

California Regional Water Quality Control Board  
North Coast Region

Monitoring and Reporting Program No. R1-2009-0049

SONOMA COUNTY WATER AGENCY  
STREAM MAINTENANCE PROGRAM  
WDID No. 1B09026WNSO

Sonoma County

**GENERAL**

For monitoring, applicant shall follow requirements contained in this Order, *and* additional requirements listed in the Sediment Sampling and Analysis Guidelines section of the SMP Manual.

**WATER DIVERSION MONITORING**

1. For all activities involving diversion of stream:

The Applicant shall establish two surface water monitoring stations, one representative of typical undisturbed conditions 100 feet upstream of the active work area, and one representative of surface water affected by diversion 100 feet downstream of the water diversion outlet. Water diversion activity monitoring shall be in accordance with Table 1 below:

**TABLE 1  
WATER DIVERSION SAMPLING AND ANALYSIS**

Parameter	Units	Sample Type	Minimum Analysis Frequency*
Dissolved Oxygen	mg/L	Grab	Twice Daily at each monitoring station
pH	pH units	Grab	Twice Daily at each monitoring station
Temperature	°F	Grab	Twice Daily at each monitoring station
Total Suspended Solids	mg/L	Grab	Twice Daily at each monitoring station
Turbidity	NTU	Grab	Twice Daily at each monitoring station

\* Field analysis allowed, provided duplicate samples are collected and sent to a certified laboratory for analysis at least weekly (and at least once for projects lasting less than one week).

The two daily sampling sets shall be evenly spaced during work hours, and the first set of daily samples shall be collected no earlier than one hour after work commencement each day. The Discharger shall observe surface water conditions upstream and downstream of the active project area to visually detect impacts of water diversion. Observations shall be conducted during sampling events at sampling locations for presence of bottom deposits, color, film or coating (from oil, grease, wax, etc.), floating material (including solids, liquids, foams, and scum), and odor. Surface water observations detecting exceedances of Effluent and Receiving Water Limitations are subject to "Reporting" requirements at the end of this document.

During installation and removal of diversion structures the Applicant shall monitor surface monitoring stations, described above (100 feet upstream and 100 feet downstream) in accordance with Table 2 below:

**TABLE 2  
DIVERSION STRUCTURE INSTALLATION SAMPLING AND ANALYSIS**

<b>Parameter</b>	<b>Units</b>	<b>Sample Type</b>	<b>Minimum Analysis Frequency<sup>1</sup></b>
Total Suspended Solids	mg/L	Grab	Twice Daily
Turbidity	NTU	Grab	Twice Daily

### **BANK STABILIZATION MONITORING**

For the first year following completion of a bank stabilization project, the Applicant shall inspect surface waters monthly during the wet season to determine if bank stabilization design and post-work Best Management Practices adequately stabilize soil and prevent excessive erosion. The Applicant shall observe surface water upstream and downstream of the bank stabilization site for bottom deposits, color and floating material.

Additionally, the applicant shall monitor bank stabilization project sites annually for five years to determine effectiveness of the projects. The applicant shall submit a summary of the results of the monthly and annual post- project inspections, and shall also include photo-monitoring of the work sites from established photo points.

### **REVEGETATION MONITORING**

The Applicant shall monitor all revegetated sites annually for five years after planting, and for at least two years after supplemental watering is discontinued, to determine if supplemental watering, weed control, rodent control, and/or protection from vandalism are required to encourage plant establishment.

### **SEDIMENT MONITORING**

For projects involving sediment removal (excluding minor maintenance sediment removal):

#### **Sampling Frequency and Locations**

- For localized sediment removal projects and bank stabilization projects that involve the removal and disposal of less than 250 cubic yards of sediment, one sample will be collected and analyzed. Details on the methodology used to collect and composite samples are described below.

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<sup>1</sup> Field analysis allowed.

- For sediment removal or bank stabilization projects that require the removal and disposal of more than 250 cubic yards of sediment, one sample will be collected for every increment of 500 cubic yards of sediment to be removed. Details on the methodology used to collect and composite samples are described below.
- For project sites that require more than one sample, sampling locations will be selected to represent overall reach conditions, and to target conditions at the upstream and downstream ends of the project zone. Sampling sites will also specifically target conditions downstream of culvert crossings, culvert outfalls, and key stream confluences.
- There may be situations where long channel reaches are not particularly wide or deep with sediment, it will be preferable to take sediment samples for every 1000 feet of project length rather than per 500 cubic yards of sediment removal. SCWA shall use whichever approach results in more samples. It is expected that, most often, the 500 cubic yard requirement will result in more sampling, but for certain projects the 1000 ft length requirement will require more sampling and provide better representation.
- In all cases, sampling locations shall be project areas with the highest potential for detecting the maximum number of contaminants at the highest concentrations, and shall be most representative of site conditions.

**Sediment Sampling Methodology**

This guidance applies to discrete (single) samples and composite samples. All samples shall be collected by means of a hand trowel, a hand auger, or another sampling method approved by the Regional Water Board. The individual collecting the sample will have the discretion of choosing the sampling method which is the most efficient to perform. Sampling methodology is described in the Sediment Sampling and Analysis Guidelines section of the SMP Manual.

Every sample location and each of the seven disposal options listed within the Sediment Sampling and Analysis Guidelines section of the SMP Manual, shall include sampling for the full list of parameters/analytes listed in Table 3. Sampling parameters/analytes listed in Table 3 may be modified after a history of sampling is obtained. This may result in not requiring monitoring for some of these contaminants under certain situations or at certain locations, or the addition of more parameters/analytes if deemed necessary by the Executive Officer.

Sampling shall be in accordance with Table 3:

**TABLE 3  
 DISCRETE SEDIMENT SAMPLING AND ANALYSIS**

Parameter/Analyte*	Units	Sample Type	Minimum Analysis Frequency*
Pesticides	µg/kg	Grab	Once before removal
pH	pH Units	Grab	Once before removal
Polycyclic Aromatic Hydrocarbons	µg/kg	Grab	Once before removal

Parameter/Analyte*	Units	Sample Type	Minimum Analysis Frequency*
(PAHs)			
Soluble Metals	mg/L	Grab	Once before removal
Total Extractable Petroleum Hydrocarbons	mg/L	Grab	Once before removal
Total Metals	mg/kg	Grab	Once before removal
Polychlorinated biphenyls (PCBs)	mg/L	Grab	Once before removal
Organics	mg/L	Grab	Once before removal

\* EPA Method chosen for analysis shall be the most accurate, with lowest detection limit.

The Applicant shall maintain records of field sampling in a log containing at least the following information:

- Date and time
- Site location
- Sample collector
- Sampling methods
- Sampling location
- Sampling depth
- Number of sampling containers
- Specific site conditions
- Analysis requested
- Other information describing the sampling event

Field sampling logs shall be made available to Regional Board staff upon request.

### **BEST MANAGEMENT PRACTICES MONITORING**

The applicant shall inspect temporary and permanent structural BMPs at active sites at least twice daily to determine if BMP maintenance, repair, or replacement is necessary. The Applicant shall maintain, repair, and/or replace BMPs as appropriate to prevent sediment discharge and reduce erosion. BMP inspections and corrective action shall be documented in a BMP inspection log. The BMP inspection log shall be kept on-site while the site is active, and shall be available to Regional Board staff upon request.

The Applicant shall document BMP effectiveness, and BMP installation, maintenance and repair, and sediment removal activities in the BMP inspection log. All changes to the Applicant's SMP Manual shall be documented, and a summary of changes shall be reported annually.

### **REPORTING**

- A. Violation Reporting
  1. Upon discovery of an exceedance, the Applicant shall identify the source of the exceedance, implement corrective action, and resample or make additional observations to determine whether or not the exceedance was corrected. After four hours, an exceedance will be considered a violation.

2. The Applicant shall notify Regional Board staff by telephone at (707) 576-2220 immediately to report violations that last longer than 12-hours. The applicant shall stop all work at the site for violations lasting longer than 24-hours. The Applicant shall update Regional Board staff of site conditions and obtain verbal permission to resume work.
  3. The Applicant shall notify Regional Board staff in writing within seven calendar days of all violations. Written reports shall include time and date of incident, duration, estimate of discharge or bypass volume, and documentation of sampling results/observations determining compliance status. The report shall also include detailed discussion of reasons for noncompliance, and specific steps that were or will be taken to correct the failure and prevent it from reoccurring.
- B. For each sediment removal project, the Discharger shall characterize the sediment and summarize all sediment sampling analyses, and submit a report to the Regional Board staff at least fifteen days prior to proposed sediment removal activities.
- C. All monitoring performed in compliance with this Order shall be made available to Regional Board staff upon request.
- D. The Applicant shall submit a letter with all monitoring reports to demonstrate compliance status with Order No. R1-2009-0049.
- E. Applicant shall comply with reporting dates and requirements within the SMP Manual.

## MODIFICATION

Any part of this Monitoring and Reporting Program may be revised with the written approval of the Executive Officer.

Ordered By: \_\_\_\_\_  
Catherine Kuhlman  
Executive Officer

July 23, 2009