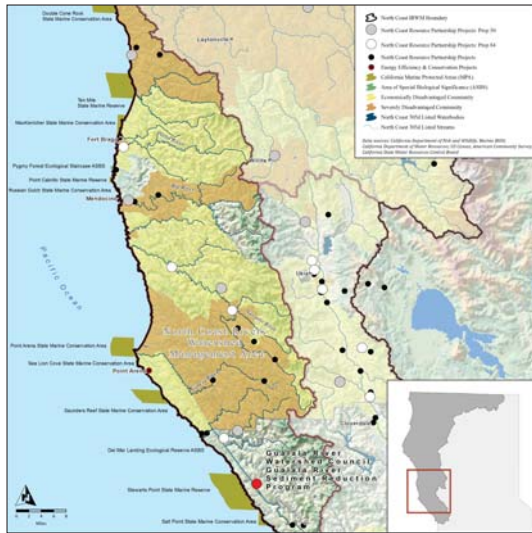


# Gualala River Sediment Reduction Program

## GUALALA RIVER WATERSHED COUNCIL (GRWC)



### STATEMENT OF THE PROBLEM

The Gualala River is 303(d) listed for sediment which increases turbidity, impacts spawning and rearing habitat, and reduces available thermal refugia. The Gualala River TMDL Technical Support Document (TSD) concluded that 85% of anthropogenic sediment delivery is road related.

### PROJECT GOALS

1. Improve water quality and work towards attainment of TMDL targets for sediment
2. Improved instream habitat
3. Provide project effectiveness monitoring
4. Increase stakeholder and community education

### THE SOLUTION

This proposal incorporates five high priority NPS reduction projects to complete sediment source reduction at the CalWater planning watershed scale. High priority projects for road related sediment source completion are based on a high road density, percent of erosion total from road sources, planning watershed disturbance index and refugia potential for coho and/or steelhead. Through these priority projects multiple landowners have partnered with the GRWC to treat sediment sources on 116 miles of high and medium priority road networks that will prevent 288,700 cubic yards of sediment from entering the watercourses in the Gualala River Watershed. Basin-wide TMDL attainment road based sediment reduction will increase from 17% to 24% by the implementation of these projects.

### PROJECT IMPLEMENTATION

Approximately 1.6 miles of road will be abandoned, 0.08 miles of road will be decommissioned and 10.32 miles of road will be storm-proofed. All road segments will be outslopped, rolling dips installed, and berms and side-cast fill removed. Site-specific treatments include:

#### Abandoned and decommissioned roads:

- Culvert removal
- Stream crossings excavated to grade
- Cobble placement in channel where necessary
- Rocked ford installation with large rip-rap buttresses

#### Storm-proofed roads:

- Culverts upgraded
- Fill removed and culvert installation
- Rock placement at crossings for energy dissipation
- Critical dip installation

In conjunction with sediment source reduction, this proposal will also implement the sixth phase of the Large Wood in the Stream Program placing over 100 in-stream logs and structures within 10 tributaries of the Gualala River.

### COMPLETION DATE

December 2015

### PROJECT BUDGET

IRWM funds:	\$ 600,000
Leveraged funds:	\$ 308,280
<b>TOTAL</b>	<b>\$ 908,280</b>

### BENEFITS

#### Economic

- An estimated \$214,866 from avoided costs of road maintenance
- An estimated \$185,419 from avoided costs of sediment deposition
- An estimated \$11,591,308 in the passive-use value associated with increases in salmonid populations (estimated at \$2,000 per additional fish generated by the project)<sup>1</sup>

#### Water Quality

- 80% reduction in anthropogenic sediment in project watersheds

#### Watershed Rehabilitation

- Improved fish and wildlife habitat
  - » Increased instream flow — both hyporheic and surface — has been shown to occur in the watershed following similar restoration projects, benefitting salmonids and other wildlife
  - » Increased pool formation and channel diversity creating habitat and refuge for adult and juvenile salmonids
  - » Increased connectivity of the ecological systems within the Gualala River watershed.

#### Cultural and Social

- Cultural value of improved salmonid populations and their habitat apart from the cultural framework and economic terms often imposed by western society
- Increased levels of technical knowledge of land owners and land managers will improve land management techniques, further improving water and habitat quality
- The collaboration between landowners and agencies increases the social capital in the watershed, paving the way for future collaborative efforts and allowing the community to more efficiently and effectively solve mutual challenges

#### Jobs and Local Economic Benefit

- Over \$900,000 will be spent locally using local labor and supplies when possible, thus contributing to State goals for environmental justice and social equity
- Assist in maintaining and creating 10 to 20 jobs within the community.
- The project will help remediate impacts of declines in salmonid populations and help restore the beneficial functions of the watershed.

### NEXT STEPS & RECOMMENDATIONS

The basis for the GRWC was formed in the 1980s due to precipitous declines in salmonid populations and we have been working to improve watershed conditions since then. This project builds on previous restoration and remediation work and we will continue to implement sediment reduction and habitat restoration projects within the Gualala River watershed until TMDL goals are met and the ecosystems that support salmonid habitat are functioning naturally.

#### CONTACT

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**NORTH COAST RESOURCE PARTNERSHIP**