

**Sediment Reduction Effectiveness Monitoring of Stream
Crossing Upgrades and Decommissions in South Fork
Elk River, Humboldt County**

**2019 Annual Report
Pursuant to
Monitoring and Reporting Program
Order No. R1-2012-0088**

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Prepared By:
Green Diamond Resource Company
P.O. Box 68
Korbel, CA 95550

Introduction

Elk River is listed as an impaired water body under Section 303(d) of the Federal Clean Water Act (USEPA, 1999) due to high instream sediment loads and associated adverse impacts to the beneficial uses of water. To address the Elk River sediment impairment, the North Coast Regional Water Quality Control Board (NCRWQCB) adopted Watershed Waste Discharge Requirements (WWDRs), Order No. R1-2006-0042. In addition to this order the NCRWQCB is developing a Total Maximum Daily Load (TMDL) for sediment in Elk River. In May 2016, the Regional Water Board adopted the Action Plan for the Upper Elk River Sediment TMDL as an amendment to the Water Quality Control Plan for the North Coast. The TMDL Action Plan was approved by the State Water Resources Control Board in August 2017 and is undergoing review by the Office of Administrative Law, and then the US Environmental Protection Agency for final approval.

Monitoring and Reporting Program (MRP), Order No. R1-2008-092, describes the monitoring and reporting efforts Green Diamond Resource Company (GDRCo) has been conducting since 2006, as part of the South Fork (SF) Elk River WWDRs. In October 2012, new property wide WDRs (Order No. R1-2012-0087) and an associated MRP (Order No. R1-2012-0088) superseded the SF ELK WWDRs and incorporated its substantive conditions and monitoring program.

Stream crossings are potentially significant sediment sources and addressing them with upgrading or decommissioning efforts is an important part of GDRCo's sediment reduction strategy. Upgrading and decommissioning stream crossings are accepted and effective measures to reduce sediment loading when implemented correctly (Pacific Watershed Associates 2005). However, these efforts can be vulnerable to erosion following implementation due to the ground disturbance and exposure of bare soil, as well as the judgment required to recreate the stream channel alignment through the road crossing area.

This annual report summarizes the monitoring activities undertaken in 2019 to assess erosion from recently completed upgrades and decommissions of stream crossings on GDRCo property in Elk River. No new sites were treated in 2018 or 2019, therefore, no new results are available to report on for this annual report.

1.0 Site Selection

Post Winter Surveys: No new sites were treated in 2018, therefore no sites received their post-winter survey in the summer of 2019.

Post Treatment (Initial) Surveys: No new road sites were treated in 2019; therefore, no new sites were selected for monitoring.

2.0 Site Descriptions

Post Winter Surveys: No new sites were treated in 2018, therefore no site descriptions can be reported.

Post Treatment (Initial) Surveys: No new sites were treated in 2019, therefore no site descriptions can be reported.

3.0 Methods and Results

Data collection and analysis followed the procedures outlined in the MRP (Order No. R1-2012-0088), the SOP's, and the Road Erosion Sampling QAPP for the SF Elk River WWDR. Summaries of the monitoring techniques are provided below and further detail can be found in the QAPP and the relevant SOPs.

4.1 Photo Point Monitoring

No new sites were treated in 2018 or 2019, therefore no photo point results can be reported.

4.2 Void Measurements

No new sites were treated in 2018 or 2019, therefore no void measurements results can be reported.

4.3 Longitudinal Profile Surveys

No new sites were treated in 2018 or 2019, therefore no longitudinal profiles can be reported.

4.4 Summary of Post winter 2 Monitoring Results

No new sites were treated in 2018 or 2019, therefore no post winter monitoring results can be reported.

4.5 Summary of Post treatment Monitoring Sites

During the 2019 dry period, GDRCo did not decommission or upgrade any road crossings associated with the Programmatic Road Management WDR (Order No. R1-2012-0087). Since no new road work was conducted and no continued monitoring was required for previously selected sites, no post-winter monitoring will be conducted in summer of 2020. New road crossing upgrades and decommissions are expected to occur in 2020 and the associated post treatment monitoring will be reported in the 2020 annual report.

4.0 Problems Encountered

Since no new sites were treated in 2018 or 2019, there are no problems to report.

5.0 Quality Assurance Summary

Special training requirements apply to all GDRCo staff involved in the implementation of this monitoring project. In 2018 and 2019, staffing changes occurred but no new sites were treated, therefore no training was conducted for this project.

Literature Cited

Pacific Watershed Associates (2005). Evaluation of Road Decommissioning, CDFG Fisheries Restoration Grant Program, 1998 to 2003. Arcata, CA: 81.