

# North Coast IRWMP Implementation Project Status Report – July 2012

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## Del Norte County

### Prop 50 Round 1:

*Crescent City Wastewater Improvement Project (City of Crescent City, \$935,602)* – Project goals include utilizing recycled water for irrigation following the completion of an upgrade to the wastewater treatment facility. The project is working with CA Department of Public Health and the State Water Resources Control Board to complete and obtain permits for utilizing recycled water for irrigation in City parks. Looking at additional tasks where recycled water may be utilized

*Headhunter Smokehouse (CA State Parks, \$280,680)* – Project work includes decommissioning and/or hydrologically disconnecting forest roads to prevent sediment delivery to Mill Creek. All on the ground work sediment reduction work is completed. Project staff is working to complete final report documents.

### EECBG:

*City of Crescent City (\$42,774)* – Project complete. Installation of 3 variable frequency drive replacement water pumps with high efficiency motors at the Raney Collector Control Building

### Prop 84 Implementation (contract pending):

Regional Management team continues to work with RCD staff to prepare the necessary documents for contract execution and project implementation.

*Del Norte Ag Enhancement (Del Norte RCD, \$255,000)* – The goal of this project is to help Del Norte County dairies in the Smith River and Lake Earl watersheds improve their waste management systems. The proposed project is a funding program for dairies in the Del Norte Resource Conservation District (DNRCD) that need financial assistance to improve stewardship. Individual dairies will submit applications to the DNRCD for projects relevant to waste collection and management. The DNRCD and the Natural Resource Conservation Service will facilitate the technical assistance necessary for project planning, prioritization and development.

## Siskiyou County

### Prop 50 Round 1:

*City of Etna Water Supply Improvement (City of Etna, \$593,936)* – This project is intended to upgrade the intake infrastructure at Etna Creek where the City receives its water supply. On the ground project work has been completed. Additional tasks of replacing decaying water supply lines have been completed as well.

*Araujo Dam Removal (Shasta Valley RCD, \$769,904)* – Project focused on removal of flash board dams with a fish friendly water pumping and irrigation system that provides water to irrigators efficiently and effectively while improving water quality during critical summer months. All project work is completed and the project is closed out. This project was completed under budget and the remaining funds were reallocated to the City of Etna and Shasta Dam projects.

*Shasta Valley Water Association Dam Removal (Shasta Valley RCD, \$1,926,350)* – Dam removal and irrigation activities are completed. Monitoring of project continues. Additional tasks for on-farm efficiencies will be completed by the March 2013 deadline. On-farm projects include piping open ditches, upgrading flow control, riparian fencing.

### EECBG:

*City of Etna (\$24,000)* – Installation of a new HVAC system at City Hall. Project completed.

### Prop 84 Implementation (contract pending):

Regional Management team continues to work with project proponents for the following projects to prepare the necessary documents for contract execution and project implementation

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*Indian Creek Sewer Pipeline Crossing (Happy Camp Sanitary District)* – The project provides critical infrastructure improvements to the wastewater collection system for an economically disadvantaged community. The project replaces an existing sewer pipeline crossing of Indian Creek with a new sewer pipeline crossing, attached to the adjacent State Highway 96 Bridge. The existing sewer pipeline crossing is currently exposed in the creek bed and is subject to damage due to loose rocks and trees or undermining during large flow events. Leakage or failure of the pipeline crossing would result in an accidental discharge of raw (untreated) sewage into Indian Creek and the Klamath River. This discharge has the potential for adverse impacts to fisheries (including salmonids), aquatic habitat, Native American subsistence fishing and basket material gathering, recreation, and water quality. The project would significantly reduce the potential for these impacts and flood damage potential to the only sewer pipeline crossing of Indian Creek.

*Happy Camp Wastewater Treatment Upgrade (Happy Camp Community Services District)* - The project constructs a new roughing filter upstream of the two existing pressure filters. The project also provides additional upgrades including: inspection of the existing filters; upgrade of the existing wetwell pumps and electrical equipment to handle the additional hydraulic and electrical load; relocation of existing wetwell electrical equipment to place this equipment a safe distance outside the 100-year floodplain; improvements of the existing backwash disposal pond to handle additional filter backwashing cycles; and improvements of Supervisory Control and Data Acquisition (SCADA) for the existing water treatment plant and existing water storage tank for better control of water storage tank levels and wetwell pump operation

*Camp Creek Habitat Protection -Road Decommissioning (Karuk Tribe)* - Project involves approximately 16.02 miles of road slated for decommissioning that is within the culturally significant and ecologically sensitive 26,994 acre Camp Creek Watershed. The overall project objective is to protect and enhance the habitat of Tribal trust species such as Spring Chinook, Coho Salmon, Summer Steelhead populations. This is to be accomplished by eliminating the present and future chronic sediment input caused by road failures and prevent catastrophic debris torrents within the Camp Creek Watersheds by removing unstable fill material and re-establishing natural hydrological patterns. The funding requested will provide funding for the removal of 13,000 yd<sup>3</sup>. Other funding partners are anticipated to contribute the necessary funding to accomplish the remaining 21,788 yd<sup>3</sup>. The funds if granted will be used to leverage other funds necessary to accomplish the overall goal of 34,788 yd<sup>3</sup>. In addition to the chronic sediment transport from these roads, the high number of stream crossings has a high potential for failure during a significant storm event. Stream crossing failures result in debris torrents that scour stream channels of riparian vegetation which is critical in maintaining lower water temperatures. Depending on slope position and channel gradient these debris torrents can trigger successive debris torrents as they move downstream. Debris torrents fills in pools, which are used by salmonids as rearing areas and as refugia.

### Modoc County

#### Prop 50 Round 1:

*Newell Water System Renovation (County of Modoc, \$1,496,963)* – This project resulted in a complete overhaul of the water supply system in the community of Newell. The new system will reduced water losses from the storage, transmission, and distribution system, improved water use efficiency, improved the safety of the water system, and improved environmental resources by reducing groundwater pumping and reducing potential contamination risks to the wildlife and habitat of the Clear Lake and Tule Lake National Wildlife Refuges. Project completed and closed out. New water system is up and running, providing safe and reliable water to the community of Newell.

### Trinity County

#### Prop 50 Round 1:

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*Raw & Recovered Water for Irrigating Public Agencies (Trinity County Water Works, \$912,219)* – Project objective to utilize recycled water for irrigation in the Hayfork area. Project complete and closed out. Recycled water is currently in use on public facilities including schools and County facilities.

*Weaverville Sanitary District Water Reclamation (Weaverville Sanitary District, \$280,688)* – Project objectives include using recycled water for industrial uses and reducing diversion from Weaver Creek. Project plans completed and some work has been completed for CEQA. Project implementation costs exceed the current funding amount. The Regional Management staff and State Water Board Grant Manager are working with the District to identify funding sources and/or projects.

EECBG:

*Energy efficiency projects including (\$78,635):* Installation of heating and cooling heat pump system at the County Jail, replacement heat pump HVAC units at Library, replacement of furnace and heat pump at the Murray Building. Project completed.

## Humboldt County

Prop 50 Round 1:

*Mattole (Mattole Restoration Council, \$1,668,744 with reallocation)* – Project objectives included invasive plant removal, native plant restoration, water conservation and forbearance program, and sediment reduction. Many project tasks have been completed, with the exception of the water tank/forbearance program. Additional tasks will be accomplished with the reallocation funding including invasive plant removal, native plant seeding/planting/propagation, and monitoring.

*Redwood Creek Sediment Reduction (Pacific Coast Fish, Wildlife, and Wetlands Restoration Federation, \$662,971 with reallocation)* – Upslope sediment reduction work continues in Redwood Creek and additional sediment savings will be realized through work completed with reallocated funds. Work remaining will be completed in Lacks Creek, the largest tributary to Redwood Creek.

*Salt River Ecosystem Restoration Project (Humboldt County RCD, \$1,294,502 with reallocation)* – This landscape scale restoration project will establish estuary habitat and tidal function in the Lower Salt River and will reduce sediment delivery from roads. This project is nearing the implementation stage after numerous years of planning and preparation. Final permits, plans, and landowner agreements are being completed. If all permits are in hand by end of July allowing work to commence in mid/late August the team anticipates that the following activities could be completed this work season: vegetation clearing, relocation of water line, construction of approximately 1/3 of the setback berm's core, construction of the outboard drainage ditch, general drainage improvements to relieve flooding on adjacent farm land, and some fencing. During the late summer, early fall bidding for completion of work on Phase 1 next season would take place.

*Mid Van Duzen River Ranch Road Sediment Reduction (Humboldt County RCD, \$461,817 with reallocation)* – The initial work on this project was completed last summer. Additional ranch road improvements and sediment reduction work will commence this summer using reallocated funding.

*Martin Slough (City of Eureka, \$3,872,905 with reallocation)* – The project objectives will improve water quality in Humboldt Bay by reducing incidents of Sanitary Sewer Overflows (SSO). Over 1 mile of interceptor pipeline will be installed. The implementation of this project continues and construction has resumed following the winter suspension. Additional work on this multi-phase, multi-million dollar project will be applied to the Martin Slough Pump station.

EECBG:

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*Energy efficiency projects (\$381,855 - )* Numerous energy efficiency projects in seven jurisdictions (Arcata, Ferndale, Fortuna, Eureka, Trinidad, Blue Lake, Rio Dell) as well as county facilities. Projects include HVAC, furnace, water pumping and lighting upgrades. Over 26 individual projects were completed.

## Prop 50 Round 2:

*Mattole Integrated Coastal Water Management Program (Mattole Restoration Council, \$879,665)* – The initial and supplemental round funds The Mattole Integrated Coastal Watershed Management Program and its efforts to meet water quality and salmonid habitat goals for the coastal Mattole River watershed. This project seeks to address key water quality factors through an integrated set of watershed management activities that are designed to address long-standing goals: (1) the reduction of sediment within the lower Mattole River and estuary, (2) improvement of water quality (particularly related to summertime water temperature and sediment), (3) improvement of the Mattole estuary's riparian, freshwater and brackish habitats, and (4) monitoring of restoration efforts to determine effectiveness.

Sediment reduction work addressing a very large landslide has been completed as well as numerous invasive plant removal and native plant restoration.

## Prop 84 Implementation (contract pending):

Regional Management team continues to work with RCD staff to prepare the necessary documents for contract execution and project implementation.

*Blue Lake – Fieldbrook Pipeline Support Retrofit (Humboldt Bay Municipal Water District - Humboldt Bay Municipal Water District (HBMWD) currently supplies domestic water to the Fieldbrook Glendale Community Services District (FGCSD) and the City of Blue Lake. The water supply pipeline to those communities crosses the Mad River via a 14-inch ductile iron pipe attached to a 1930's era North Coast Railroad Authority (NCRA) bridge, which was not built to modern seismic standards. The bridge has not been used or maintained for many years, and if it fails, it will damage the HBMWD's pipeline and interrupt the sole domestic water service to Fieldbrook and Blue Lake. An inspection of the NCRA bridge was completed by Winzler & Kelly in 2007, which found the condition of the bridge to be substandard and near the end of its functional life. This project replaces the bridge with an aerial overcrossing designed to meet current seismic codes. This project addresses the critical water supply needs of the disadvantaged communities of FGCSD and Blue Lake.*

*Mattole Integrated Watershed Management Initiative (Mattole Restoration Council)* – The provides a comprehensive approach to watershed restoration in the Mattole through streamflow enhancement, riparian restoration, coho recovery rearing, streamflow, and turbidity monitoring, sediment stabilization, and removal of invasive plants. Seven water storage systems will be installed in the Mattole headwaters totalling 350,000 gallons to augment summer stream flows in critical reaches of coho salmon habitat. Residents agree to turn off instream pumps when directed and begin using water from storage tanks. Recovery rearing of coho salmon will be implemented as a temporary measure to avoid extirpation until streamflow and habitat issues are more fully addressed in the headwaters. Downstream work to control sediment will take place through the installation of bioengineered willow fences, as well as reduce active erosion and increase streamside shade through the planting of native riparian trees, shrubs, and grasses. Invasive plants will be removed on project sites prior to implementation, and turbidity and streamflow assessment will ensure that project goals are met.

## **Mendocino County**

### Prop 50 Round 1:

*Westport Water Supply Reliability Project (Westport County Water District, \$374,241)* – Project completed. New 100,000 gallon water tank improves water supply reliability to the coastal community of Westport.

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*Fish Friendly Farming (California Land Stewardship Institute, \$210,510)* – Project includes native plant restoration, invasive plant removal and sediment reduction at 3 sites in the Russian River watershed. Restoration has been initiated at all three sites and irrigation systems are put in place where needed to ensure success in dry summer months.

*Navarro Watershed Sediment Reduction (Mendocino RCD, \$673,633)* – Project worked with forest and ranch landowners to conduct road improvement activities to reduce sediment delivery to the watershed. Project complete and closed out.

*Covelo Wastewater Facilities Improvement (Covelo Community Services District, \$1,065,591)* - The Covelo Wastewater Facilities Improvement generally consisted of primary pond improvements, collection system upgrades, influent pump station and headworks modifications, secondary and holding pond improvements, sand filter rehabilitation, electrical and control system upgrades, construction of a new control and operations building, and construction of a septage receiving station. The improvements brought the facility into compliance with the Regional Water Board Waste Discharge Requirements. Project complete, final report documents being developed.

### EECBG:

*Point Arena (\$24,000)*: Installation of water pump with premium efficiency motor at the wastewater treatment facility.

### Prop 50 Round 2:

*Forsythe Creek Upslope Road Sediment Reduction (Mendocino RCD, \$1,791,564)* - The initial round of funds implements road sediment reduction strategies from the Forsythe Creek Watershed Assessment on two sub-watersheds in Forsythe Creek, tributary to the Russian River, to improve salmonid habitat and other beneficial uses. MCRCD has cooperated with landowners, agencies and contractors to maximize benefits of sediment control methods throughout the watershed.

The supplemental round of funds is primarily focused on upgrading a large stream crossing identified in the original Forsythe Creek road sediment inventory which was also used to identify road segments to be treated in Grant 1. The wet crossing will be upgraded to a bridge using Caltrans standards as required by the County. Construction set to begin August 1<sup>st</sup>, 2012.

*Big River Lower Mainstem Restoration (Mendocino Land Trust, \$ 662,169)* – The initial round of funding will address the five highest priority areas of potential sediment loading to the mainstem of Big River based on a roads assessment and inventory of the Big River Unit conducted by Mark Smelser of the California Geological Survey completed in 2004 for the California Department of Parks and Recreation Mendocino District. All of the sites are within the first 2.1 miles of the Main Haul Road that runs parallel to the Big River estuary. Construction is set to begin September 2012.

### Prop 84 Implementation (contract pending):

Regional Management team continues to work with RCD staff to prepare the necessary documents for contract execution and project implementation.

*Ackerman Creek Habitat Restoration Project (Pinoleville Pomo Nation)* - The project will restore habitat for culturally important species along a 0.63 mile degraded stretch of Ackerman Creek that flows through the Pinoleville Pomo Nation reservation. The plans include in-stream restoration and enhancement activities, pollution prevention, invasive plant removal and revegetation of the riparian zone. This riparian restoration proposal will implement two parts of the overall plan. The first part will be to assess and sustain initial efforts to eradicate *Arundo donax* and blackberry for several years after they have been first removed. The second part is to replant a riparian forest with native plants that have cultural value to tribal citizens and that improve in-stream habitat for salmonids and other aquatic species. The project will involve tribal youth in the removal and re-vegetation activities which will be reinforced by field-based science and culture lessons.

*Bodega Bay HU Water Resources Management (Gold Ridge RCD)* - The project combines a suite of approaches to restore a resilient riparian corridor and in-stream habitat for the benefit of fish and other aquatic organisms that dwell in



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Americano, Ebabias and Salmon Creeks. The project will adopt an integrated, community-based approach to address these critical issues and identified impairments to beneficial uses. Fine sediment delivery will be reduced by restoring actively eroding gullies that were identified in a UCCE study in 2007. Instream habitat will be enhanced through the implementation of large woody debris structures. The streamflow augmentation and water conservation component of this project has been designed using lessons from Gold Ridge RCD's Save Our Salmon (SOS) program, completed in 2010. This project will expand on the SOS program to improve long-term water security throughout coastal Sonoma County. With salmonid populations dwindling, the time to implement aggressive measures to protect water quality and habitat is now. This project takes that aggressive approach, while at the same time respecting the critical partnerships between private landowners and the RCD.

*Mendocino Jumpstart Integrated Water Plan (Mendocino County RCD)* - The project will implement LID and sustainable practice projects, linked to educational opportunities via college courses and Mendocino County Resource Conservation District workshops. Recycling irrigation water from the Mendocino College sports fields will reduce potable water consumption, up to 1 million gallons per month during peak demand. A rainwater catchment and xeric landscape conversion at the County Agriculture Building and one at Mendocino College will demonstrate conservation for use at homes and businesses. The bioswale/wetland and vernal pool will create new habitat while treating storm water before entering Ackerman Creek. Education opportunities provided by Mendocino College will promote learning and skill development with these and other sustainable techniques.

*Nissah-kah Creek Fish Passage (Hopland Band of Pomo Indians)* - The Hopland Band of Pomo Indians tribe is working to restore its culture, land and water. In 2005 the tribe identified steelhead restoration as a high priority in its Environmental Master Plan. Since then the tribe has secured grant funding to do stream habitat typing and fish passage analysis, as well as improving stream and riparian habitat. The fish passage analysis identified two culverts as major impediments to upstream and downstream steelhead migration. Tribal EPA secured funding to develop designs for fish passage improvement for these two culverts on Nissakah Creek, one of two headwater streams on the reservation. These designs were developed to meet National Marine Fisheries Services' standards, and were completed in November 2009. The proposed project will build two fish passage improvements according to the engineering designs; this will increase the viability of the remnant population of steelhead that spawn in this stream, will help restore part of the cultural heritage of the Tribe, and will benefit the salmonid restoration efforts of the Russian River Watershed.

*Gualala River Sediment Reduction Program (Gualala River Watershed Council)* - Located in Mendocino and Sonoma Counties, the Gualala River is the largest watershed in the Mendocino Coast Hydrological Unit. Existing conditions in the basin indicate that 85% of anthropogenic sediment delivery is road related and there is a paucity of existing in-stream large wood debris (LWD) habitat required for salmonids (NCWAP 2003, NMFS 2010, GRWC 2010). The projects included in this proposal are elements of the GRWC Restoration Program. By implementing these projects through an existing and dynamic program we build upon partnerships and maximize the outcomes and costs associated with attainment of TMDL and Basin Plan goals. Through this proposal 12 miles of road will be hydrologically disconnected to a level of 95% in a high priority watershed reducing 30,000 yds<sup>3</sup> of pollution from entering watercourses. In conjunction with sediment reduction, a suite of habitat enhancement structures will be installed in tributary reaches where coho and steelhead currently spawn and rear and the Wheatfield Fork Stream Flow gauge will be repaired and maintained to assist the Stewarts Point Rancheria in monitoring in-stream flow levels.

*Mendocino Headwaters Integrated Water Quality Enhancement (Mendocino County RCD)* - MCRCD will implement water quality enhancement projects in three TMDL water bodies in Mendocino County, including; 1) Decommissioning 3 miles of roads in Jackson State Demonstration Forest to prevent an estimated 6,024 cubic yards of sediment delivery to the Little North Fork Big River; 2) Upgrade three fish passage barriers and two stream crossings, in the Upper Rancheria Creek sub basin of the Navarro River watershed, to prevent an estimated 790 cubic yards of sediment from delivering to streams and to open up an additional 1.26 miles of suitable habitat for migratory salmonids; and 3) Restore approximately two acres of riparian along the Upper main stem Russian River on the Yokayo Rancheria, by controlling

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invasive *Vinca major* (Periwinkle), *Arundo donax*, Himalayan blackberry and Harding grass and replanting with native plants which have cultural significance to the tribal community.

*Waterfall Gulch Transmission Main (City of Fort Bragg)* – The project includes the replacement of a 50 year old existing 8" Waterfall Gulch Raw Water Transmission Main with 10" PVC. There is limited access to the existing main line and replacement will incorporate solutions for better access to the line in case of emergency, along with carrying a guarantee of a service life of not less than 75 years. Construction of a new main line will reduce the amount of water pumped from the Noyo River, which is a critical habitat for salmon.

*Sustainable Forests, Clean Water & Carbon Sequestration Demonstration (Redwood Forest Foundation, Inc)* – The project will work with the Woody Biomass Work Group (WBWG) to be the first step in developing a regional industry to convert excess woody biomass to a carbon sequestering, soil amendment product known as biochar to improve watershed-wide water quality and quantity.

## Sonoma County

### Prop 50 Round 1:

*Graton Wastewater Treatment Upgrade and Reclamation (Graton Community Services District, \$1,116,648)* – The project will improve the efficiency of the facility and will utilize reclaimed water for irrigation on nearby lands. GCSD is in the final stages of securing State Revolving Fund financing for the project. The signed Facility Plan Approval and the Preliminary Funding Commitment were received in May. The Board approved a Notice to Proceed to the successful contractor, KG Walters. KG Walters is reviewing the contract, securing bonds and will submit the schedule of values in order to complete the Financing Agreement. One last item, the property clearance, is due to be heard at the next Sonoma County Board of Supervisors meeting on July 31. Construction should begin within one month.

*Sediment Solutions for the Gualala (Gualala River Watershed Council, \$159,052)* – Project objectives of reducing sediment delivery through drainage improvements, removal of at-risk sidecast fill slopes, removal and repair of at-risk stream crossings. Project complete and closed out

*Sonoma County Water Recycling and Habitat Restoration (City of Santa Rosa, \$4,004,603)* - The benefits of this project include improved water supply reliability; reduced conflicts; enhanced salmonid habitat because of reduced diversions from the Russian River; and water quality improvements because of reduced recycled water discharges to the Laguna de Santa Rosa and Russian River. Project is 95% complete and is on schedule for completion by the March deadline. Recycled water is currently being used for irrigation through this project

### Prop 50 Round 2:

*Salmon Creek Sediment Reduction and Water Conservation Program (Gold Ridge RCD, \$725,322)* - The project will conserve and enhance habitat for native salmonid populations in the Salmon Creek Watershed by reducing sediment delivery and implementing key water conservation programs. The project will adopt an integrated, community oriented approach to addressing these critical issues. Identified priority road upgrade sites will be repaired to reduce fine sediment delivery to Salmon Creek and its tributaries. The water conservation program is designed to simultaneously improve community long-term water security, while increasing summer flows during the critical salmonid rearing period. Final report documents being developed for the initial funding agreement that included water conservation projects. Additional water conservation work and upslope sediment reduction work is scheduled to begin in August 2012.

### Prop 84 Implementation:

Regional Management team continues to work with RCD staff to prepare the necessary documents for contract execution and project implementation.

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*Copeland Creek Watershed Detention/Recharge, Habitat Restoration and Steelhead Refugia Project Phase 1 (Sonoma County Water Agency)* - Copeland Creek from Highway 101 east to Snyder Lane in the City of Rohnert Park 1) enhance and restore 21 acres of riparian habitat along 9,400 linear feet of Copeland Creek by strategically removing 10 acres of invasive species and replanting with 14,650 plants; 2) remove up to 11,000 cubic yards of sediment to foster the natural geomorphic functioning of this reach, mitigate flooding, and improve fish passage and water quality; 3) complete the 90% design and continue to advance the environmental review for two to three off-stream storm water detention basins located in the alluvial fan east of Petaluma Hill Road with up to 200 acre-feet in storage capacity and up to 150 acre-feet annual groundwater recharge potential.

Remaining Phases With the Availability of Future Funding: Copeland Creek from Snyder Lane east 1) complete the design, environmental review, permitting, and construction of the storm water detention basins; 2) enhance and restore riparian habitat along 6,600 linear feet of Copeland Creek; 3) increase open space preserved by 75 to 90 acres; and 4) construct more than 6,000 linear feet of public trails and bike paths from Sonoma State University east to Crane Creek Regional Park.

*Gualala River Sediment Reduction Program* - Located in Mendocino and Sonoma Counties, the Gualala River is the largest watershed in the Mendocino Coast Hydrological Unit. Existing conditions in the basin indicate that 85% of anthropogenic sediment delivery is road related and there is a paucity of existing in-stream large wood debris (LWD) habitat required for salmonids (NCWAP 2003, NMFS 2010, GRWC 2010). The projects included in this proposal are elements of the GRWC Restoration Program. By implementing these projects through an existing and dynamic program we build upon partnerships and maximize the outcomes and costs associated with attainment of TMDL and Basin Plan goals. Through this proposal 12 miles of road will be hydrologically disconnected to a level of 95% in a high priority watershed reducing 30,000 yds<sup>3</sup> of pollution from entering watercourses. In conjunction with sediment reduction, a suite of habitat enhancement structures will be installed in tributary reaches where coho and steelhead currently spawn and rear and the Wheatfield Fork Stream Flow gauge will be repaired and maintained to assist the Stewarts Point Rancheria in monitoring in-stream flow levels.

*Lower Russian River Water Quality Improvement Project (Sotoyome RCD)* – The project will improve the overall health and vitality of the lower Russian River Ecosystem with two complimentary programs that address water quality through education and repair of septic systems in the lower river and reduction of sediment in the Austin Creek Watershed. The two projects will address the Russian River TMDL for sediment, pathogen, and temperature through sediment reduction on rural roads, septic system repair, and water quality assessment of both projects. Habitat for endangered coho salmon and steelhead trout will be improved through sediment reduction in high priority streams in Austin Creek and improvement of water quality in the lower Russian River with subsidized septic system evaluations, educational workshops and resources, and a demonstration repair project for low income residents.

*Russian River Arundo donax Removal and Riparian Enhancement Program (Sotoyome RCD)* – The project will remove invasive *Arundo* from 150 infested acres on the mainstem of the Russian River and along 2-3 several key tributaries that flow into the Russian River. Also several hundred native plants will be installed, and educational workshops will be provided to landowners throughout the watershed. The removal area has been strategically selected to create the best potential for riparian habitat improvement in this reach of the river and builds off previous treatment years and adjacent removal sites where *Arundo* is already controlled. The project will conserve and enhance salmonid populations by removing *Arundo* and increasing the abundance of native riparian plants throughout the riparian corridor. Removal of *Arundo* and replanted of native plant vegetation will reduce sediment delivery and improve water quality, keep water temperatures low, protect and enhance native plant communities. This project is supported by local, state and federal agencies and has been developed and implemented since 2001 based on a watershed approach and with the collaboration of many local landowners and organizations. Over the past decade, the Sotoyome RCD and its partners have made great strides in controlling *Arundo* in the Russian River, removing it from over 1,500 infested streamside acres.