, which flows into a greater 10,392 acre watershed. This is less than 1% of the watershed area. Even

slightly increased levels of turbidity or temperature, which are not anticipated due to the rigorous mitigation measures to be applied at this site, would not be significant.

Staff response Staff inspected the proposed harvest site in December 2009, accompanied by the forester, who discussed road construction proposed for the site. As described in the Staff Report, the extent of road construction places the Soil Disturbance Factor into the high risk range; that is, road construction in the steep site increases the threat of excessive erosion if the Discharger fails to install adequate control measures, including complete removal of temporary roads and correct installation of adequate permanent creek-crossing structures. Post-harvest staff inspections will determine if the Discharger adequately installed the requisite measures.

The proposed Order requires the Discharger to implement a long-term roadway inspection and maintenance program dedicated to controlling erosion of sediment. The Discharger shall submit the program with the annual reports. The proposed Order also requires the discharger to take immediate action to repair failed sources of sediment as soon as practicable; such works include, but are not limited to, culverts, crossings, and roadways.

5. In addition, the water flow in the summer at this site is intermittent and miniscule. There is not likely to be water flow at sufficient depth, so as to provide enough water to submerge a hobo temp. This furthers the argument that this tributary does not provide enough flow of any sort to result in any significant effects to downstream beneficial uses of Bear Creek.

Staff response Comment noted. See comment # 4, above. Staff observed these low flow conditions in Starr Creek during the inspection in December 2009. Timber harvest conducted in accordance with the approved THP shall ensure the canopy remains sufficiently dense to prevent temperature increase in Starr Creek's waters. Protection of vegetation to prevent temperature increases and the low flow in Starr Creek will result in maintenance of beneficial uses in Bear Creek.

6. I would submit that visual monitoring is appropriate for this site, and that staff inspection soon after the mitigation measures are completed, and during the first winter, would be much more useful than any proposed photo, turbidity, and temperature monitoring.

Staff response Staff concurs that turbidity and temperature monitoring would provide little useful information on this timber harvest and is unnecessary. Staff recommends the Board retain visual and photographic monitoring by the discharger to provide evidence and reporting that allows staff to evaluate compliance in conjunction with inspections. Staff commits to post-harvest inspections to determine whether the proposed erosion control measures are adequate.

RECOMMENDATION

Staff recommends the Water Board adopt Order No. R3-2009-0063, *Individual Conditional Waiver of Waste Discharge Requirements, and Monitoring and Reporting Program No. R3-2009-0063 for proposed Timber Harvesting Plan 1-08-018 SCR Young*.

ATTACHMENTS

1. Proposed Order and Monitoring & Reporting Program Order No. R3-2009-0063.
2. 1-08-018 SCR Young Eligibility Criteria.

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, California**

**Draft Order No. R3-2009-0063
March 18, 2010**

**Individual Conditional Waiver of Waste Discharge Requirements
1-08-018 SCR Young
Santa Cruz County**

WHEREAS, the California Regional Water Quality Control Board, Central Coast Region (hereinafter Water Board or Regional Board) finds that:

1. California Water Code (CWC) Section 13260(a) requires that any person discharging waste or proposing to discharge waste within any region that could affect the quality of the waters of the State of California (hereinafter the State), other than into a community sewer system, shall file with the appropriate Water Board a report of waste discharge (ROWD) containing such information and data as may be required by the Water Board.
2. The Water Board prescribes waste discharge requirements, except where the Water Board finds that a waiver of waste discharge requirements for a specific type of discharge is in the public interest pursuant to CWC Section 13269.
3. On July 8, 2005, in accordance with CWC Sections 13267 and 13269, the Water Board adopted Order No. R3-2005-0066 – General Conditional Waiver of Waste Discharge Requirements – Timber Harvest Activities in the Central Coast Region (General Order), which includes Eligibility Criteria. Water Board staff uses the Eligibility Criteria to numerically evaluate a timber plan based on factors such as intensity of infrastructure (soil disturbance factor), intensity of harvesting over the past 15 years in the same watershed (cumulative effects ratio), and number and type of streams in the harvest area (drainage density index). The Eligibility Criteria provide Water Board staff with a method for ranking timber harvest activities and assigning them an appropriate monitoring tier. The four monitoring tiers are described as:

Tier I: CalFire Forest Practice Rules compliance monitoring.
Road inventory program.
Forensic monitoring as necessary.

Tier II: CalFire Forest Practice Rules compliance monitoring.
Road inventory program.
Forensic monitoring as necessary.
Visual and photo monitoring of harvest infrastructure.

Tier III: CalFire Forest Practice Rules compliance monitoring.
Road inventory program.
Forensic monitoring as necessary.
Visual and photo monitoring of harvest infrastructure.

Tier IV: Individual Conditional Waiver of Waste Discharge Requirements
(Individual Order) with appropriate monitoring or
Waste Discharge Requirements with appropriate monitoring

4. On July 10, 2010, the Water Board agreed with the Executive Officer's proposal to change the enrollment process to shift the burden of employing the Eligibility Criteria procedure from staff to dischargers and to have dischargers provide this information earlier in the process so staff can prioritize the review, inspections and evaluation of timber harvest plans with the most significant threat to water quality. Staff now verifies if dischargers used correct site-specific information for the procedure. While Timber Harvests conducted under Monitoring Tiers I – III may enroll under this General Order, staff drafts Individual Orders for harvests conducted under Tier IV monitoring for the Board's consideration. The Board also approved staff's proposal to eliminate temperature and turbidity monitoring for Tiers I – III harvests unless the Executive Officer considers it necessary for a specific timber harvest operation.
5. On August 3, 2009, Water Board staff received a complete Notice of Intent for Timber Harvesting Plan (THP) 1-08-018 SCR Young.
6. Water Board staff evaluated the Young harvest using the Eligibility Criteria. According to the Eligibility Criteria, the Young harvest falls into Tier IV. The THP has a high cumulative effects ratio, a high drainage density index, and a medium soil disturbance factor.
7. The Water Board finds it is appropriate to regulate this activity with a Conditional Waiver of Waste Discharge Requirements, rather than Individual Waste Discharge Requirements for this discharge. The discharge is regulated by the California Department of Forestry and Fire Protection (CalFire) as described in Finding No. 13 and this Individual Order requires the discharger to comply with the conditions of Order No. R3-2005-0066 *General Conditional Waiver of Waste Discharge Requirements – Timber Harvest Activities in the Central Coast Region* and additional conditions set forth in this Individual Order that are consistent with the requirements of the Basin Plan and the CWC. Violations of the conditions of this Individual Order and the Monitoring and Reporting Program subjects the discharger to administrative civil liability to the same extent as would a violation of a waste discharge requirements Order. Therefore, in accordance with CWC Section 13269, the Water Board will regulate the discharge of waste associated with the timber harvest activities of the Timber Harvesting Plan (THP) 1-08-018 SCR Young by a Conditional Waiver of Waste Discharge Requirements.
8. The Water Board has adopted the Water Quality Control Plan for the Central Coast Region (Basin Plan), which establishes beneficial uses, water quality objectives, waste discharge prohibitions, and implementation policies that apply to waters of the State and discharges to waters of the State within the Central Coast Region.
9. The Young harvest will occur in Santa Cruz County, in the Bear Creek Watershed to which Starr Creek is a tributary. Pursuant to the Basin Plan and California State Water Resources Control Board (hereinafter State Board or State Water Board) Plans and Policies, including State Water Board Resolution No. 88-63, the existing and potential beneficial uses of Bear Creek potentially affected by the timber harvest include:
 - a. Municipal and Domestic Supply (MUN);
 - b. Agricultural Supply (AGR);
 - c. Ground Water Recharge (GWR);
 - d. Water Contact Recreation (REC-1);

- e. Non-contact Water Recreation (REC-2);
- f. Wildlife Habitat (WILD);
- g. Cold Freshwater Habitat (COLD);
- h. Migration of Aquatic Organisms (MIGR);
- i. Spawning, Reproduction, and Development (SPWN); and
- j. Commercial and Sportfishing (COMM).

Although the Basin Plan does not list Starr Creek and identify specific beneficial uses for it, implementation of adopted State and Regional Board Plans and Policies protect its water quality.

10. The Basin Plan contains water quality objectives developed to protect the above-listed beneficial uses of water. The Water Board considered factors in CWC Section 13241, including economic considerations, as required by law, during the development of these objectives. Prohibitions, provisions, and specifications contained in this Order implement these previously developed water quality objectives. Compliance with water quality objectives will protect the beneficial uses listed above.
11. The Water Board analyzed the Young harvest's potential water quality effects, as described in the THP and ROWD. The Water Board finds that the proposed discharge will comply with State Water Resources Control Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. Under this policy, water quality degradation may be allowed if the following conditions are met: 1) any change in water quality must be consistent with maximum benefit to people of the State; 2) the project will not unreasonably affect present and anticipated beneficial uses; 3) the project will not result in water quality less than prescribed in the Basin Plan; and 4) the Discharger must treat discharges with the best practicable treatment or control to avoid pollution or nuisance and maintain the highest water quality consistent with maximum benefit to the people of the state.
12. In general, timber harvesting and associated activities can cause the discharge of sediment, and can cause temperature and turbidity increases in receiving waters. The Water Board finds that the harvest, including the discharge of these constituents, will not result in any appreciable or significant adverse changes to water quality due to erosion, sediment discharges, temperature or turbidity increases if the Discharger complies with the THP, Forest Practice Rules, Board of Forestry Regulations, the conditions of Order No. R3-2009-0063, and Monitoring and Reporting Program No. R3-2009-0063.
13. CalFire and the California Board of Forestry (BOF) regulate timber harvest activities on non-federal lands in accordance with the Z'berg-Nejedly Forest Practice Act (Public Resources Code, Section 4511 et seq.) and the California Forest Practice Rules (Title 14, California Code of Regulations, Chapter 4, Section 895 et seq.). CalFire is the state agency with primary jurisdiction over timber activities. The Water Board cannot issue permits to allow timber harvesting. The Water Board regulates water quality impacts of timber plans CalFire has found to be in conformance with the Forest Practices Act and Board of Forestry regulations. The Water Board does not have legal authority to require an alternative project.
14. The Secretary of the Resources Agency has certified that CalFire's timber harvest plan regulatory program can function as a substitute for an Environmental Impact Report or a negative declaration (CEQA Guidelines § 15251). CalFire is the lead agency for purposes of CEQA. Registered Professional Foresters submit either a Non-Industrial Timber Management Plan NTMP or Timber Harvesting Plan (THP) and only CalFire has the

authority to grant discretionary approval for these projects. CalFire considers all the significant environmental effects of the project and makes a finding under CEQA Guidelines section 15091 for each significant effect. If CalFire finds that the timber operations will not have a significant effect on the environment, a THP serves as a substitute negative declaration. If CalFire finds that the timber operations may have a significant effect on the environment, the THP serves as a substitute environmental impact report, and includes mitigation of potential impacts. CalFire considered all the potential significant environmental effects of the Young harvest and made a finding that the timber operations identified in the THP will not have a significant effect on the environment. Therefore, the above-referenced THP serves as a substitute negative declaration for the timber harvest.

15. During their review process in accordance with California Forest Practice Rules (Title 14, California Code of Regulations, Article 2, Subchapter 7, Section 1037.5), Central Coast Water Board staff participated on the CalFire interdisciplinary review team for the THP. CalFire considered the recommendations made on the THP by the interdisciplinary review team before determining that the THP conforms to the Forest Practices Act and Board of Forestry Regulations.
16. The Water Board is a responsible agency for purposes of CEQA and has considered the THP in the adoption of this Order. This Order requires the Discharger to comply with all requirements of the THP and of Monitoring and Reporting Program No. R3-2009-0063.
17. CalFire regulates timber harvesting practices in the State and requires the Discharger to implement practices to control water quality impacts, including erosion and sedimentation. The Discharger must also comply with any local ordinances that also require various controls to protect water quality. The conditions of this Order protect beneficial uses by:
 - (i) Prohibiting pollution, contamination, or nuisance;
 - (ii) Requiring monitoring and compliance with applicable water quality control plans;
 - (iii) Requiring the Discharger to grant access to Water Board staff to perform inspections; and
 - (iv) Requiring approval of the THP by CalFire.
18. Management practices are the most feasible treatment method to prevent or control the discharges. If a timber harvest is conducted in the manner prescribed in the THP and the conditions of this Individual Order, a conditional waiver of waste discharge requirements is in the public interest and is consistent with applicable water quality control plans, including the Water Quality Control Plan, Central Coast Region.
19. The winter period for the Central Coast Region shall be October 15 through April 15.
20. The rain year for the Central Coast Region shall be July 1 through June 30.
21. The THP lays out a 41-acre selective harvest utilizing a combination of tractor and rubber-tired skidder and cable yarding within the Bear Creek Watershed. The harvest covers 41 acres or 0.04 percent of the 10,392 acre planning watershed (Bear Creek Watershed - CalWater V2.2: 3304.120300). Approximately 15 percent of the watershed has been selectively harvested within the last 15 years.
22. The Discharger may be required to conduct visual, photo, turbidity, and temperature monitoring as a condition of the Individual Order.

23. This Order does not regulate point-source discharges that require a National Pollutant Discharge Elimination System (NPDES) permit under the Clean Water Act, including but not limited to silvicultural point-source discharges, as defined in 40 CFR Chapter 1 Part 122.27.
24. Adoption of this Order will not have a significant impact on the environment and will be in the public interest, provided that the Discharger:
- (a) Complies with the conditions of this Order; and
 - (b) Complies with applicable State Water Board and Water Board plans and policies and as those plans and policies may be amended from time to time through the amendment process;
25. This Order shall not create a vested right to discharge and all waste discharges are a privilege, as provided for in CWC Section 13263.
26. Pursuant to CWC Section 13269, this action waiving the issuance of waste discharge requirements for certain specific types of discharges: (a) is conditional, (b) may be terminated at any time, (c) does not permit an illegal activity, (d) does not preclude the need for permits which may be required by other local or governmental agencies, and (e) does not preclude the Water Board from administering enforcement remedies (including civil liability) pursuant to the CWC.
27. The Executive Officer may terminate the applicability of the Individual Order for 1-08-018 SCR Young if the Executive Officer makes any of the following determinations:
- a. The timber harvest activity is not in compliance with any applicable condition of this Individual Order.
 - b. The timber harvest activity has varied in whole or in any part from the approved THP, unless these changes result in better protection of water quality.
28. The Executive Officer or Water Board may terminate the applicability of this Order at any time when such termination is in the public interest and/or the timber harvest activities could affect the quality or beneficial uses of the waters of the State.
29. Any person affected by this action of the Water Board may petition the State Water Board to review the action in accordance with section 13320 of the California Water Code and Title 23, California Code of Regulations, Section 2050. The petition must be received by the State Water Board within thirty (30) days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request.
30. The Water Board conducted a public hearing on March 18, 2010, in Watsonville, California, and considered all testimony and evidence concerning this matter;

THEREFORE IT IS HEREBY ORDERED:

1. In accordance with CWC Section 13269, the waste discharges associated with timber harvest activities of THP 1-08-018 Young in the Central Coast Region shall be subject to the following conditions, and the requirement to obtain waste discharge requirements is hereby waived, subject to the following conditions:
 - a. "Discharger" means the landowner and anyone working on behalf of the landowner in

- the conduct of timber harvest activities.
- b. The Discharger shall comply with all requirements of applicable water quality control plans adopted by the Water Board and approved by the State Water Board, and water quality control plans and policies adopted by the State Water Board.
 - c. The Discharger shall conduct timber harvest activities in accordance with the approved THP and with all applicable sections of the Forest Practice Rules.
 - d. The Discharger shall notify the Water Board concurrently when submitting a request to CalFire for a minor or major amendment.
 - e. The Discharger shall notify the Water Board concurrently when notifying CalFire of Commencement of Operations pursuant to California Forest Practice Rules, Title 14 CCR 1035.4 Notification of Commencement of Operations.
 - f. The Discharger shall obtain and comply with all local, state and federal permits required by law. The Discharger shall comply with all applicable county ordinances related to timber operations, including zoning ordinances.
 - g. The Discharger shall not create a condition of pollution, contamination, or nuisance, as defined by CWC Section 13050.
 - h. The Discharger shall not discharge any waste not specifically regulated by this Individual Order, except in compliance with CWC Section 13264. Waste specifically regulated by this Order includes: earthen materials including soil, silt, sand, clay, rock; and organic materials such as slash, sawdust, or bark. Examples of waste not specifically regulated by this Order include petroleum products, hazardous materials, or human wastes.
 - i. The Discharger shall not change stream temperature that exceeds Basin Plan requirements. The Discharger shall not cause the watercourse temperature within the THP area to increase more than five degrees Fahrenheit (5°F) above natural Starr Creek or Bear Creek temperatures.
 - j. The Discharger shall not change turbidity in Starr Creek or Bear Creek that exceeds Basin Plan requirements. The Discharger shall report sediment increases detected during monitoring as required by Monitoring and Reporting Program (MRP) No. R3-2009-0063 Section II – Data Logging and Reporting; Sediment Release Reporting.
 - k. The Discharger shall allow Water Board staff reasonable access, pursuant to Public Resources Code 4604 (b), onto the THP site, for the purpose of performing inspections to determine compliance with these requirements.
 - l. Pursuant to California Water Code Sections 13267 and 13269, the Discharger shall comply with Monitoring and Reporting Program (MRP) No. R3-2009-0063. Water Board staff needs this information to verify that these requirements are the appropriate regulatory tool for Timber Harvest activities for THP 1-08-018 Young. Evidence that supports the need for this information was presented in the Discharger's ROWD.
 - m. The Discharger shall take immediate action to repair failed crossings, culverts, roads and other sources of sediment as soon as possible.

- n. The Discharger shall maintain all erosion and sediment control devices, management measures, and mitigations prescribed in the THP for the term of this Order.
 - o. The Discharger shall comply with all requirements of the Executive Officer pursuant to MRP R3-2009-0063.
2. Upon receipt of notice of termination of applicability of the Individual Order, the Discharger shall immediately cease all timber harvest activities that may result in discharges to waters of the State, other than activities necessary to control erosion. Upon notice of termination, the discharger must file a report of waste discharge and applicable filing fee. Timber harvest activities that may result in discharges that could affect the quality of waters of the State may commence only upon enrollment by the Executive Officer under general waste discharge requirements or individual waste discharge requirements, or in accordance with CWC Section 13264(a).
 3. This Order shall become effective on March 18, 2010 and shall expire on March 18, 2015, unless terminated or renewed by the Water Board. The Water Board may terminate this Individual Order at any time.
 4. As provided by CWC Section 13350(a), any person who, in violation of any waiver condition, discharges waste, or causes or permits waste to be deposited where it is discharged, into the waters of the state, is subject to administrative or civil liability for the violation.

I, Roger W. Briggs, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on March 18, 2010.

Roger W. Briggs, Executive Officer

**DRAFT MONITORING AND REPORTING PROGRAM
NO. R3-2009-0063
for
1-08-018 SCR YOUNG TIMBER HARVEST
March 18, 2010**

This Monitoring and Reporting Program (MRP) No. R3-2009-0063 is issued pursuant to California Water Code (CWC) sections 13267 and 13269. Failure to comply with this MRP may subject the Discharger to monetary civil liability in accordance with Water Code section 13268 and 13350. Monitoring shall begin at the start of timber harvest operations and must comply with this MRP and any subsequent revisions. Monitoring shall continue until this MRP is revised or rescinded.

MONITORING LOCATIONS

This MRP takes into account site conditions and mitigations to establish monitoring locations (see Young Harvest Plan Map, Attachment A and Road Segment Map, Starr Creek Focus, Attachment B.) The Discharger shall monitor these locations as described below:

Section I – Implementation and Effectiveness Monitoring and Monitoring Frequency;
Section II – Data Logging and Reporting; and
Section III – Standard Provisions.

VISUAL MONITORING: The Discharger shall visually monitor the locations below.

Visual monitoring locations shall include the full length of roads, watercourse crossings, landings, skid trails, water diversions, watercourse confluences, known landslides, and all mitigation sites in the Timber Harvesting Plan (THP) area (as documented in the THP approved by the California Department of Forestry and Fire Protection [CalFire]).

PHOTO-MONITORING: The Discharger shall photograph locations listed below:

- Photo-location #1 (P1) – R1 road reconstruction at site where relocated to document winterization
- Photo-location #2 (P2) – Class II road crossing C1, a shallow earthen ford to be converted to a rock ford conforming to standard construction specifications, to document stability.
- Photo-location #3 (P3a, P3b, P3c....) – R2 road reconstruction at 50 foot stations along road to document stabilization and winterization
- Photo-location #4 (P4) – Class II road crossing C2, after removal of temporary crossing, to document stability.
- Photo-location #5 (P5) – R3 road construction at 50 foot stations along road to document stabilization and winterization.
- Photo-location #6 (P6) – Class II road crossing C3, after removal of temporary crossing, to document stability.
- Photo-location #7 (P7) – Decommissioned R4 road at 50 foot stations along road to document stabilization and winterization.
- Photo-location #8 (P8) - Class III road crossing C4, after removal of temporary crossing, to document stability.

CALFIRE FOREST PRACTICE RULES COMPLIANCE MONITORING: The Discharger shall ensure timber harvesting activities conform to the approved THP and with all applicable sections

of the Forest Practice Rules. This includes allowing site access for compliance inspections by CalFire and Water Board staff pursuant to 40 CFR Article 8, section 4604.

ROAD INVENTORY PROGRAM: The Discharger shall develop and implement, for review and approval of the Executive Officer (EO), a Roads Management Program (example attached in Attachment C, Exhibit 1, Big Creek Road Inventory Program) within the THP area. The program must be approved by the EO before implementation.

MONITORING: The Discharger shall conduct monitoring as described in Section I below.

I IMPLEMENTATION AND EFFECTIVENESS MONITORING AND MONITORING FREQUENCY

A. VISUAL MONITORING

VISUAL MONITORING LOCATIONS: Visual monitoring locations shall include the full length of roads, watercourse crossings, landings, skid trails, water diversions, watercourse confluences, known landslides, and all mitigation sites (as documented in the CalFire-approved THP) in the plan area. Visual monitoring shall be where timber harvesting poses the greatest risk of discharge of pollutants (sites may be established by the EO during or after the pre-harvest inspection (PHI)).

VISUAL MONITORING FREQUENCY: The Discharger shall monitor all visual monitoring locations for existing or potential sources of sediment.

Year One – The Discharger shall monitor at least three times during “Year One”, at the start of timber harvesting and for one year after the end of timber harvesting.

- Monitoring Event One:

The Discharger shall perform the first monitoring event within 12 to 24 hours of the first storm event that yields three inches of rain or greater within a 48-hour period.

- Monitoring Events Two and Three:

The Discharger shall perform the next two monitoring events within 12 to 24 hours of the next two storm events (one monitoring event each storm) that yield three inches of rain or greater within a 72-hour period and soil saturation after the start of the winter period on October 15.

Years 2-5 – After harvesting timber and receiving the EO's determination that management practices protect water quality and beneficial uses, the Discharger shall visually monitor in accordance with the EO-approved Road Management Program (RMP). Exhibit 1 provides an example, the Big Creek Road Inventory Program.

The Discharger shall schedule a post-harvest inspection with Water Board staff no sooner than 10 months after the timber harvest plan is complete.

Note: The Discharger shall not begin Year Two monitoring until so directed in writing by the EO.

If management practices do not adequately protect beneficial uses, as determined by the EO, the Discharger shall repeat "Year One" monitoring. In addition to supplementary monitoring, the EO will determine if additional measures are required.

Summary of Visual Monitoring Frequency:

"Year One": minimum of three events
Year Two – Five: consistent with the EO-approved RMP developed by the Discharger and approved by the EO.

B. PHOTO-MONITORING

PHOTO-MONITORING LOCATIONS: Photo-monitoring locations shall be at locations within the timber harvest plan area where timber harvest activities pose the greatest risk of sediment discharge (sites may be established by the EO during or after the PHI). Photo-monitoring locations shall include sites upstream and downstream of each newly-constructed or reconstructed Class I and Class II watercourse crossings and landings within a Class I or II Watercourse or Lake Protection Zone (WLPZ). Photos shall clearly show the management measure's effectiveness.

The Discharger shall:

- i. Use the attached document: *Standard Operation Procedure 5.2.3 - Photo Documentation Procedure* (including any subsequent revisions to SOP 5.2.3) as the protocol for all photo-monitoring (Attachment C, Exhibit 1).
- ii. Use flagging, rebar, or another method of establishing the photo-monitoring locations.
- iii. Use all photo-monitoring locations until this MRP is revised or rescinded.

PHOTO-MONITORING FREQUENCY: The Discharger shall monitor all photo-monitoring locations established by the EO during or after the PHI.

"Year One" – The Discharger shall photo-monitor according to the following four conditions during "Year One" monitoring.

- Before the onset of timber harvest operations. (One Photo Set).
- After the first significant storm event (First Storm) (One Photo Set).
- After completion of timber harvest activities (One Photo Set).
- After a significant storm event during the month of April (April Storm) (One Photo Set). (A significant storm event means any storm with three inches of rain or greater within a 48-hour period and soil saturation.)

Additionally, the Discharger shall photograph new or reconstructed Class I and Class II water crossings:

- Before construction, after construction, and after removing the crossing, (if crossing is temporary).

The Discharger shall photo-monitor within seven days of any of the following:

1. The first storm.

- 2. End of timber harvesting activities.
- 3. April storm events. If no significant storm event occurs in the month of April, the Discharger shall complete photo-monitoring by April 30 of the same year.

Years 2 and 5 - In years two and five, after timber harvesting and the EO's written statement that management measures protect beneficial uses (as documented by information in the annual report and a post-harvest inspection conducted by Water Board staff), the Discharger shall photo-monitor in April.

The Discharger shall schedule a post-harvest inspection with Water Board staff no sooner than 10 months after the timber harvest plan is complete.

Note: The Discharger shall not begin Year Two monitoring until so directed to do in writing by the EO.

If management measures do not protect beneficial uses, as determined by the EO, the Discharger shall repeat "Year One" monitoring. In addition to supplementary monitoring, the EO will determine additional measures if required.

Summary of Photo-monitoring Frequency:

"Year One":	2 photo sets (minimum)
Year Two:	1 photo set
Year Five:	1 photo set

C. FORENSIC MONITORING

- 1. If monitoring detects failed management measures and/or evidence of discharge, the Discharger shall conduct forensic monitoring to identify the source.

Management measure failure is defined as: Whenever a management measure, or failure to implement a management measure, creates a condition of pollution, contamination, or nuisance, as defined by CWC Section 13050.

- 2. If management measures fail (this includes failure to implement management measures as determined by CalFire and documented by CalFire as a violation of the Forest Practice Rules), the Discharger shall photo¹-document them and shall implement management measures immediately to prevent discharge and adverse effects on water quality.
- 3. If timber activities cause a pollutant discharge into waters of the State, the Discharger shall measure in-stream turbidity (using grab samples) at the point of discharge into waters of the State. If there is a discharge into a Class III watercourse and water is no longer flowing, the Discharger shall measure in-stream turbidity in the closest Class I or Class II watercourse downstream of the discharge.

¹ Monitoring photos shall be of a quality sufficient to record the effectiveness of the implemented management practice.

4. If, during monitoring, the Discharger observes a discharge (sediment, soil, other organic material, herbicides, pesticides, fluids from timber equipment (oil, hydraulic fluid, etc), etc.), the Discharger shall notify the Water Board within 24 hours.
5. If, during monitoring, the Discharger observes a discharge or failed management measure, the Discharger shall submit to the Water Board a written report, including photo documentation, water quality data, and the management measures or corrective actions and a description of their effectiveness within 10 working days. Upon review of the report, the EO will determine completeness of the report and the need for additional actions necessary for the protection of beneficial uses.

FORENSIC MONITORING AREAS OF CONCERN: The following areas must be addressed during forensic monitoring if water diversion, feral pig activity, or trespass activity are causing or threatening to cause impacts to water quality.

Water Diversion. The Discharger shall monitor the water diversions for total daily water usage when water is being diverted. The Discharger shall monitor the creek to ensure no more than 10% of the creek flow is diverted.

Feral Pig Activity. During any inspection, the Discharger shall document all evidence of feral pig activity near watercourses that may be contributing discharges to waters of the state. The Discharger must address the feral pig activity according to forensic monitoring requirements described in 1 – 5 above.

Trespass Activity. During any inspection, the Discharger shall document all evidence of trespass activity near watercourses that may be contributing discharges to waters of the state. The Discharger must address the trespass activity according to forensic monitoring requirements described in 1 – 5 above.

FORENSIC MONITORING FREQUENCY The frequency of Forensic Monitoring coincides with implementation and effectiveness monitoring, or at any time a failed management measure and/or discharge is reported or observed.

II DATA LOGGING AND REPORTING

1. **Logbooks.** The Discharger shall maintain logbooks for recording all visual and water analysis data. Logbooks shall include documentation of maintenance and repair of management measures. Logbooks shall be available for inspection to Water Board staff.
2. **Health and Safety.** The Discharger shall ensure that all monitoring is done in a safe manner. If any monitoring location is too dangerous to sample, then the Discharger shall report this circumstance to the Water Board within 48 hours.
3. **Road Management Program.** After review and approval by the EO, the Discharger shall develop and implement a Roads Management Program (RMP) (an example is attached in Exhibit 1, Big Creek Road Inventory Program) within the THP area. After each storm event that triggers an inspection, the Discharger shall perform a field inspection and prepare a field form as described in the RMP protocol. The Discharger shall enter the data into a logbook (as described in Item 1, above) and into a database or spreadsheet which tracks observations, work completed, and dates of last review. If the need for repair is immediate, the Discharger shall promptly develop and implement an appropriate action.

- 4. Sediment Release Reporting.** Within 72 hours, the Discharger shall report to the EO if at least one cubic yard of soil is released to a waterway due to man-made causes or at least five cubic yards of soil is released to a waterway due to natural causes, or when turbidity is noticeably greater downstream compared to upstream (of a crossing or the THP area). The Discharger shall submit a written report to the EO within 10 days of detection. The Discharger shall investigate source areas of sediment. If sources are found, the Discharger will locate and document the source and size of the release. If sources related to timber harvest activities are found, the Discharger shall immediately correct the source if possible, or schedule corrective action at an appropriate time given the site conditions.

FOREST PRACTICE RULE VIOLATION REPORTING. The Discharger shall report violations of the Forest Practice Rules to the EO within 48 hours and provide the report in writing within 10 working days of the violation. The written report shall include photo-documentation and water quality data (if discharge enters waters of the State) before and after remedial action. Upon review of the report, the EO will determine its adequacy and if the need for additional actions is necessary to protect beneficial uses. The Discharger shall complete additional monitoring that the EO determines is necessary.

ANNUAL REPORTING

By November 15 of each year, the Discharger shall submit an Annual Report to the EO using the template that can be downloaded from:

<http://www.waterboards.ca.gov/centralcoast/Facilities/TimberHarvest/index.htm>

Under "Monitoring and Reporting", click on "Annual Report Template."

In addition to the reporting requirements already set forth in the MRP, the annual report must include the following:

1. General

- ❖ The name and address of the person submitting the report as well as the day, month, and year in which the report is being submitted at the top of the first page.
- ❖ The subject line of the annual report must state the THP number, three-letter county code, and plan name as it appears in the approved THP.
- ❖ Time period during which the data were collected.
- ❖ List Tier level and summarize the monitoring requirements.
- ❖ A status of active timber harvest operations including:
 - Day, month, and year the harvest opened and closed for the season.
 - Previous year's activities (types, locations, percent harvested, area of harvest, and extent of overall plan completion).
 - Planned activities including estimated month and year harvests activities must resume.
 - Estimated month and year harvesting will be completed.
 - Wet weather problems observed.
 - Any other critical information.
- ❖ A summary of all violations. If there were no violations, please state as such.
- ❖ Detailed documentation of rainfall measurement procedures and locations or a reference to the page number in the THP where this is described. Describe the type of rain gauge(s) used. If applicable, include the link to the Web site where data for the rain gauge may be viewed.

- ❖ With the first annual report, a copy of the road management program.
 - A summary of the road management program² and actions implemented for the protection of water quality and beneficial uses.
 - ❖ Recommendations for improving the monitoring and reporting program.
2. **Visual Monitoring**
- ❖ A summary of all visual monitoring activities performed during the previous year.
 - Summary must include dates and times visual monitoring occurred and any corrective actions taken during inspections.
 - Attach inspection forms or copies of logbook pages detailing inspections.
4. **Photo-monitoring**
- ❖ Submittal of all data and photos in electronic format.

III STANDARD PROVISIONS

1. Representatives of the Water Board shall be allowed:
 - a. Entry upon premises where timber harvest activities occur;
 - b. Access to copy any records that must be kept under the conditions of these requirements;
 - c. To inspect any timber harvest activity, equipment (including monitoring and control equipment), practices, or operations regulated or required under these requirements; and,
 - d. To photograph, sample, and monitor for the purpose of showing timber harvest requirements compliance.
2. The Discharger shall maintain records of all monitoring information and results. Records must be maintained for a minimum of three years after the MRP is rescinded. This period may be extended during the course of any unresolved litigation or when requested by the Water Board.
3. Any person signing a report must make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

The EO may modify or rescind this MRP at any time. Any such modification or rescission must comply with California Water Code section 13269 or 13267.

Roger W. Briggs, Executive Officer Date

² Big Creek's Road Inventory Program may be used as a model.

Exhibits:

Exhibit 1

Big Creek Road Inventory Program

Standard Operating Procedure 5.2.3 Photo Documentation Procedure

S:\Seniors\Shared\NPS\Timber_Harvest_Case Files by Site\1-08-018 SCR Young\March 18, 2010 agenda items\MRP_R3-2009-0063_1-08-018_SCR_Young_final.doc

Plan No.:	1-08-108 SCR
Plan Name:	Young

Cumulative Effects Ratio					
Is the proposed harvest in a 303(d) listed watershed? **	Acres Proposed for Harvest or Harvested in Planning Watershed (CalWater) in last fifteen years*	Acres to be harvested as part of proposed		Total Acres in Planning Watershed	
		THP/NTMP	Sum	Watershed	CER
Yes	1,641	41	1507	10,392	15%

* Include all acreage in proposed and approved THPs/NTMPs

** Watershed 303d listed as impaired from sediment or temperature?
If yes type "yes" or leave blank.

Plan No.: 1-08-018 SCR

Plan Name: Young

Drainage Density Index

ft. of Class I	ft. of Class II	ft. of Class III	Corrected Sum	Plan Area (ac)	DDI
100	1,550	1,650	5050	41	123

Plan No.: 1-08-018 SCR

Plan Name: Young

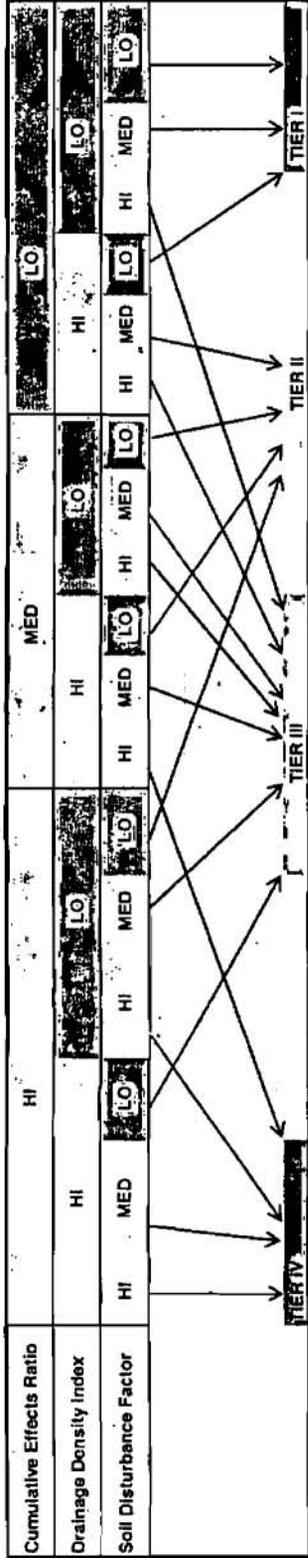
Soil Disturbance Factor

Enter values in cells shaded yellow.

		Group(ac)	Selection(ac)			Corrected Sum
Silviculture	Harvest Area (ac)		41			41
	Area in THP (ac)		41			
Roads		<u>Seasonal/Temporary</u> <u>Existing</u> x 4	<u>Proposed</u> x 6	<u>All weather/ Permanent</u> <u>Existing</u> x 2	<u>Proposed</u> x 4	
	Linear feet - Existing and proposed	100	4900			29800
		<u>Class I</u> x 30	<u>Class II</u> x 20	<u>Class III</u> x 10		
	Crossings - Number and Class of watercourse crossed		4	1		90
		x 10				
	Number of feet In-lieu/Alt rule in WLPZ	1,200				12000
	EHR - Number of feet in high or extreme	<u>High</u> x 2 1,200	<u>Extreme</u> x 5			2400
				Roads Subtotal	44290	
Skid Trails		<u>Existing</u> x 1.5	<u>Proposed</u> x 2.5			
	Linear feet - Existing and proposed	0	2300	For unmapped acreage, add 100 feet per acre		5750
		<u>Class I</u> x 10	<u>Class II</u> x 7	<u>Class III</u> x 3		
	Crossings - Number and Class of watercourse crossed	0	0	0		0
		x 5				
	Number of In-lieu/Alt rule in WLPZ	0				0
	EHR - Number of feet in high or extreme	<u>High</u> x 1.0 0	<u>Extreme</u> x 2			0
				Skid Trails Subtotal	0	
Landings		<u>Existing</u> x 1.5	<u>Proposed</u> x 2.5			
	Ground-based	0	5			13
	Helicopter	x 1	x 2			
		0	0			0
	No. of In-lieu/Alt rule in	x 3	x 5			0
	0	0			0	
				Landings Subtotal	13	
FINAL SUM						
Winter Operations Proposed? Yes or No If yes, automatic Tier III monitoring.	No					
				Sub Total	44344	
				Total	44344	

Eligibility Criteria

Plan No.: 1-08-18 SCR
Plan Name: Young
Regulatory and Monitoring Requirement Decision Tool



General Conditional Waiver for Timber Operations

Individual WDR or Waiver

Tier III Monitoring Requirements include water column monitoring for temperature and turbidity, visual and photo monitoring of timber harvest area infrastructure, CDF Forest Practice Rules compliance monitoring, road inventory program, and forensic monitoring as necessary. Tier III monitoring is automatically required if ground based equipment is used off of an all-weather road during the period October 15 - May 1.

Tier II Monitoring Requirements include visual and photo monitoring of timber harvest area infrastructure, CDF Forest Practice Rules compliance monitoring, road inventory program, and forensic monitoring as necessary.

Tier I Monitoring Requirements include CDF Forest Practice Rules compliance monitoring, road inventory program, and forensic monitoring as necessary.

Individual Monitoring

Final
High
High

16%

High	Med	Low
>15%	15% to 10%	<10%

123

High	Med	Low
>100	>100	<100

Winter Operations Not Proposed

Cumulative Effects Ratio >15% 15% to 10% <10%

Drainage Density Index >100 >100 <100

High

44344

Soil Disturbance Factor >2500 2500 to 1000 <1000

YOUNG PROPERTY
 Starr Creek
 Santa Cruz Co., California

ATTACHMENT A

HARVEST PLAN MAP

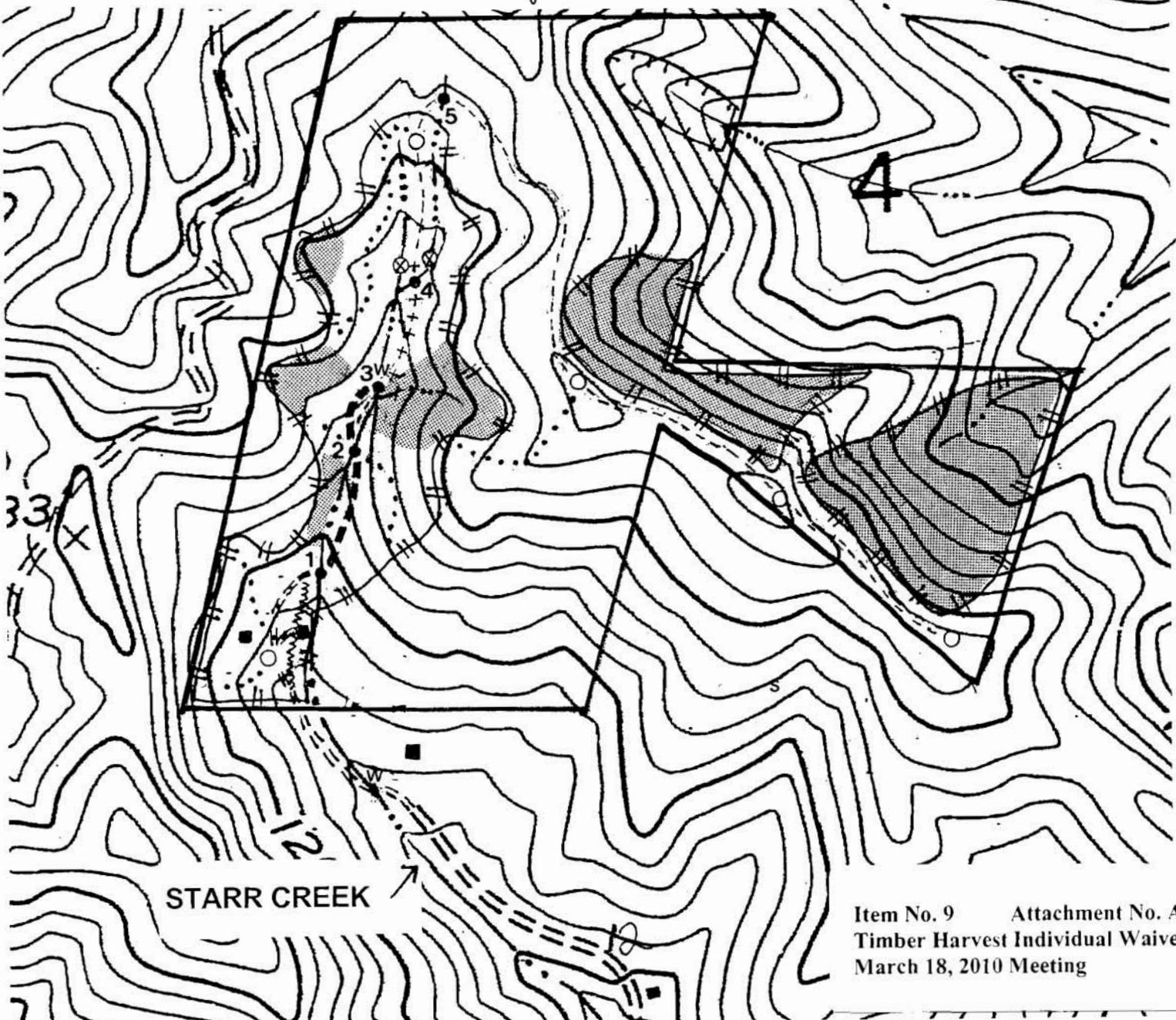
T9S, R2W, MDBM
 Section 4
 Scale 1" = 500 ft. CI = 40'
 USGS Castle Rock Ridge Quad

Legend

- Harvest boundary
- Cable logging area
- Existing seasonal road
- Existing seasonal road-no hauling
- Proposed seasonal road
- Proposed or reconstructed seasonal road/WLPZ
- Proposed temp. road
- Proposed skid trail

Reconstructed WLPZ temp. road over 20% grade + + + +

- Class I watercourse (see map next page)
- Class II watercourse
- Class III watercourse
- Watercourse class change
- Watercourse crossings
- Domestic water intakes
- Old-growth residual preserve
- Houses
- Landings



STARR CREEK FOCUS

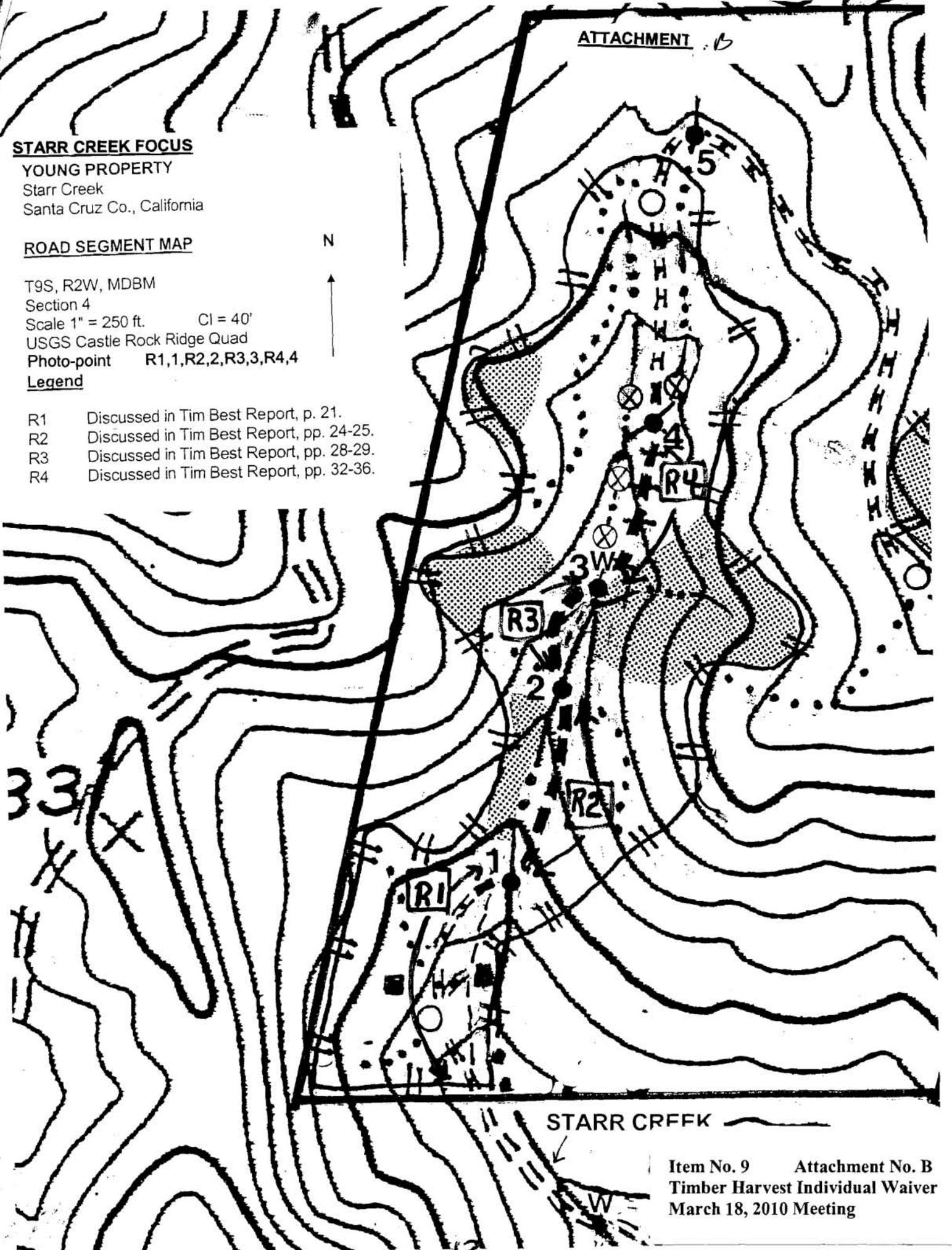
YOUNG PROPERTY
Starr Creek
Santa Cruz Co., California

ROAD SEGMENT MAP

T9S, R2W, MDBM
Section 4
Scale 1" = 250 ft. CI = 40'
USGS Castle Rock Ridge Quad
Photo-point R1,1,R2,2,R3,3,R4,4
Legend



- R1 Discussed in Tim Best Report, p. 21.
- R2 Discussed in Tim Best Report, pp. 24-25.
- R3 Discussed in Tim Best Report, pp. 28-29.
- R4 Discussed in Tim Best Report, pp. 32-36.



ATTACHMENT : C

EXHIBIT 1

**BIG CREEK ROAD INVENTORY PROGRAM
STANDARD OPERATING PROCEDURE 5.2.3
PHOTO-DOCUMENTATION PROCEDURE**

**Item No. 9 Attachment No. C
Timber Harvest Individual Waiver
March 18, 2010 Meeting**

**BIG CREEK ROAD INVENTORY PROGRAM (BCRIP)
PROTOCOL FOR CONDUCTING COMPANY ROAD
INVENTORIES & MAINTENANCE**

Purpose

Big Creek Lumber Company owns and controls over 11,000 acres of forests on which there are over 60 miles of permanent, temporary, surfaced, and un-surfaced roads. Maintenance of these roads requires frequent monitoring and treatment.

This document has been drafted to provide the standard operating procedures for conducting and recording road inventories and for the use of the inventory to direct appropriate treatment. This protocol has been drafted so as to guide road inventories consistent with Big Creek goals & objectives and with the certification of Big Creek's lands with the Forest Stewardship Council (FSC).

Process of Road Inventory

Big Creek conducts road inventories on varying intervals, depending upon (1) the designated use of the road, (2) the intensity and duration of precipitation received, (3) the hydrologic activity of the stream system in the area, (4) the susceptibility of the road and appurtenant crossings to failure or damage, and (5) the interval of time since that portion of road was used.

On properties where there has been recent activity or road use, especially if road damage was noted or improved, review of the roads is conducted more frequently. For each portion of road, Big Creek has designated a standard interval of 2 inches of rain per storm event as the cue to send out maintenance crews. The 2" standard interval is subject to change based on the relationship between the five factors listed above.

When indicated by the interval period, or when deemed necessary otherwise, an individual or group of persons will review the portion of road. Road inventory may be conducted on foot, by pickup, or (especially in wet periods) by ATV or other light-tracking vehicle. While conducting the inventory, the person or persons will do handwork where necessary, to clear and improve drainage structures and culverts.

Each instance a portion of road is inventoried, a form is filled out recording the observations of the person (see Appendix B, Road Inventory Form). This form shows the person to record the location, date, problem, and proposed solution. This form is then submitted to the Chief Forester of Operations (CFO).

After the road inventory form is completed, it is entered into the roads inventory database (a spreadsheet which tracks observations, work completed, and dates of last review for a portion of road).

If the need for repair or maintenance is immediate, the road reviewer will immediately notify the Chief Forester of Operations so that an appropriate treatment may be planned and initiated. All road inventory forms submitted to the CFO are reviewed, and potentially urgent problems are further analyzed to determine if immediate treatment is necessary. When immediate treatment is prescribed, the project is listed with indication of urgency on a day care board posted in the Big Creek Forestry Office. As soon as resources are available to conduct the treatment operations, the necessary equipment, materials, and personnel are dispatched to the site.

After the site is treated, the CFO or the CFO's designee will review the site to determine the success of the treatment. This site, at an interval dependent upon the treatment, will be reviewed over time to evaluate success of treatment and to determine if follow-up treatment is necessary.

For sites that do not require immediate treatment, the records for that site will not be further entered and the biennial summary of roads is prepared (May 1 and November 1 of every year). At these times corresponding to the appropriate end and beginning, respectively, of the winter period, the latest records for each property are reviewed and responsibility for appropriate treatment and design, subsequent evaluation of the treatment's success is conducted, and follow-up treatment prescribed, if necessary.

ELEMENTS OF THE FIVE FACTORS THAT DETERMINE INSPECTION TRIGGERS FOR THE BCRIP:

Watershed:

Threatened and Impaired
303 (D) Listed Stream Segments
Sub-division/home proximity to project area
Orographic effect:
 South county vs. North county
Project elevation, low vs. high in the watershed
Road conditions outside of project area that contribute or receive flow
Watercourse classifications for project area

Porosity:

Fast vs. slow
Soil type - sandstone/shale/granite
High vs. low rock content
Ground saturation point/springs begin to flow at higher rates

Topography:

Steep/flat/undulating
Indication of instabilities/ tipped trees/earth fractures/slides
Proximity to San Andreas Fault

Vegetative Cover Types:

Brush/oak woodland/conifer
General vegetative cover

General Elements Associated with Infrastructure:

Age of road:
 Older vs. newer road/existing leaf cover/general vegetation cover

History:

Legacy problems/old humboldt crossings
Who designed and implemented the existing road/crossings
Past performance and condition of general infrastructure

Location of road:

Ridge top/steep ground/proximity to watercourse/roads on unstable areas

Road surfacing:

Rocked/ based/seeded/straw mulched/slash packed/un-surfaced

Road Standards:

Indeveloped/outloped/crowned/re-contoured:
Spider outlope of new roads
Full bench road cut/balanced cut and fill/fill
Through cuts/long run of through cut
Berms on outside edge of road
Seasonal/all winter road

Type of drainage and crossings:

Waterbars/rolling dips/bridges/culverts/rocked fords
Current condition of erosion control structures/How much do you think they can handle

Trespass

4WD/motorcycles/mountain bikes/horses/foot traffic

Watercourse crossing location and frequency

Gopher holes

Pig wallows/roosting

PG&E access road

BHR rating in THP

Weather:

Interval of time since the last rain event
Type of rain year/El nino/are storms holding more rain
Jet stream status

High pressure or low pressure

Wind direction:

South East - Strong high pressure
South - Storm medium pressure
Southwest - Storm low pressure
East/Southeast - Strong extreme low pressure
West - Clearing

Check the barometer

Soaking, low intensity, rain vs. hard, high intensity, rain

General weather patterns

Trigger Assessment Tools:

Weather radio

Barometer

Local contacts:

Forest landowners

Local news forecasts

Tell tail locations:

Creek mouths open to the ocean

General overland flow

Bridge crossings of major rivers/streams/creeks throughout the county

Etc...

State wide contacts

Other foresters and forestry companies

California News:

Moving uphill vs. downhill

Weather web sites (rainfall, stream flow, satellite imagery, forecasts, flood warnings, etc...):

<http://www.wrh.noaa.gov/mtr/>

<http://www.goes.noaa.gov/>

http://water.usgs.gov/cgi-bin/waterwatch?map_type=real&state=ca

<http://cdec.water.ca.gov/mtr/realStations.html>

http://www.weather.com/maps/maptype/satelliteworld/pacificocean/satellite_large_animated.html?

<http://www.wrh.noaa.gov/mtr/certext.php?pl=RSS&id=RSS>

<http://www.srfine.com/home/index.cfm>

<http://weather.cnn.com/weather/forecast.jsp?locCode=SRU>

OWNERSHIP:

DATE:

NAME(S):

LOCATION:

PROBLEM:

CODES

SOLUTION:

CODES

LOCATION:

PROBLEM:

CODES

SOLUTION:

CODES

PROBLEM

Cut-Bank Failure	1
Fill-Slope Failure	2
Water Bar Failure	3
Fill Failure	4
Drainage Problem	5
Cracks/Sealing	6
Flashed Culvert	7
Wash-Out	8
Slide Debris/Flow	9
Trees Blocking Road	10

SOLUTION

Replace	A
Reconstruct	B
Deepen	C
Reinforce	D
Remove	E
Cover	F
Mechanical	M
Hand Work	H
Temporary	T
Permanent	P

Standard Operating Procedure 5.2.3

Photo Documentation Procedure

Introduction:

Photographs provide a qualitative, and potentially semi-quantitative, record of conditions in a watershed or on a water body. Photographs can be used to document general conditions on a reach of a stream during a stream walk, pollution events or other impacts, assess resource conditions over time, or can be used to document temporal progress for restoration efforts or other projects designed to benefit water quality. Photographic technology is available to anyone and it does not require a large degree of training or expensive equipment. Photos can be used in reports, presentations, or uploaded onto a computer website or GIS program. This approach is useful in providing a visual portrait of water resources to those who may never have the opportunity to actually visit a monitoring site.

Equipment:

Use the same camera to the extent possible for each photo throughout the duration of the project. Either 35 mm color or digital color cameras are recommended, accompanied by a telephoto lens. If you must change cameras during the program, replace the original camera with a similar one comparable in terms of media (digital vs. 35 mm) and other characteristics. A complete equipment list is suggested as follows:

Required:

- Camera and backup camera
- Folder with copies of previous photos (do not carry original photos in the field)
- Topographic and/or road map
- Aerial photos if available
- Compass
- Timepiece
- Extra film or digital disk capacity (whichever is applicable)
- Extra batteries for camera (if applicable)
- Photo-log data sheets or, alternatively, a bound notebook dedicated to the project.
- Yellow photo sign form and black marker, or, alternatively, a small black board and chalk

Optional:

- GPS unit
- Stadia rod (for scale on landscape shots)
- Ruler (for scale on close up views of streams and vegetation)

Some safety concerns that may be encountered during the survey include, but are not limited to:

- Inclement weather
- Flood conditions, fast flowing water, or very cold water
- Poisonous plants (e.g.: poison oak)
- Dangerous insects and animals (e.g.: bees, rattlesnakes, range animals such as cattle, etc.)
- Harmful or hazardous trash (e.g.: broken glass, hypodermic needles, human feces)

We recommend that the volunteer coordinator or leader discuss the potential hazards with all volunteers prior to any fieldwork.

General Instructions:

From the inception of any photo documentation project until it is completed, always take each photo from the same position (photo point), and at the same bearing and vertical angle at that photo point. Photo point positions should be thoroughly documented, including photographs taken of the photo point. Refer to copies of previous photos when arriving at the photo point. Try to maintain a level (horizontal) camera view unless the terrain is sloped. (If the photo can not be horizontal due to the slope, then record the angle for that photo.) When photo points are first being selected, consider the type of project (meadow or stream restoration, vegetation management for fire control, ambient or event monitoring as part of a stream walk, etc.) and refer to the guidance listed on *Suggestions for Photo Points by Type of Project*.

When taking photographs, try to include landscape features that are unlikely to change over several years (buildings, other structures, and landscape features such as peaks, rock outcrops, large trees, etc.) so that repeat photos will be easy to position. Lighting is, of course, a key ingredient so give consideration to the angle of light, cloud cover, background, shadows, and contrasts. Close view photographs taken from the north (i.e., facing south) will minimize shadows. Medium and long view photos are best shot with the sun at the photographer's back. Some artistic expression is encouraged as some photos may be used on websites and in slide shows (early morning and late evening shots may be useful for this purpose). Seasonal changes can be used to advantage as foliage, stream flow, cloud cover, and site access fluctuate. It is often important to include a ruler, stadia rod, person, farm animal, or automobile in photos to convey the scale of the image. Of particular concern is the angle from which the photo is taken. Oftentimes an overhead or elevated shot from a bridge, cliff, peak, tree, etc. will be instrumental in conveying the full dimensions of the project. Of most importance overall, however, is being aware of the goal(s) of the project and capturing images that clearly demonstrate progress towards achieving those goal(s). Again, reference to *Suggestions for Photo Points by Type of Project* may be helpful.

If possible, try to include a black board or yellow photo sign in the view, marked at a minimum with the location, subject, time and date of the photograph. A blank photo sign form is included in this document.

marker post) then have an alternate method (map, aerial photo, copy of an original photograph of the photo-point, etc).

2. Select an existing structure or landmark (mailbox, telephone pole, benchmark, large rock, etc.), identify its latitude and longitude, and choose (and record for future use) the permanent position of the photographer relative to that landmark. Alternatively, choose the procedure described in *Monitoring California's Annual Rangeland Vegetation* (UC/DANR Leaflet 21486, Dec. 1990). This procedure involves placing a permanently marked steel fence post to establish the position of the photographer.
3. For restoration, fuel reduction, and BMP projects, photograph the photo-points and carry copies of those photographs on subsequent field visits.

Determining the Compass Bearing:

1. Select and record the permanent magnetic bearing of the photo center view. You can also record the true compass bearing (corrected for declination) but do not substitute this for the magnetic bearing. Include a prominent landmark in a set position within the view. If possible, have an assistant stand at a fixed distance from both the photographer and the center of the view, holding a stadia rod if available, within the view of the camera; preferably position the stadia rod on one established, consistent side of the view for each photo (right or left side).
2. Alternatively, use the procedure described in *Monitoring California's Annual Rangeland Vegetation* (UC/DANR Leaflet 21486, Dec. 1990). This procedure involves placing a permanently marked steel fence post to establish the position of the focal point (photo center).
3. When performing ambient or event photo monitoring, and when a compass is not available, then refer to a map and record the approximate bearing as north, south, east or west.

Suggestions for Photo Points by Type of Project:

Ambient or Event Monitoring, Including Photography Associated with Narrative Visual Assessments:

1. When first beginning an ambient monitoring program take representative long and/or medium view photos of stream reaches and segments of shoreline being monitored. Show the positions of these photos on a map, preferably on the stream/shore walk form. Subjects to be photographed include a representative view of the stream or shore condition at the beginning and ending positions of the segment being monitored, storm drain outfalls, confluence of tributaries, structures (e.g., bridges, dams, pipelines, etc.).
2. If possible, take a close view photograph of the substrate (streambed), algae, or submerged aquatic vegetation.

4. Long view and medium view of streambed changes (thalweg, gravel, meanders, etc.)
5. Medium and close views of structures, plantings, etc. intended to induce these changes.
6. Optional: Use a tape set perpendicular across the stream channel at fixed points and include this tape in your photos described in 3 and 4 above. For specific procedures refer to Harrelson, Cheryl C., C.L. Rawlins, and John P. Potyondy, *Stream Channel Reference Sites: An Illustrated Guide to Field Techniques*, United States Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report RM-245.

Vegetation Management for Fire Prevention ("fuel reduction"):

1. Aerial view (satellite or airplane photography) if available.
2. In the absence of an aerial view, a landscape; long view showing all or representative sections of the project (bluff, bridge, etc.)
3. Long view (wide angle if possible) showing the project area or areas. Preferably these long views should be from an elevated vantage point.
4. Medium view photos showing examples of vegetation changes, and plantings if included in the project. It is recommended that a person (preferably holding a stadia rod) be included in the view for scale
5. To the extent possible include medium and long view photos that include adjacent stream channels.

Stream-Sediment Load or Erosion Monitoring:

1. Long views from bridge or other elevated position.
2. Medium views of bars and banks, with a person (preferably holding a stadia rod) in view for scale.
3. Close views of streambed with ruler or other common object in the view for scale.
4. Time series: Photograph during the dry season (low flow) once per year or after a significant flood event when streambed is visible. The flood events may be episodic in the south and seasonal in the north.

