

California Regional Water Quality Control Board
North Coast Region

Cleanup and Abatement Order and Requirement for Technical Reports
No. R1-2006-0055
(As amended by Order No. R1-2008-0100 to reflect new ownership)

for

Scotia Pacific Company LLC, Salmon Creek Corporation,
The Pacific Lumber Company, and
Humboldt Redwood Company, LLC

North Fork Elk River Watershed

Humboldt County

The California Regional Water Quality Control Board, North Coast Region (hereinafter Regional Water Board), finds that:

1. The Pacific Lumber Company, the Scotia Pacific Company LLC, and Salmon Creek Corporation, all subsidiaries of MAXXAM, Inc., (hereinafter collectively referred to as the Discharger)* own and/or conduct timber harvest activities on approximately 21,000 acres (76%) of the 27,500 acre Elk River watershed, tributary to Humboldt Bay and southeast of Eureka. There are two major tributaries of the Elk River, the North, and South Forks of Elk River. The Discharger owns approximately 98% of the total watershed area within North Fork Elk River planning watersheds. This Order pertains only to the Discharger's North Fork Elk River holdings.
2. The Discharger conducts timber harvesting, forestry management, road construction and maintenance, and related activities on the lands in the North Fork Elk River watershed within its ownership.
3. Mean annual precipitation in the vicinity of the North Fork Elk watershed shows a strong elevation gradient, ranging from 99 cm in Eureka (seaside) to 152 cm near Kneeland (20 km inland, elevation 810 m.). Roughly 90% of the precipitation occurs as rainfall between October and April.
4. Pursuant to the Water Quality Control Plan for the North Coast Region (Basin Plan), including State Water Resources Control Board (State Water Board) Resolution No. 88-63, the existing and potential beneficial uses of the Eureka Plain Hydrologic Unit, including the North Fork Elk River and its tributaries, are:
 - a. Municipal and Domestic Supply (MUN)
 - b. Agricultural Supply (AGR)
 - c. Industrial Service Supply (IND)
 - d. Groundwater Recharge (GWR)
 - e. Freshwater Replenishment (FRSH)

* Humboldt Redwood Company, LLC is added as a responsible party in accordance with Order No. R1-2008-0100.

- f. Navigation (NAV)
 - g. Hydropower Generation (POW)
 - h. Water Contact Recreation (REC-1)
 - i. Non-contact Water Recreation (REC-2)
 - j. Commercial and Sports Fishing (COMM)
 - k. Cold Freshwater Habitat (COLD)
 - l. Wildlife habitat (WILD)
 - m. Rare, Threatened, or Endangered Species (RARE)
 - n. Marine Habitat (MAR)
 - o. Migration of Aquatic Organisms (MIGR)
 - p. Spawning, Reproduction, and/or Early Development (SPWN)
 - q. Estuarine Habitat (EST)
 - r. Aquaculture (AQUA)
 - s. Native American Culture (CUL),
 - t. Water Quality Enhancement (WQE)
 - u. Flood Peak Attenuation/Flood Water Storage (FLD)
 - v. Wetland Habitat (WET)
5. The waters of Elk River support, or before recent timber harvest-related degradation of water quality, have supported, domestic and agricultural water supplies for more than 100 residents.
6. The waters of North Fork Elk River support coho and Chinook salmon, and steelhead and cutthroat trout. Coho salmon, Chinook salmon, and steelhead trout are listed as threatened under the federal Endangered Species Act. Additionally, the California Fish and Game Commission amended the California Endangered Species Act (CESA) to list coho salmon as threatened in the Southern Oregon / Northern California Coast Evolutionarily Significant Unit (ESU) north of San Francisco Bay, which includes North Fork Elk River.
7. Sediment deliveries to North Fork Elk River have increased in response to accelerated timber harvesting activities over the last 15 years, resulting in impacts to water quality conditions. The record on this matter is extensively documented, as with testimony and evidence provided by the public, interested parties, affected residents, the Discharger, and Regional Water Board staff and through numerous hearings before the Regional Water Board:
- a. Significant discharges of sediment and organic debris to watercourses have aggraded the stream channels in some areas, significantly reducing channel capacity and, along with increased peak flows, contributed to increased flood frequencies and severity;
 - b. Increased flooding threatens public health and safety, including ingress and egress to homes, roads, bridges, and other structures. Flooding is a nuisance condition under California Water Code (CWC) and must be addressed (California Water Code (CWC) §§ 13050 and 13263);

- c. Increased sediment and organic material can also produce tastes and odors offensive to the senses, and can interfere with surface water supply intakes and endanger the integrity of septic systems; and
- d. Increased turbidity due to excessive fine sediments also provides a medium to promote bacteriological growths and reduces the effectiveness of water disinfection for domestic water supplies.

Recent inspections and residents' reports to the Regional Water Board affirm that these effects continue in nature and extent.

- 8. Excessive fine sediment has been shown to detrimentally affect spawning gravel for fish and to reduce survival from egg to emergence stages by reducing intragravel oxygen and gravel permeability and by entombing fish larvae within gravel interstices. Excessive fine sediment can reduce the production of food organisms for juvenile fish. Furthermore, increased excessive bedload reduces stream pool size and habitat availability for aquatic species, and reduces channel capacity, which leads to increased flooding of adjacent lands and may cause dewatering in the summer season.
- 9. The North Fork Elk River watershed is listed as an impaired water body under Section 303(d) of the federal Clean Water Act due to sedimentation/siltation. Water quality problems cited under the listing include: sedimentation, threat of sedimentation, impaired irrigation water quality, impaired domestic supply water quality, impaired spawning habitat, increased rate and depth of flooding due to sediment, and property damage.
- 10. From 1988 to 1993, according to CDF records, the Discharger has conducted accelerated timber harvesting plan activities throughout their entire Elk River ownership. For example, in the North Fork Elk River watershed, the average annual rate of harvest from 1986 to 1998 was 5.4% of their ownership, compared to their annual average harvest rate of 0.5% from 1974 to 1987. From 1999 through 2001 the annual average harvest rate was 0.3% while CDF imposed a moratorium on new plan approval due to cumulative watershed impacts. From 2002 to 2004, the annual average harvest rate increased to 4% of their ownership in the North Fork Elk River.
- 11. The Discharger significantly intensified the rate and scale of timber harvest activities in this watershed over the last 17 years, and sediment reports submitted by the Discharger document a resulting significant timber-harvest-related increase in sediment discharges, and threatened discharges.
- 12. On December 16, 1997, representatives of CDF, California Department of Fish and Game, California Division of Mines and Geology (now known as the California Geological Survey), and Regional Water Board staff reached consensus that the North Fork Elk River watershed had significant adverse cumulative watershed impacts, with timber harvesting a contributing factor.

13. Conditions in this watershed, tools for recovery, and the linkages to timber harvesting plan activities and associated road construction are documented in a number of reports and scientific panel reviews:
 - a. *Sediment Source Investigation Reduction Plan for the North Fork Elk River Watershed, Humboldt County, California* (PWA, 1998): “both road construction and harvesting have been linked to increased sediment production and yield in the North Fork Elk River.” In addition, various landslide processes were found to constitute the largest percentage of sediment sources in this watershed, a significant portion of which is related to timber-harvest related activities.
 - b. *An Analysis of Flooding in Elk River and Freshwater Creek Watershed, Humboldt County, California* (1999): A CDF-commissioned Blue Ribbon panel of University of California scientists (U.C. Panel) review (July 1, 1999) concluded, in part, that the submitted analysis was incomplete and incorrect, and that flooding was likely increased significantly by the Discharger’s timber harvest and related activities. In addition, the U.C. Panel noted that there is aggradation in Elk River, and that the material is still being transported through the fluvial system.
 - c. The North Coast Regional Water Quality Control Board’s *Staff Report for Proposed Regional Water Board Actions in the North Fork Elk River, Bear Creek, Freshwater Creek, Jordan Creek and Stitz Creek Watersheds* (Sept. 9, 2000): This document described and annotated the increased sediment deliveries to watercourses from harvested lands, increased flooding impacts, the accelerated rate of land-disturbing timber harvest activities, and its correlation to these impacts. The document also proposed alternative or combined courses of action for reducing these impacts, including but not limited to the issuance of waste discharge requirements.
 - d. The University of California Committee on Cumulative Watershed Effects found in their June 2001 report, *A Scientific Basis for the Predication of Cumulative Watershed Effects*, that an increase in peak flow rates due to timber harvesting is likely under the current harvest rates and that this increase in peak flow translates into an increase in flood risk.
 - e. The *Humboldt Watersheds Independent Scientific Review Panel* (ISRP) (December 27, 2002) reviewed CDF’s application of the empirical peak flow model used to establish the annual timber harvesting limitation of 600 equivalent clearcut acres for the Elk River watershed. The ISRP concluded that “the approach does not take into account sediment production or changes in the sediment transport capacity of channels that might result from harvest.” Further, because the CDF approach is designed to maintain the current level of impairment rather than promote recovery, this approach “yields a high risk that current harvest rates will not achieve recovery of beneficial uses of water in impaired water bodies.”

- f. The ISRP found that the harvest and road construction rates have been high enough to impact a substantial portion of the watershed. These activities and impacts are documented in the Elk River Watershed Analysis, given the type and level of activity. The ISRP concluded, among other things, that the approval of THPs generating this documented level of impact constitutes a strong indication that the THP and HCP processes will not result in the timely recovery of the Elk River watershed.
14. In March of 1999, the Discharger, the US Fish and Wildlife Service, National Marine Fisheries Service (NMFS, now called NOAA Fisheries Service, or NOAA Fisheries), and the California Department of Fish & Game (DFG) (collectively referred to as the Wildlife Agencies) entered into an agreement to implement an all-species *Habitat Conservation Plan* (HCP) on the Discharger's lands. The HCP was prepared to address the requirements of the federal Endangered Species Act (FESA) and the California Fish and Game Code with regard to listed (and potentially listed) species, including listed salmonids. The Implementation Agreement for the HCP states, in part, "notwithstanding any other provisions in this Agreement all activities undertaken pursuant to this Agreement, the HCP, or the Federal or State Permits must be in compliance with all applicable Federal and state laws and regulations."
15. The HCP imposes certain prescriptions and other benefits that may result in both short-term and long-term benefits and improvements in the North Fork Elk River Watershed. However, the HCP was not designed to, and can not, ensure full compliance with the federal and state water quality laws and regulations, such as the Basin Plan prohibition against discharge of sediment waste in amounts deleterious to beneficial uses such as domestic drinking water supplies, nor does the HCP protect against nuisance flooding or directly remediate aggradation of stream channels.

Section 3.4.1.3 (page 3.4-13) of the *Final Environmental Impact Statement/Environmental Impact Report For the Headwaters Forest Acquisition and the PALCO Sustained Yield Plan and Habitat Conservation Plan* acknowledges this in part, as follows: "Because the proposed HCP/SYP is not designed specifically to address impaired waters to meet the water quality criteria, additional restrictions and management practices may be required later by the TMDL process. These future restrictions could conflict with some management components of the proposed HCP/SYP. Such future effects of the Clean Water Act enforcement are beyond the scope of this document and thus will not be addressed here". Additionally, the HCP requirements are calculated to result in a trend toward properly functioning watershed conditions over period of 50 years. The HCP was not designed to achieve compliance with applicable water quality standards, the legal requirements in the Basin Plan or other applicable water quality laws in Porter-Cologne or the Clean Water Act. The Regional Water Boards, however, are required to regulate water quality in a manner that will achieve compliance with those laws.

16. Under the HCP, the Discharger is implementing road-related sediment reduction strategies associated with CDF-approved THPs to reduce sediment discharges

from roads to streams. Particularly, the Discharger “upgrades” all appurtenant roads associated with approved THPs, and employs a “zero net discharge” sediment offset strategy. Such efforts can be effective at minimizing sediment discharges from timber harvest activities when properly implemented. However, these strategies fail to first prevent controllable discharges from occurring and then fail to truly mitigate for incidental discharges once they have occurred, thus continuing to allow ongoing sediment discharges to waters of the State. In addition, the Discharger is also conducting corrective roadwork, independent of THPs, across its ownership to reduce sediment discharges from roads to streams. Particularly, the Discharger is required to “storm proof” roads and landings on its ownership within the first 20 years of the HCP. Such efforts can be effective at minimizing road-related sediment discharges when properly implemented. However, sediment discharges from other anthropogenic sediment source sites, such as skid trails, gullies, and landslides are not necessarily addressed under this strategy. While these ongoing discharges may be acceptable within the time period of the HCP, they do not comply with prohibitions outlined in the *Action Plan for Logging, Construction, and Associated Activities in the Water Quality Control Plan for the North Coast Region* (Basin Plan). Therefore, sediment reduction strategies under the HCP, as implemented through the CDF THP review process, do not sufficiently protect water quality and restore the beneficial uses of impaired waters of the State, particularly as applied in this watershed which has been heavily affected by cumulative effects of intensive human activities.

17. On August 1, 2002, Cleanup and Abatement Order R1-2002-0085 was issued to the Discharger in response to a unanimous Board directive to address discharges and threatened dischargers of earthen materials in Elk River originating from the Discharger’s landholdings in this watershed. This Cleanup and Abatement Order (CAO) was originally issued, in part, due to the slow rate at which the Discharger was addressing these previously inventoried sediment discharge sites under other regulatory mechanisms. CAO R1-2002-0085 was later rescinded and replaced by CAO R1-2002-0114 on December 17, 2002. Order R1-2002-0114 requires the Discharger to prepare and submit an itemized report identifying all options and preferred alternatives for the remediation of each road related and non-road related landslide contained in the 1998 PWA report. In particular, the CAO focused on remediation of sites identified in Table 13 of this report (herein after to referred to as “Table 13 sites.”)
18. Since issuance of Order R1-2002-0114, Regional Water Board staff has expressed concerns over the slow progress that the Discharger has made towards correction of the Table 13 sites. This was documented in a letter from the Regional Water Board Executive Officer to the Discharger on February 5, 2004. In a March 19, 2004 letter, the Discharger indicated that the pace at which remediation of Table 13 sites was due, in part, to a lack of a programmatic 1603 permit from the California Department of Fish and Game, a change in requirements for prioritization of road treatment under their HCP, and sediment treatment work identified during THP development and treatment required under these THPs. On May 21, 2004 the Regional Water Board Executive Officer reiterated concerns over the slow pace of corrective work and clarified that an

adequate work plan that proposed a treatment schedule for all remaining Table 13 sites based on prioritization of those sites having the greatest threat to water quality must be submitted.

19. On April 1, 2005, the Discharger submitted a work plan for all remaining Table 13 sites. However, the information submitted is insufficient to determine if the work plan adequately prioritizes correction of sites having the greatest threat to water quality. Regional Water Board staff is working with the Discharger on refining the work plan. However, to date, this issue has not been adequately resolved, in part, due to lack of a specific provision within the current CAO requiring the Discharger to submit annual work plans subject to the approval/concurrence of the Regional Water Board Executive Officer.
20. On July 18, 2005 Regional Water Board staff issued a letter to the Discharger indicating that the sediment sites identified by the 1998 PWA report Table 13 appeared to be incomplete, out-of-date and no longer as relevant as they once were. This is evident by the significant number of non Table 13 related sediment discharge sites identified for treatment in the Dischargers THPs submitted within the North Fork Elk River watershed since the 1998 report was written.
21. Order R1-2002-0114 required the Discharger to “prepare and submit by December 31, 2002, an assessment of in-stream soil deposits in Bridge Creek and the North Branch of the North Fork Elk River. The in-stream assessment shall include, but not be limited to, deposited soil volumes, causal mechanisms, potential remediation activities, and a time schedule for implementation. For the purposes of this Order, in-stream shall be defined as bankfull width or the channel migration zone, whichever is greater. Bankfull width and channel migration zone are defined in the Discharger's HCP.” On February 25, 2003, the Discharger submitted a report titled *Sediment Assessment and Treatment Plan for Selected Sediment Sources in the North Fork Elk River* (PWA 2003.) This report included an assessment of in-stream sediment deposits in the CMZ, or bankfull channel width, of Bridge Creek and the Little North Fork Elk River. A total of 19 discrete sites were identified as having future potential sediment delivery and 5 of which were listed as tentatively listed for potential treatment. To date, Regional Water Board staff have not received information that these 5 sites have been further evaluated for remediation, scheduled for treatment, or treated,
22. On March 31, 2006, the Discharger submitted a proposed 2006 work plan for sediment treatment work in the North Fork Elk River watershed. The work plan includes a proposal for the treatment of 37 road related and 1 skid trail related sites. At least 9 of these sites were not included on the original Table 13 list.
23. In recognition of the conditions in the Elk River and Freshwater Creek watersheds and the linkage to timber harvesting plan activities, the Regional Water Board approved three motions on December 3, 2003: 1) additional regulatory and non-regulatory actions are necessary due to the rate and scale of land disturbing activities in the five impaired watersheds, including the North Fork Elk River; 2) direction to develop a Cleanup and Abatement Order to address sediment sites (in basins where such orders were not already in place) and issue

- a Time Schedule Order if the due dates contained in the Order are not met; and 3) require the submittal of Reports of Waste Discharge which would lead to watershed-specific Waste Discharge Requirements (WWDRs).
24. In response to the December 3, 2003 Regional Water Board motions, on April 1, 2004 CAO R1-2004-0028 was issued to the Discharger to address sediment remediation activities in their South Fork Elk River land holdings. This Order requires the Discharger, in part, to conduct sediment inventories, prioritize treatment sites, prepare a master treatment schedule, and conduct monitoring of a selected number of treated sites. While the Discharger has conducted some sediment remediation work in this watershed, the Discharger is largely non-compliant with the most significant portions of this Order. In particular, a complete and adequate sediment inventory, prioritization, and master treatment schedule has not been submitted for concurrence by the Regional Water Board Executive Officer. These reports were initially due on December 1, 2004.
 25. Also in response to the Regional Water Board's December 3, 2003 motions, CAO R1-2006-0046 was issued to the Discharger on April 10, 2006 to conduct sediment evaluation and abatement work in their Freshwater Creek properties. This order contains most of the structural elements as CAO R1-2004-0028. Orders R1-2004-0028 and R1-2006-0046 are intended to require the Discharger to conduct watershed-wide sediment inventories and prepare a master treatment schedule which prioritizes the correction of sites in a manner and timeframe that will result in the most benefit to water quality, as explicitly stated goals. In addition, each of these orders has an explicit annual feedback loop and monitoring program, neither of which CAO R1-2002-0114 currently requires.
 26. In order for consistency with other existing orders that are similar in nature and goals as well as for increased efficiency in implementation of expedited watershed cleanup, revision of CAO R1-2002-0114 is necessary.
 27. On March 26, 2003, the Regional Water Board Executive Officer issued two orders under CWC section 13267(b), directing the Discharger to submit technical reports for purposes of developing Elk River and Freshwater Creek Total Maximum Daily Loads (TMDLs) for sediment. The technical reports under both orders were due by April 15, 2003. The Discharger has not complied with those orders to date, and has lawsuits, still pending in the courts, challenging the authority and basis for those orders.
 28. The Discharger is currently proposing to engage in timber harvesting plan activities within its North Fork Elk River ownership which will result in additional discharges and threatened discharges of sediment to the North Fork Elk River and its tributaries, causing further impairment of the beneficial uses of those waters than what has already occurred as a result of timber harvesting plan and related activities, as extensively documented in the record.
 29. The Discharger has discharged waste, particularly sediment, into waters of the State in amounts deleterious to beneficial uses, in violation of Basin Plan prohibitions. The Discharger has caused and permitted waste to be discharged

or deposited where it is likely to be discharged into North Fork Elk River and their tributaries in amounts deleterious to beneficial uses, also in violation of the Basin Plan. Such waste discharges have created conditions of pollution and nuisance, and will likely continue to exacerbate such conditions until the waste is cleaned up and its effects abated by the Discharger. These conditions and activities trigger the provisions of CWC sections 13304 and 13267.

30. The Discharger is required by this order, under the authority of CWC section 13304, to cleanup and abate ongoing and threatened discharges to waters of the State from past, present and proposed activities on its lands. The obligations to comply with this Order are independent of, and in addition to, any arrangements the Discharger may have with other agencies to comply with other laws or permits or under the HCP. The Regional Water Board is willing, and this Order is crafted, to maximize consonance between the requirements of this Order and other agency permits and requirements, to the degree possible while still achieving compliance with applicable water quality laws.
31. The technical reports required by this order under CWC section 13267(b) are necessary to ensure that sources of management-related sediment discharges are identified, characterized and evaluated for treatability, and abated. The burden to the Discharger, including the costs of these reports, bears a reasonable relationship to the need and benefits to be obtained, because the reports will lead directly to the abatement and prevention of controllable discharges to impaired waters of the State. These discharges cause, and threaten to cause, significant environmental and economic harm to the beneficial uses of waters of the State and add to nuisance flooding conditions.
32. This is an enforcement action by a regulatory agency, being taken for the protection of the environment, and is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, section 21000 et seq., specifically section 21084), and in accordance with California Code of Regulations, Title 14, section 15321.

THEREFORE, IT IS HEREBY ORDERED that, pursuant to California Water Code Sections 13267(b) and 13304, Regional Board Order No. R1-2002-0114 is rescinded and replaced with Order No. R1-2006-0055 and the Discharger shall comply with the following:

In overview, the primary components of these provisions require:

- 1) By June 1, 2006, begin implementation of the March 31, 2006 proposed 2006 Work Plan for sediment abatement (aka "sediment reduction" or "treatment") activities in this watershed and submit a revised work plan with additional information;
- 2) By June 19, 2006, the submittal of a report summarizing all sediment abatement activities conducted in 2005 in this watershed;
- 3) By October 2, 2006, the submittal of a Monitoring and Reporting Plan for the implementation and evaluation of activities conducted as part of this Order;

- 4) By December 13, 2006, the submittal of a sediment source inventory, sediment reduction plan, and a master treatment schedule;
- 5) The implementation of the required plans, with the submittal of annual workplans, monitoring plans, and monthly status reports.

More specifically, the Discharger shall –

1. **Implement Proposed 2006 Sediment Correction Work Plan and Provide Additional Information** - By no later than June 1, 2006, the Discharger shall begin implementation of the 2006 work plan, submitted to the Regional Water Board on March 31, 2006, of all sediment reducing (treatment) work proposed to be conducted in the North Fork Elk River watershed during the 2006 work year. While the Discharger has already submitted a work plan, additional information is required to be submitted by June 1, 2006 for concurrence by the Regional Water Board Executive Officer. The resubmitted 2006 work plan shall include, at a minimum, the following information:
 - A written summary describing the types of activities to be conducted, including the total number of road miles, stream crossings, and any other sediment sites to be treated.
 - A table compiling all sites, including the following information: the volume of sediment to be treated, treatment immediacy or priority, a complete description of the selected treatment alternative, and all erosion control measures to be implemented. All site identification numbers or numbering systems shall be the same as or correlated to road work order or Erosion Control Plan numbers in the Dischargers THPs, where applicable.
 - A treatment site identification number and location shown on a scaled map.
2. **Submit Information on Sediment Correction Work Completed in 2005** – By June 19, 2006, the Discharger shall submit a report summarizing all sediment reducing (treatment) work conducted in the North Fork Elk River watershed in the 2005 work year, for concurrence by the Regional Water Board Executive Officer. An adequate summary report shall include, at a minimum, the following information:
 - A written summary describing the types of activities conducted, including the total number of road miles, stream crossings, and any other sediment site to be treated.
 - A table compiling all sites, including the following information: the volume of sediment to be treated, treatment immediacy or priority, a detailed description of the selected treatment alternative, and all erosion control measures that were implemented. All site identification numbers or numbering systems shall be the same as or correlated to road work order or Erosion Control Plan numbers in the Dischargers THPs, where applicable.
 - A treatment site identification number and location shown on a scaled map.
3. **Monitoring and Reporting Plan** – By October 2, 2006, the Discharger shall submit a Monitoring and Reporting Plan (MRP) and associated documentation for concurrence by the Regional Water Board Executive Officer. The Discharger shall

conduct annual winter period monitoring activities on a representative sample of sediment source sites treated under this Order. Monitoring of a subset of sites corrected in 2005 and 2006 shall commence as detailed within the monitoring plan upon concurrence by the Executive Officer, the onset of the first rain event after October 15, 2006 that generates overland flow, or the first 1 inch in 24 hour event after 10 inches of cumulative precipitation after November 1, 2006, whichever is sooner.

The MRP shall include, at a minimum, the following information:

- Sampling locations shall be selected such that monitoring is conducted at a representative sample of treated sites across the categories identified, and across a range of physical, site-specific attributes (e.g., underlying geology, soil type, slope angle, drainage area, etc.)
- Types of monitoring shall include: visual observations, photographic documentation, and instream grab sampling for turbidity. All selected monitoring locations shall be subject to observational monitoring, while smaller subsets shall also be subject to photographic monitoring and/or instream grab sampling for turbidity.
- Sampling schedule that collects at least two samples per season and at least one during a stressing event. The precipitation events that trigger an individual monitoring event shall be defined within the MRP.
- Post correction monitoring shall include an estimate of sediment delivered to a watercourse from the corrected site at least one year after the site has been corrected.
- Components for both implementation and effectiveness monitoring.

By October 2, 2006, with the MRP, the Discharger shall develop and submit a Quality Assurance Project Plan (QAPP) and Standard Operating Procedures (SOPs) for all monitoring and reporting required by this Order for concurrence by the Regional Water Board Executive Officer. The QAPP and SOPs shall be developed in a manner consistent with guidance available from the US Environmental Protection Agency (EPA).¹ The Discharger shall implement monitoring and reporting activities according to the QAPP and SOPs.

- 4. Prepare and Submit Sediment Source Inventory and Sediment Reduction Plan & Master Treatment Schedule** – By December 13, 2006, the Discharger shall prepare and submit, the following information, which is subject to the provisions outlined in Items 4(a) and 4(b) and subject to concurrence by the Regional Water Board Executive Officer:
 - An updated and current sediment source inventory and sediment reduction plan
 - A master treatment schedule for treatment of sites within the Discharger's ownership in the North Fork Elk River watershed.

¹ EPA guidance is available on the internet at: <http://www.epa.gov/quality/>

a) **Sediment Source Inventory and Sediment Reduction Plan:** By December 13, 2006, the Discharger shall prepare a sediment inventory of all sediment discharge sites present within their holdings in the North Fork Elk River watershed as of May 8, 2006 for concurrence by the Regional Water Board Executive Officer. An adequate inventory and associated report shall, at a minimum, contain the following information:

- i) A detailed list of all sediment source sites associated with watercourse crossings, roads, skid trails, gullies, road-related and non-road-related landslides, and any other sediment-generating features associated with timber harvest activities. All sediment sites must be inventoried, cataloged, and evaluated for treatability. Sites that are determined to be infeasible to treat must be clearly identified and a detailed reason for a determination of infeasible to treat written in the inventory.

For each sediment source site, the list shall include the following information:

- A treatment site identification number and location shown on a scaled map, the volume of sediment to be treated, treatment immediacy, and detailed description of the selected treatment alternative.
- ii) All documentation associated with the investigation, assessment and characterization of sediment sources, including:
 - Dates during which the inventory was conducted,
 - Access to hard copies of all field notes and forms;
 - Hard copy and electronic versions of databases and any associated GIS layers, or access to electronic databases and any associated GIS layers for queries by Regional Water Board staff; and hard copy and electronic versions of all air photographs and images used as part of the analysis, or access to hard copy and electronic versions of all air photographs and images used as part of the analysis.
 - Associated analyses.
 - iii) Complete descriptions of:
 - The extent of areas inventoried and of field surveys, justification for areas where field surveys were deemed unnecessary, aerial photographs (dates and flight lines) evaluated, all methods employed in the investigation, assessment, and characterization of sediment sources.

b) **Master Treatment Schedule** – By December 13, 2006, the Discharger shall prepare a master treatment schedule, for concurrence by the Regional Water Board Executive Officer, for all sediment discharge sites deemed feasible to treat as part of the sediment inventory and sediment reduction plan [Item 4(a).] A master treatment schedule shall accompany the sediment source inventory and sediment reduction plan, and shall contain a detailed, long-term, multi-year time schedule for treatment activities to be completed at all sites listed in the inventory

and reduction plan. The master treatment schedule shall be based primarily on an efficient and expeditious recovery of the beneficial uses in the North Fork Elk River Watershed. The treatment schedule shall identify priority subbasins within the North Fork Elk River watershed and a prioritization of treatment sites within each subbasin. The methods and criteria used for determining subbasin and site prioritization shall be explicitly described within the sediment reduction plan.

5. **Ongoing (Annual) Cleanup Activities** –Implementation of the Sediment Source Reduction Plan and Master Treatment Schedule described in Item 4 above shall begin on the date specified in the plans, and the work will commence in any event no later than June 1, 2007. Implementation shall continue on an annual basis until all sites have been treated, according to the following provisions:

- a) **Submit Annual Workplans and Treatment Schedules** – By April 1 of each year, the Discharger shall submit an annual workplan and treatment schedule to remedy sediment sources identified in the sediment source inventory and sediment reduction plan described in Item 4 above, for concurrence by the Regional Water Board Executive Officer.

The workplan shall contain, at a minimum, a detailed list of known, priority sediment source sites that are feasible to treat prior to November 1 of the following winter period. In addition, all sites discovered during individual THP layout and proposed for correction during a particular year and not included in the Item 4 Master Sediment Inventory and Treatment Schedule shall also be described within the annual work plan, given a treatment prioritization, and a treatment schedule proposed.

In addition, for each sediment source site, the workplan list shall include:

- A treatment site identification number and location shown on a scaled map. All site identification numbers or numbering systems shall be the same as or correlated to road work order numbers in THPs either in development, approved, or pending approval.
- The volume of sediment to be treated,
- Treatment immediacy,
- A detailed description of the selected treatment alternative, including all erosion control measures to be implemented,
- A detailed time schedule for treatment activities to be completed prior to November 1 of the work year.

Each annual workplan must be consistent with the master treatment schedule constructed as per Item 4 of this Order. Any deviation from the master treatment schedule must be first submitted within the April 1 workplan and is subject to the concurrence of the Regional Water Board Executive Officer. Justification for deviations must be provided in detail.

- b) Implement Annual Workplans and Treatment Schedules** – By May 1 of each year, the Discharger shall commence implementation of the annual workplan and treatment schedule described in Item 5(a) above, or within 14 days of concurrence of the plan by the Executive Officer, whichever is sooner. During treatment, the Discharger shall allow Regional Water Board staff reasonable access for routine inspection purposes to areas where control, treatment, and mitigation activities are occurring.
 - c) Submit Annual Monitoring Plans** – By October 1 of each year, the Discharger shall submit a winter period monitoring plan describing monitoring activities of corrected sites to be conducted for the current year's winter period. The monitoring plan shall be consistent with the requirements specified in Item 3 and shall contain an itemized list of selected monitoring locations, the types of monitoring to be conducted at each location, and a detailed sampling schedule. The monitoring plan shall also include references to all quality assurance documents (i.e., Quality Assurance Project Plans and Standard Operating Procedures) associated with the activities to be conducted. Monitoring of corrected sites shall commence as detailed within the monitoring plan upon approval by the Executive Officer, the onset of the first rain event after October 15 of the applicable year that generates overland flow, or the first 1 inch in 24 hour event after 10 inches of cumulative precipitation after November 1 of the applicable year, whichever is sooner.
 - d) Submit Annual Summary Reports** – By November 15 of each year, the Discharger shall submit a summary report, monitoring plan and associated documentation for all treatment work conducted under this order during the applicable year, for concurrence by the Regional Water Board Executive Officer. The summary report submittal shall include, at a minimum, a hard copy summary report describing all corrective actions completed, electronic versions of databases, and access to hard copies of all associated databases. In addition, the report shall correspond to and be fully compatible with the approved annual workplan and treatment schedule described in Item 5(a) above, and shall discuss, in detail, the reasons for any departures from the workplan and treatment schedule, and how such departures will be resolved in future years.
- 6. Monthly Status Reports** – For each month between May and November (inclusive), the Discharger shall submit to the Regional Water Board by the fifteenth day of the following month a brief status report for all treatment work conducted under this order. Each status report shall be compatible with the approved workplan and treatment schedule for the applicable year, and shall discuss in detail the reasons for any departures from the workplan and treatment schedule, and how such departures will be resolved in future months.

7. **Work Conducted by Licensed Professionals** - Work associated with the deliverables identified in this Order must comply with existing statutes and regulations regarding the practice of geology and/or engineering in California.
8. **Request for Extensions** - Requests for extensions to required time lines specified within this Order shall be submitted to the Regional Water Board's Executive Officer (EO), in writing, at least 10 working days prior to the due date. Requests for extension must provide a reason or reasons for the request. Approval of any request for an extension of time to comply with required deadlines are subject to the approval of the EO. If the Discharger does not receive written approval of any requested extensions, it should not be assumed that the due dates are extended indefinitely or have been approved. The Discharger shall be accountable for all due dates set out in this Order in the absence of written approval from the EO.
9. **Potential Penalties for Failure to Comply** - Failure to comply with the terms of this Order may result in enforcement under the California Water Code. Any person failing to provide technical reports containing information required by this Order by the required date(s) or falsifying any information in the technical reports is, pursuant to CWC Section 13268, guilty of a misdemeanor and may be subject to administrative civil liabilities of up to one thousand dollars (\$1,000.00) for each day in which the violation occurs. Any person failing to cleanup or abate threatened or actual discharges as required by this Order is, pursuant to CWC Section 13350(e), subject to administrative civil liabilities of up to five thousand dollars (\$5,000.00) per day or ten dollars (\$10) per gallon of waste discharged.
10. **Review or Reconsideration of This Order** - Any person affected by this action of the Regional Water Board may petition the State Water Resources Control Board (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 State Water Board must receive the petition within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request. In addition to filing a petition with the State Water Board, any person affected by this Order may request the Executive Officer or the Regional Water Board to reconsider this Order. To be timely, such request must be made within 30 days of the date of this Order. Note that even if reconsideration by the Executive Officer or Regional Water Board is sought, filing a petition with the State Water Board within the 30-day period is necessary to preserve the petitioner's legal rights

Ordered by _____
Catherine Kuhlman
Executive Officer

May 5, 2006