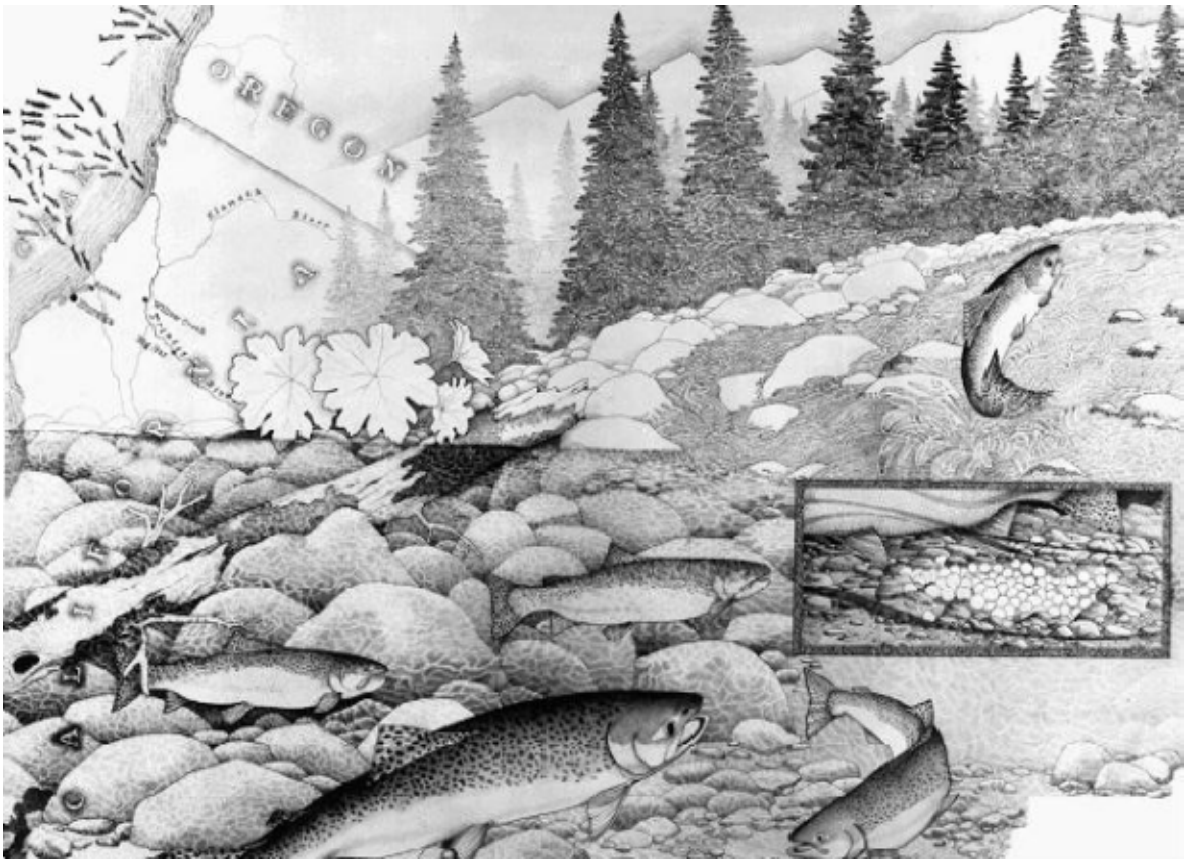
Five Counties Salmonid Conservation Program (5C)

Final Report

Contract P0710305

CA Department of Fish and Game (CDFG),
Fisheries Restoration Grant Program

June 2008 – August 2010



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1. INTRODUCTION

The Five Counties Salmonid Conservation Program (5C) was formed by Del Norte, Humboldt, Mendocino, Siskiyou, and Trinity Counties in 1997 in response to the listing of the Coho salmon as a federally threatened species. From its inception through January of 2009, the Program was housed in Trinity County as a special division of the Planning Department. Due to increasing costs and other factors, in February 2009, the 5C Program transitioned to the Northwest California Resource Conservation & Development Council, a 501 (c)3 non-profit group. The Program goals and activities have remained consistent under the Council. The Program is still guided by the five counties' Boards of Supervisors but also with the participation of the Council President. As was Trinity County, the Council will be the 5C's legal, fiscal, and administrative entity and will receive most of the Program's grants for execution by 5C staff.

The Program region encompasses the Coho ESU within the five counties, which includes the following major watersheds:

- Albion River
- Bear River
- Big River
- Black Butte River
- Eel River
- Elk River
- Garcia River
- Klamath River
- Knopki River
- Little River
- Mad River
- Mattole River
- Navarro River
- Noyo River
- New River
- Salmon River
- Salt River
- Scott River
- Shasta River
- Smith River
- Ten Mile River
- Trinity River
- Van Duzen River

The 5C region excludes the Russian and Gualala River systems. Refer to Figure 1 below for a map of the 5C region. The Program headquarters are located in Weaverville, Trinity County. The geospatial location is Lat/Long (Decimal Degrees): 40.73554014 N/122.9405464 W. The program's objectives are to restore habitat and improve water quality to help re-establish salmonid populations. Its efforts have been guided by an assessment of county policies and practices and their effect on salmonid populations that was completed by the University of California Cooperative Extension. The 1998 assessment report included recommendations on ways the counties could improve policies and practices to restore and enhance those populations. To date, the Program has largely focused on: working to improve policies and practices related to infrastructure, notably roads system maintenance and capital improvement; training various county roads staff, planners, and policymakers in salmonid and water quality related topics; identifying, prioritizing, and implementing physical projects to restore access to habitats and improve water quality; and working with other restoration groups on larger collaborative efforts. The 5C has relied on many funding sources including NOAA Fisheries and CA Department of Fish and Game Fisheries Restoration Grant Program funds to oversee and execute the larger program including trainings and development of improved policies as well as to coordinate the on-the-ground work. More detailed information on the Program can be accessed through the website: www.5counties.org.

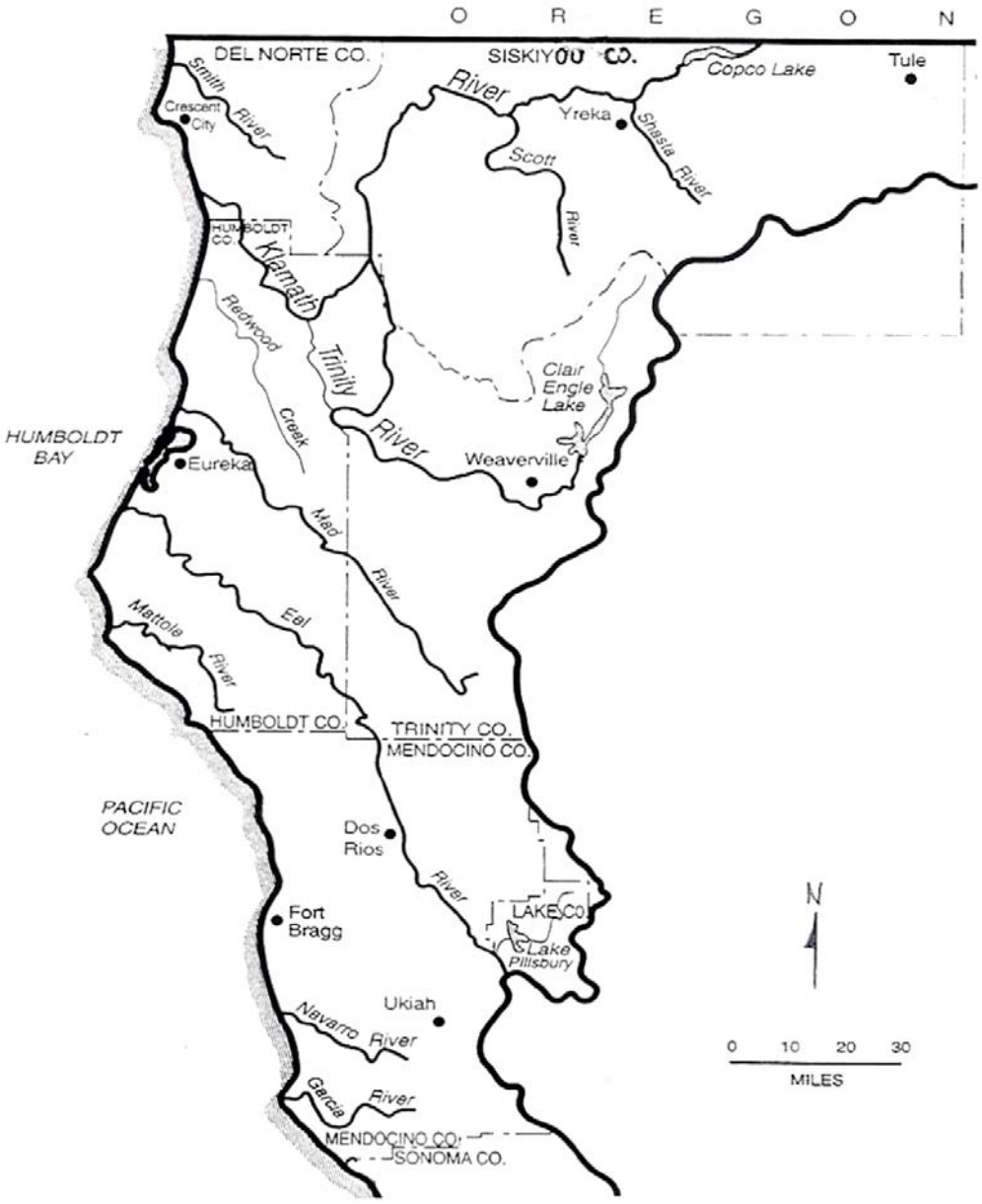


Figure 1: Five Counties Program Area

Under this contract, 5C staff mainly consisted of the Program Director Mark Lancaster, Manager Sandra Pérez, Assistant Manager Christine Jordan, Natural Resources Technician Carolyn Rourke, and Council Office Manager Judy Carter.

Although the contract effective date is shown as June 1, 2008, it funded the 5C Program activities for the time period of August 2008 to August 2010. The activities completed as part of this contract are described in this final report according to the tasks outlined in the scope of work. More detailed information (e.g., work descriptions, meeting agenda and sign-in sheets, reports prepared) may

be found in the Progress Reports submitted throughout the contract period. Asterisks * in the text below denote work completed with matching funds. A summary of the project and costs associated with this contract are found at the end of this report. An electronic copy of this report and all attachments (except for sediment video DVD Task 14) are included on a CD accompanying this report as Attachment A.

2. 5C Program Steering Meetings (Task 2)

During this program agreement, the 5C Program transitioned from being housed within Trinity County to the Northwest CA RC&D Council (Council), a 501 (c)3 non-profit group, as described in the Introduction above. With this change, the structure of the governing body changed a bit. The original ten member 5C Board, comprised of 2 Board Supervisors from each member County, transitioned into a new entity called the 5C Executive Committee, comprised of 1 Supervisor from each County (and 1 alternate) and the 5C Council President. Prior to the transition in February 2009, in order to facilitate the move and adoption of the new 5C Program Memorandum of Agreement between the counties and the Council, staff participated in the following meetings: 3 Council (sit-down and/or conference calls); 2 Trinity County Board; 1 Del Norte Board; and 1 Siskiyou Board. Additional efforts were required to logistically move the Program including obtaining a new office space with sufficient infrastructure and modification of the Program's existing financial system to accommodate some of the Council's methods. A loan was also obtained to minimize the impacts of Program activities and grant reimbursement cycles to the Council's cash flow. Numerous informal meetings were conducted with Council members and staff as well as with County Supervisors and staff to coordinate all efforts.

After the transition, staff participated in 9 Council meetings throughout the contract period. Topics typically included an update of current and upcoming projects and grant agreements, review of consultant subcontracts, and the 5C Program's budget. 5C staff held regular meetings with Council staff on fiscal, budgetary, and logistical aspects of the 5C Program and Council, policy matters, and 5C projects. Some of these efforts are performed with in-kind resources.

Two 5C Policy meetings were held on February 12, 2010 in Arcata and June 23, 2010 in Ukiah. Funding for a portion of the costs of the Ukiah meeting was provided through in-kind sources. Several County Supervisors, the 5C staff, and the Council President attended. Discussions focused on the transition of the Program to the Council and the new relationship, structure, and financing as well as 5C Program activities.

Three issues of the 5C Program e-newsletter, which summarizes current and recent projects, outreach, and other Program activities were distributed throughout the period. Typically, over 250 recipients include: 5C members; RCD&D Council members; state and federal partner agencies; watershed groups; restoration

consultants; regional elected officials; cities and special districts within the 5C region; and local media. It is also posted on the 5C website.

3. DEVELOPMENT AND IMPLEMENTATION OF 5C CONSERVATION STRATEGIES AND PROJECTS (TASK 3)

The development of the Program strategies and projects is ongoing. 5C staff coordinates with counties to develop projects. This sometimes includes partnerships with other entities. For example, Humboldt County developed a project with an adjacent private landowner and Pacific Watershed Associates for the Humboldt County sediment reduction project on Showers Pass Rd. A possible sediment reduction project on private lands along Trinity Dam Blvd was explored during the implementation phase of a 5C sediment reduction project on the road.

Throughout the period staff has coordinated closely with several grantor agencies and representatives in response to the bond funded grant freeze in effect from late December 2008 until 2009. Affected projects, timeframes, and budgets were discussed. Projects were restarted on different dates according to the specific grant sources involved. During the transition, some 5C projects were transferred from Trinity County to the Council. Other projects remain with Trinity County but are still managed by 5C staff through a special agreement between the County and Council. Among the projects that 5C staff worked on are:

- Weaver Basin Wetlands (WBW)*: The Program Manager continues to manage the grant from the Natural Resources Conservation Service (NRCS) for non-native invasive vegetation removal work. This includes meetings and site visits with NRCS staff. The Program Assistant Manager performed vegetation surveys as part of the project's monitoring efforts.
- Fish passage improvement: The Program Assistant Manager oversees and/or coordinates with individual county staff on these projects: Horse Creek, Hoteling Gulch, Canyon Creek (Pacific Power), and McKinney Creek (Siskiyou); Telegraph and Indian Creeks (Humboldt Caspar and Ryan Creeks (Mendocino) with the Program Director; Nunes and Brush Creeks (Del Norte); and Little Browns Creek, Conner Creek, Lower Sidney Gulch, and East Weaver dam (Trinity). 5C staff was involved to varying degrees especially depending on the stage (development, construction, or design) of each project. However, work typically included coordinating on specific project structure design, permitting, pre and post project monitoring, timing of construction, surveys, and grant management. Program grant support directly contributed to the completion of three barrier projects (White's Gulch*, Finley Gulch*, and Ancestor Creek*).
- Sediment Reduction: 5C staff coordinated with counties on timing and planning of several projects including: Sugar Creek Road (Siskiyou); Rube Creek and lower Klamath River tributaries on Capelle Road (Humboldt); and Browns Mountain*, Roundy*, China Gulch*, and Dutch Ck Roads* (Trinity). The level of 5C staff involvement depended on the stage (development, design, or construction) of each project. However, work typically included

coordinating treatments, permitting, pre and post project monitoring, timing of construction, and grant management.

5C staff also discusses the methodology of various 5C tools such as the DIRT inventory periodically with member county staff as it relates to specific projects. Sometimes those discussions lead to a refinement of the methodologies or their application. For example, the Program Director discussed culvert sizing methods of DIRT and also ways to prevent and address private road drainage issues and sediment delivery to county roads with Siskiyou Public Works.

Broader issues that impact salmonid habitat and water quality are also addressed with regulatory agencies and interested parties periodically as appropriate. For example, the Program Director met with the CDFG local warden regarding unpermitted water diversions within the East Weaver Creek watershed. It was agreed that the diversions would be monitored and if necessary removed in the summertime. However, this preliminary outreach lays the foundation for a potential project or landowner outreach effort in the future.

A: Assure funding based on ESU ecological factors and implementation timeframes

5C staff coordinates with counties, agencies, and other interested parties on watershed and barrier prioritization. For example, the Program Director and Assistant Manager regularly met with Michael Bowen of the Coastal Conservancy (CC) as well as with Mendocino, Siskiyou, Humboldt, and Del Norte County staff on specific barrier priorities and several prospective projects in those regions in order to determine funding allocations under the 5C's CC migration barrier design grant. In light of the funding freezes on many bond-dependent grants, conferring closely with county staff and grantors was especially critical to ensure available funding and allocations to ongoing and upcoming projects were consistent with current prioritizations and timeframes.

As appropriate, 5C staff also considers broader refinements to existing 5C prioritizations as new information is available or issues arise. For example, the Program Director began to explore a possible new factor in project prioritization – specifically historic climate data over the past 115 years in order to look beyond just annual rainfall averages and instead analyze patterns. In response to the drought conditions experienced in many parts of the 5C region, this type of analysis may help indicate which streams will have water, and perhaps cold water, in drier periods. This information would likely be most relevant in evaluating prioritization criteria for barrier and in-stream habitat projects. To date only a relatively small geographic area has been assessed. If results prove fruitful, they may be replicated at a larger scale.

Part of the broader 5C strategy involves making information on projects and 5C product/methodology readily available to member county staff and easy to assemble so that conservation efforts in higher priority watersheds may be accomplished. For example, the Program Manager attended a GIS user conference to hone skills and explore ways of improving the existing 5C GIS dataset (Task 5

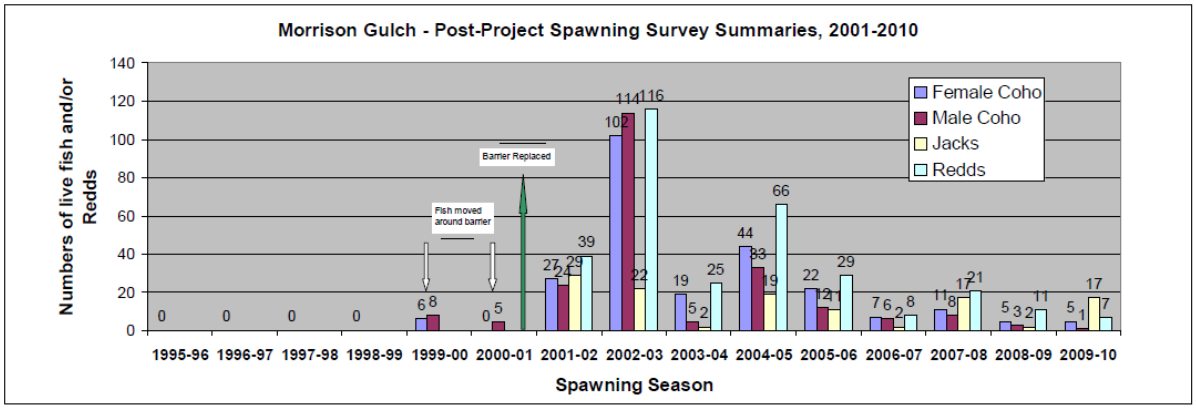
below). She also pursued a GIS based concept for online data sharing that does not rely on use of proprietary ESRI software. The intent was to determine whether it would be applicable to existing 5C inventory data (e.g., DIRT road erosion and migration barrier sites). This type of approach would facilitate: sharing data with county staff with limited software capabilities; enabling county staff to add pictures and status updates to sites (see Task 5 below); and facilitating a broader assessment of identified restoration sites and other factors that could shape 5C conservation priorities. Unfortunately, at a user help desk, ESRI staff was unable to perform the first step of importing existing 5C databases into an appropriate format due to limitations of the import process. As the process is refined, further attempts are likely.

B: Retain specialists to ensure efficient completion of beneficial projects

Ross Taylor & Associates has performed fisheries biologist work for the 5C throughout the period. This has included fish relocation on Hall City Creek and Finley Gulch in Trinity County and spawning surveys on Morrison Gulch in Humboldt County. Results for 15 spawning surveys indicated the presence of several redds and live adult and jack Coho (refer to Table 1).

Figure at right: Ross Taylor relocating fish at Finley Gulch migration barrier fall 2009.

TABLE 1. Morrison Gulch spawner/redd Survey Results



C: Natural Resources Technician assistance with restoration projects

Due to overall funding freezes and other limitations, a Natural Resources Technician was only hired for a small period of time under this contract, primarily under matching sources. However, 5C staff did periodically assist counties with environmental review or design work in prospective fish passage and sediment reduction projects. Due to limited county staff and resources, this assistance sometimes meant the difference between a project concept being developed and pursued rather than being shelved pending additional funds. Portions of this work are done with matching funds.

D: Coordination with agencies on regulatory requirements, standards, and timelines

Typically, 5C staff regularly worked with regulatory agencies included NOAA Fisheries, CDFG, and North Coast Regional Water Quality Control Board (NCRWQCB) to address project-specific considerations such as fish passage guidelines and proposed designs on migration barriers, streambed alteration agreements on both sediment sites and barriers, and post project monitoring requirements. This is done via sit-down meetings, site visits, and regular email and phone communication for several projects.

Occasionally, 5C staff is invited by agencies or partner entities to participate in non-county restoration projects. For example, NOAA and CDFG have been working with the Shelter Cove Resort Improvement District on potential options to improve fish passage at a dam downstream of the Telegraph Creek migration barrier site (Humboldt County). At NOAA's request for 5C technical assistance, staff met with the District's General Manager to discuss the site, potential options for improving passage at the dam, and modification of the water intake. Humboldt County does not plan to treat the road crossing until passage at the dam is remediated.

Additionally, 5C staff works with regulatory agencies on local issues that are not specifically related to a project. One example was a private quasi-dam construction, associated possible fish stranding, and fish relocation need on East Weaver Creek. CDFG and 5C staff addressed the issue and talked about the development of a multi-purpose restoration project targeting landowner and in-stream needs. NCRWQCB staff sometimes discusses water quality complaints in the region with staff in an effort to learn more about the watershed or local issues.

More programmatic issues are also discussed with regulatory agencies. For example, the Scott River TMDL and Siskiyou County roads were discussed with Siskiyou County and NCRWQCB staff. This resulted in an effort to incorporate 5C tools and products such as the Road Manual and the recent Scott and Salmon River Watershed DIRT road erosion inventory results into the TMDL implementation plan. The NCRWQCB would also like to certify the 5C Program on a larger scale so that a waste discharge waiver for compliant road maintenance practices may be issued (see Task 8 below).

Counties on occasion approach 5C staff to discuss regulatory agency policies or proposed plans. For example, Siskiyou County is pursuing legal advice on the best

way to represent its interests in the NOAA Federal SONCC Recovery Plan. They discussed the Plan, a lack of local government input, and strategies for inclusion of local governments with the Program Director.

4. RESOURCE SHARING OR POOLING (TASK 4)

The Program Director helped to arrange for a bridge contractor to cut bolts and remove old decking from a surplus Trinity River railcar bridge that the Trinity River Restoration Program gave to Del Norte County. He also helped to coordinate the logistics of transferring the bridge.

5. MONITOR AND REPORT 5C PROJECTS STATUS (TASK 5)

Monitoring for salmonid spawning activity and post-project surveys of the migration barrier removal have been conducted throughout the period.* Several redds have been observed by fisheries biologist Taylor.

Above: Redd (left) and wild female steelhead (right) found during monitoring of Little Browns Creek (Weaver Creek, Trinity River). Steelhead is visible just beneath (and parallel to) the undercut bank.

DIRT road erosion inventory methodology was discussed by the Program Manager, Director, and Natural Resources Technician. Specifically, the application of DIRT methodology to monitoring implemented project work was discussed. This included DIRT methodology rules about what constitutes a site and culvert sizing. Clarification of these topics will help counties to incorporate DIRT into project monitoring, the requirements for which are ever increasing. Many of the current sediment reduction projects rely on DIRT inventory data and estimates of total potential erosion for a site. However, many water quality funding sources seek quantitative monitoring, which has traditionally relied on physical sampling of sediment or turbidity in streams. However, those factors are not comparable to data used to identify high priority DIRT sites (potential sedimentation volumes), which can make monitoring these projects to the satisfaction of the grantors and within the ability of the counties difficult. The costs of quantitative in-stream

sampling/monitoring on such a large scale of sites along county roads that often cross multiple drainages can be expensive and in some cases may make a project proposal less competitive. However, use of the DIRT methodology to assess a portion of the treated roads can sometimes prove to be a more feasible alternative.

The Program Manager continues to assemble information for the 5C Program GIS database as needed. This has included data assembled for the water resources planning project described in Task 11. 5C staff regularly provides partner agencies and restorationists with information (e.g., Mattole Restoration Council, CDFG staff) on 5C restoration sites.

Program member counties are also encouraged to conduct monitoring of restoration efforts done as part of maintenance or emergency activities. For example, Siskiyou County did bio-engineering and revegetation on the Bar Road emergency project to protect a failing bank directly along the Klamath River. Documentation of such work is one of the efforts of the Road Manual BMP implementation monitoring (see Task 8 below).

As they are further developed and feasible, GIS online capabilities discussed in Task 3B above could help the 5C to facilitate better monitoring and reporting. Specifically, county road department staff would be able to upload pictures, status updates, and other information to the existing 5C GIS dataset. This would make it easier to report results for different purposes and help to keep the data relevant.

6. UCCE Reassessment Phase II on-site field visits (Task 6)

For various reasons, 5C staff was unable to perform the assessment task. These reasons include:

- The unexpectedly larger workload associated with transitioning the 5C from the County to the non-profit Council in order to facilitate a more financially viable Program; and
- The comprehensive freeze of bond dependent grants, which made up a significant portion of the Program's funding, required 5C staff to: shuffle funding; reschedule projects; coordinate with grantors, member counties, and project partners to adjust to changing state directives. At the same time largely because of those grant freezes, 5C staff was furloughed throughout July 2009 through June 2010.
- The economic downturn reduced already limited county staff and resources that would be needed to properly perform the assessment task.

The assessment will be resumed when resources permit.

7. FRAMEWORK 5C CONSERVATION STRATEGY (TASK 7)

The 5C Conservation Strategy provides a brief background of the Program and its goals before outlining the main Elements of work that have been and/or will be used to achieve those goals. These Elements include: Policy and Regulatory Stability; Land Use; Water Quality; Water Quantity; Fish Passage Improvement; Habitat; Outreach and Collaboration with Other Stakeholders; and Program Management and Monitoring: Other Actions Needed to Implement Program Elements. General tasks or approaches for each Element are described; both for past efforts as well as for future efforts. For example, now that the 5C is housed at the non-profit Council, projects and collaboration with non-county entities and/or private landowners may be pursued.

The Strategy also discusses state and federal recovery strategies and how 5C work and Elements relate to those efforts. The overall 5C Program addresses many of the same goals/issues targeted by other recovery strategies. A copy of the draft, which is undergoing review by member counties, is included as Attachment B.

8. IMPLEMENTATION OF 5C ROADS MANUAL (TASK 8)

After holding numerous discussions with 5C staff on timeframes and options for the road manual tasks over several months, long-time environmental consultant Sari Sommarstrom informed the Program that due to other time commitments, she could not perform these tasks within the contract timeframes. Therefore, the Program Director and Manager completed the work under these tasks.

5C staff reviewed draft waste discharge requirements (WDRs) proposed for county roads maintenance in multiple watersheds within Siskiyou County. As numerous discussions with NCRWQCB staff progressed, it was decided that 5C products (e.g., the Road Manual, DIRT inventories, Low Impact to Hydrology road standards), could be certified and incorporated into a programmatic discharge permit for Road Manual compliant county road maintenance activities within the entire 5C region. The NCRWQCB staff agreed to provide feedback on the products as needed to develop draft waiver language.

Reporting on the implementation of Manual best management practices (BMPs) is done to satisfy requirements of the NMFS 4(d) inclusion process. The first report (2008) was submitted to NMFS and provided to the NCRWQCB and CDFG in order to explore multiple programmatic permitting options. NCRWQCB staff began coordination with the 5C to develop feedback on initial reporting results in order to facilitate consistent monitoring objectives and thus simplify reporting for the Counties. Counties are encouraged to provide monitoring results of work done as part of maintenance or emergency activities for use in road manual reporting.

The Program Director organized two BMP training workshops instead of one central one to meet needs and resources – especially given the travel restrictions and fiscal constraints in each County. One workshop was held in Hoopa on July 21st and the other in Ukiah on July 22nd. Both workshop days included speakers from the

NCRWQCB, CDFG, CA Geological Survey, and the 5C Program. A classroom portion was held in the morning followed by afternoon field sessions. Topics included maintenance activities and NCRWQCB interactions, ditch maintenance and CDFG interactions, reporting of BMP implementation, and on-site discussions of overall road and maintenance related issues on Bair Rd in Hoopa and Fish Rock Road near Booneville. Participants (36 in Hoopa and 37 in Ukiah) included: county road department staff: supervisors, equipment operators, permitting, engineers, and management; speakers; and 5C staff.

9. Develop Land Use Tools and Incentives including Resources for Planners, Incentive Based Tools for Private Landowners, and Public Brochures (Task 9)

The Program Manager and Director completed a water resources planning project in the mainstem Trinity River as part of a larger effort with Humboldt County for regional water management.* The project deliverables included: a final report documenting the type of data collected, outreach conducted, process of data analysis, overall assessment of the study area, and broad recommendations to encourage better management and protection of water resources; project location maps and accompanying GIS data that included individual Community Watershed Planning Areas (CWPAs) that were analyzed in more detail; a simple model used to help assess water availability across the study area; and technical reports summarizing results and specific recommendations within each CWPA. The results will be made available to Trinity County planners and decision makers and will also serve as a model tool that planning departments in other counties may create for their regions.

Member counties periodically contact 5C staff about local land use related issues. These interactions sometimes lead to development of existing or new Program strategies. For example, the Program Director and Manager were contacted by Trinity County Environmental Health (TCEH) about questionable grading activities in a local watershed that were reported to have caused rilling, rutting, and runoff into the creek. TCEH conducted a site visit along with the local DFG warden and NCRWQCB staff. The Program Director also met with an adjacent parcel's landowner. Situations like these help to underscore the need for 5C model grading best management practices (currently in early draft stage). Recommended policies

and future public educational materials will likely incorporate lessons learned from this grading activity.

Another example of a member county request demonstrated a potential need for further guidance in road maintenance and improvement. A road department road re-alignment project on an eroding segment of Point Cabrillo Road in Mendocino County was undergoing environmental review by the planning department. 5C staff held discussions with staff from both departments to resolve the question of whether the old alignment should be left in place or decommissioned. This project highlighted issues not currently addressed by the 5C Road Manual or other 5C product, namely design for realignment or other major road modification projects. A compromise was reached to leave part of the old alignment intact to allow a shoulder at the curve but to plant the eroding outboard slope fill face. The project may also be featured in future roads workshop and/or land use planning trainings.

A library of standard mitigation measures within the 5C region is being developed. It will be made available to planners in all counties for review and consideration.

5C staff attended workshops and trainings on relevant land use planning such as the free land use and environmental law update held by Abbott & Kindermann where topics such as environmental laws (e.g., water rights, streambed alteration, water quality, ESA), CEQA, and other land use laws (e.g., development, zoning) are presented. The Program Manager also periodically sent out land use planning updates to Program planners. Meetings with Trinity County Board members and General Plan Advisory Committee members regarding the General Plan Update process were also held in the early portions of the contract period.

10. Develop Grants and Local Government Funding (Task 10)

Discussions with grantors and Program partners are ongoing. Some of these activities are held as part of larger collaborative efforts such as the Fish Passage Forum or the North Coast Integrated Regional Water Management Group (NCIRWMG) (see Task 11 below). Throughout the period staff has coordinated closely with several grantor agencies and representatives on effects to projects, timeframes, and budgets of the bond funded grant freeze in effect since December 2008. Several grant proposals for discrete restoration projects as well as larger Program funding were submitted throughout the contract period to a variety of sources:

- Sediment Reduction projects on China Gulch and Dutch Creek Roads as well as on Deerlick Springs Roads Phase II (Trinity County) were submitted to the Trinity River Restoration Program (TRRP) and/or Trinity Resource Advisory Committee (RAC) by 5C staff;
- Proposals for a sediment reduction project in the Scott River watershed on Sugar and French Creek Roads (Siskiyou), Ancestor Creek migration barrier (Mendocino), and Griffin Creek sediment reduction and fish passage project (Del Norte) were submitted to a NOAA stimulus source;

- 5C staff developed and assisted with proposals for the CDFG Fisheries Restoration Grant Program: 5C Program; Sugar Creek Road sediment reduction project in the Scott River (Siskiyou); Brush Creek fish passage improvement project on behalf of Del Norte County; South Fork Ryan Creek fish passage project (Mendocino); and Ryan Creek fish passage project on behalf of Mendocino County.
- Del Norte County in coordination with 5C staff submitted a NACO grant for the Brush Creek Migration Barrier project.
- A proposal to the NOAA Coastal and Marine Habitat Restoration National and Regional Partnership Grants program for a three year regional effort, led by the 5C, to identify and implement high priority on the ground restoration projects, conduct outreach, and promote watershed stewardship within the 5C and FishNet 4C areas as well as portions of southern Oregon was submitted by 5C staff. Special consultants in southern Oregon and the Fishnet 4C would have helped to identify and oversee projects in their respective areas. The $3.7 million project was comprised of approximately 50% matching funds. Twenty letters of support were received from legislators in California and Oregon, state and federal agencies, and watershed groups or non-profit organizations. A lot of coordination with NOAA staff and Project Partners was required due to the size and scope of the proposal.
- The Program Director submitted the 'Lower Sidney Gulch Urban Stream Restoration Phase I' grant proposal to the TRRP Fish and Wildlife Basin Restoration Grant Program (FWBRGP). It proposed the initial phase of a larger project to assess site conditions, conduct outreach, and design treatments to improve in-stream habitat complexity, increase riparian habitat, restore floodplain areas, and prevent potential sediment delivery.
- The Program Manager prepared the 'Central Trinity Water Conservation Project' TRRP FWBRGP grant proposal to conduct outreach, implement demonstration projects, and facilitate individual projects to: improve water usage efficiency through conservation and storage devices and drought tolerant landscaping; reduce the amount of surface water withdrawals during critical low periods; and promote more fire safe communities.
- A 5C Program proposal was submitted to the CDFG FRGP.
- The Program Assistant Manager helped to develop an Open Rivers grant proposal submitted for fish passage improvement on Ryan Creek in Mendocino County.

Often these efforts include not only the development of concepts and proposals with Program partners but also: coordination with grantor entities; site visits; participation in proposal workshops and several review and prioritization meetings (e.g., Trinity County Resource Advisory Committee, Trinity River Watershed Council); and meeting with grantor proposal review committees on specific projects. Other funding opportunities were coordinated. For example, 5C staff explored possible shovel-ready restoration projects with member counties and various agency representatives in response to stimulus funding sources. Some counties included restoration treatments in some stimulus requests. Not every

collaborative effort to pursue funding leads to the development of an actual proposal. For example, the Program Director and Assistant Manager coordinated with the Smith River Conservancy on a possible FRGP proposal as well as designs for three Caltrans sites in Del Norte County (Sultan, Little Mill, and Clark Creeks).

Non-grant funding is also pursued whenever possible. For example, the Program Director and Assistant Manager coordinated with Caltrans on possible use of Bypass Mitigation Funds for fish passage improvement projects. A 5C letter on Federal Guidance on Transportation Enhancement Activities was submitted to encourage the inclusion of aquatic species connectivity as an eligible funding category.

The Program Director also explored funding available for work outside of county entities. Now that the Program is under the Council, opportunities to expand the Program's restoration work beyond county entities is possible. For example, he participated in the review of a draft cooperative CCPI proposal for a Forestry Management Program that the local NRCS office prepared that would incorporate programs and work that may be subcontracted to 5C staff (see Task 11 below).

11. Coordinate with Government-based Watershed Conservation Organizations (Task 11)

Part of the Program' success is due in part to its relationships and cooperation with numerous watershed conservation entities and agencies. 5C staff actively participates in regional efforts such as the CA Fish Passage Forum (FPF) and the North Coast Integrated Regional Water Management Group (NCIRWMG).

The Program Director and Assistant Manager participate in the FPF. Efforts focus on permit streamlining, fish passage design, project funding, and coordination with landowner agencies. Work has included:

- Participation in 5 meetings and/or conference calls;
- Review of the Caltrans Memorandum of Understanding (MOU) for Elkhorn Slough at a request that the 5C consider the MOU as a possible model for working with Caltrans to restore fisheries habitat within the SONCC;
- Providing technical information to policy makers such as the Assembly Natural Resources and Transportation Committees that was considering policy on fish passage projects on State Highways;
- Discussions on use of transportation funding for fish passage;
- FPF application to the National Fisheries Habitat Action Plan (NFHAP) partnership. This has included review of FPF bylaws, redraft of the strategic plan, and consideration of non-profit status;
- Development of the Passage Assessment Database;
- Discussions on Aquatic Passage Guidelines & Culvert Deterioration and Storm Capacity, the draft federal SONCC Coho recovery plan, and the Federal Highway Administration's fish passage design HEC26; and
- Starting the development of a FPF method of evaluating and prioritizing fish migration barrier projects. This included consideration of criteria used by six federal and state agencies as well as the 5C Program.

The Program Director and Manager participate in the NCIRWMG. Originally the Director was a member of the Policy Review Panel (PRP) and the Manager was a member of the Technical Peer Review Committee (TPRC). Recently, both serve on the TPRC. Discussions and work focus on bond funded projects; legislative and funding updates; NCIRWM protocols and Plan; and relevant current water quality and/or water plan documents. This has included the following:

- Participation in 7 sit-down meetings and a couple of conference calls;
- Work on the water resources planning tool described in Task 9 above*;
- Work with the Weaverville Sanitary District on their Prop 50 NCIRWMP water reclamation project design, environmental documents, permitting needs, and potential stimulus funding;
- Coordination with NCIRWMG members, local consultants, and others on regional clean energy, potential funding and proposal strategies, possible economic and other benefits and impacts, as well as opportunities to leverage other resources;
- Development of a subcontract between the 5C and West Coast Watershed, consultants to the NCIRWM, for developing regional clean energy concepts and projects*. These projects have included*:
    - An electric vehicle concept proposed by a consultant to the Trinity Public Utilities District (PUD). It would begin with purchase of pilot vehicles and the placement of a charging station infrastructure along the Hwy 299 corridor with connectivity to Redding. The Program Manager: coordinated with the PUD consultant via several meetings to pursue ways to extend the PUD's concept network to a larger regional scale with connectivity west to the coast and further south, to Chico or perhaps the Sacramento area; and helped the consultant to write a concept proposal to the CA Energy Commission for the first phase that would include connectivity to Chico. Although the proposal was invited to submit a full proposal, the TPUD decided that it was not prepared to begin the project;
    - Additional clean energy concepts such as methane capture at local landfills, green waste/ composting, biomass, and conservation. This has included conducting site visits to regional dairies, local compost facilities, and coordinating with several stakeholders. One result of their efforts was a contract between a local composter and Trinity County Solid Waste to annually divert approximately 500 tons of compostable waste from the landfill; and
    - Completion of an energy assessment within the rural areas of the NCIRWMG region titled "Northwest California Sustainable Energy and Water Conservation Outreach" that would be incorporated into a larger regional assessment. It focuses on uses of, needs for, and possible new renewable energy sources;
- Participating in a Sustainable Water Infrastructure conference that featured water conservation, drought management planning, and water infrastructure funding;
- Attendance at a workshop on Resilient Water Management Strategies for a Changing Climate sponsored by the EPA.* Topics focused on: multiple

agency as well as local and international government strategies to implement climate change related policy or projects; current climate change science; potential climate change impacts on water resources; water resources management; and the development of an EPA climate change strategy. As efforts develop, staff will continue to be involved in the development of relevant strategies, which offer numerous opportunities to develop approaches that benefit climate change, fisheries, and water quality.

- Participating in the NCIRWMG review and acceptance of a proposal from a consortium of tribes requesting inclusion on the NCIRWMP Policy Review Panel and Technical Peer Review Committee. Three seats on the PRP and the TPRC for tribal representatives were granted; and
- Coordinating upcoming meetings for the Prop 84 bond funding opportunity.

The Program Assistant Manager also worked with the local Shasta-Trinity US Forest Service office to conduct NEPA wildlife and botanical assessments to facilitate USFS planned projects that would benefit wildlife and water quality resources.*

The Program Director was interviewed for a NOAA documentary on salmon recovery that will showcase efficient integration of salmon/steelhead conservation into business practices, government programs, and other activities.

Potential restoration projects are occasionally developed with other government entities. One example is a possible fish passage project that would coincide with the alignment of a sewer line on East Weaver Creek with the Weaverville Sanitary District. Resource sharing is also pursued with public entities as appropriate. For example, the Program Assistant Manager coordinated with USFS staff on use of excess native seed straw from recent fire rehabilitation efforts in restoration project revegetation efforts.

Training efforts have also been coordinated on with Program partners. For example, the Director and Assistant Manager presented sessions on invasive weed management, native plants, and culvert installation and ditch maintenance at three roads maintenance workshops for five central coast counties.

As described in Task 10 above, the Program Director coordinated with the local NRCS office in the development of a draft CCPI that would incorporate programs and work specifically in fire rehabilitation, fuels thinning, and sediment reduction. The CCPI was submitted to state NRCS officials for consideration in the larger CCPI process.

Other efforts that the 5C staff occasionally participate in include: the TRRP Watershed Workgroup and TRRP Adaptive Management Workgroup to discuss potential projects and larger restoration issues; NCRWQCB local meetings to coordinate potential site visits; and participation in regional workshops geared toward local government efforts such as the Local Government Commission conference on implementing recent climate change legislation or the Planning and Conservation League 2008 CA Water Summit.

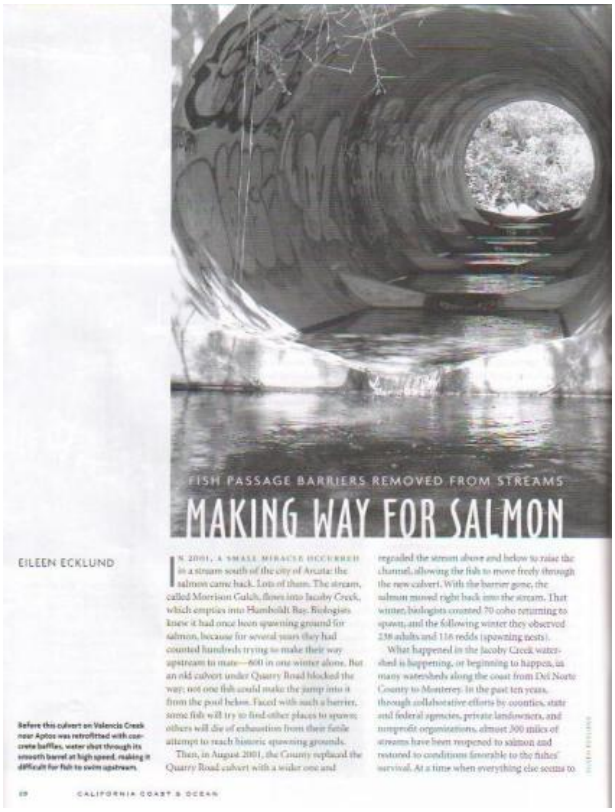
12. COLLABORATION WITH LOCAL WATERSHED COORDINATORS, NON-PROFIT GROUPS, AND INTERACT WITH PUBLIC GROUPS (TASK 12)

5C staff regularly collaborates with watershed coordinators, groups, and the public on conservation and restoration. Some of these interactions are ongoing and/or regular such as participation in the Trinity River Watershed Council (TRWC) while others are more specific or unique.

The TRWC typically discusses current watershed restoration projects, updates funding sources and cycles, and watershed prioritizations. On a few occasions, site visits to prospective sites are also conducted. Participation in the TRWC has included: attendance at 8 meetings; discussions and review of prospective project concepts, proposals, and ongoing projects; coordination with TRWC members; and collaborating on sharing restoration project data. Discussions and data sharing is common with individual watershed groups. For example, restoration within the Big Creek watershed in Trinity County was discussed with the Watershed Research and Training Center, who prepared a draft report of restoration activities.

Annually, 5C staff attends the Salmonid Restoration Federation conference. This year, the Assistant Manager presented on 5C fish passage projects and the various designs used.

Collaboration and outreach unique to this contract period included: coordinating with local high schools staff and students to perform invasive riparian vegetation removal; an interview with the Program by CA Coast and Ocean Magazine on the 5C Program and its fish passage efforts, published in the Autumn 2009 issue (right); data sharing and coordinating with HSU on post project barrier project monitoring; interacting with natural resources consultants and professionals, academics and scientists, non-profit organizations, and interested individuals in events such as the water management and climate change workshop discussed in Task 11 above; and education outreach (classroom presentation followed by a field tour) at the Trinity County RCD Summer Day Camp in Weaverville on water resources, watershed impacts, and ways to conserve and minimize use conflicts.



FISH PASSAGE BARRIERS REMOVED FROM STREAMS

MAKING WAY FOR SALMON

EILEEN ECKLUND

IN 2001, A SMALL MIRACLE OCCURRED in a stream south of the city of Arcata: the salmon came back. Lots of them. The stream, called Morrison Gulch, flows into Jacoby Creek, which empties into Humboldt Bay. Biologists knew it had once been spawning ground for salmon, because for several years they had counted hundreds trying to make their way upstream to mate—600 in one winter alone. But an old culvert under Quarry Road blocked the way; not one fish could make the jump into it from the pool below. Faced with such a barrier, some fish will try to find other places to spawn; others will die of exhaustion from their futile attempt to reach historic spawning grounds.

Then, in August 2001, the County replaced the Quarry Road culvert with a wider one and regraded the stream above and below to raise the channel, allowing the fish to move freely through the new culvert. With the barrier gone, the salmon moved right back into the stream. That winter, biologists counted 70 coho returning to spawn, and the following winter they observed 238 adults and 116 redds (spawning nests).

What happened in the Jacoby Creek watershed is happening, or beginning to happen, in many watersheds along the coast from Del Norte County to Monterey. In the past ten years, through collaborative efforts by counties, state and federal agencies, private landowners, and nonprofit organizations, almost 300 miles of streams have been reopened to salmon and restored to conditions favorable to the fishes' survival. At a time when everything else seems to

Before this culvert on Valencia Creek near Aptos was retrofitted with concrete baffles, water shot through its smooth barrel at high speed, making it difficult for fish to swim upstream.

13. CONDUCT SALMON, WATER QUALITY, & LAND USE WORKSHOP(S) (TASK 13)

Four meetings with planners were held in fall 2009 in all but Humboldt County. The Humboldt County planner representative was in the process of providing available dates and clarifying specific requested topics at the end of this contract period. In some cases, follow-up meetings with 5C Board members were also conducted.

The first meeting was held October in Ukiah with Mendocino County Planners. Discussion topics included the content and nature of the recently adopted General Plan – especially in regards to climate change and sustainable energy, current development patterns and water shortages in the county, and resources the county would like the 5C's assistance in acquiring.

The Siskiyou County Planning Department meeting was held November in Yreka. Given the relative turnover in staffing, an introduction to the 5C was provided before discussions on the current structure of the department and topics related to sustainable energy, transportation, and fisheries.

The Del Norte planner's meeting was held November in Crescent City. Among topics discussed were sustainable energy, transportation, potential renewable energy projects within the county, and recent development project proposals submitted to the county.

A meeting was held with the sole Trinity County planner November in Weaverville. Topics such as sustainable energy, transportation, and potential renewable energy projects within the county were discussed along with the need for additional planning staff.

14. PROVIDE EDUCATION ON SEDIMENTATION AND ITS EFFECTS ON WATER QUALITY AND COMPLETE ROAD-RELATED SEDIMENT VIDEO (TASK 14)

Several types of educational outreach were conducted on sedimentation and related water quality impacts. This included:

- A presentation by the Director and Manager on sediment water quality issues and the DIRT database at a Forest Road Risk Assessment and Management Workshop for Forest Landowners sponsored by UC Cooperative Extension (UCCE) in Weaverville. Attendees included: members of the public; agency representatives from the CA Geologic Survey, CDF, Trinity Resource Conservation District, and the NRCS; and UCCE staff.
- A 5C sediment reduction element and DIRT database presentation by the Director and Manager at the CDF Monitoring Study Group (mostly agency staff) meeting in Redding.
- Coordination with Siskiyou County on the results of the DIRT data previously collected for the Scott and Salmon River watersheds as well as on the use of the DIRT database throughout the period. Staff also worked with road departments in August to assess sediment damage potential from summer fires including recognizing upslope watershed and road degradation.

- The Program Manager has discussed with Mendocino County Department of Transportation ways to merge the existing 5C DIRT data with up-to-date road crew observations of current conditions in a way that preserves both datasets yet brings all the information together. County staff will determine its needs and objectives so that a solution may be developed.

The 5C sediment video "Addressing Road-Related Sedimentation" was produced with in coordination with Tristan Howard Productions. The 26 minute video features speakers from various agencies and organizations discussing the nature and causes of sedimentation, effects to water quality and wildlife habitat, and ways to identify and treat sediment sources. Footage and photos captured in 5C and Program partner projects over several years are utilized along with footage captured throughout the contract period to help illustrate the video's concepts. Mass copies of the video have begun to be distributed. The public and other interested parties may access an online version of the video via the 5C website. The video will be incorporated into 5C trainings and presentations on road related sediment. 5C member counties will be encouraged to feature the video during their orientation of new road maintenance staff. A copy of the video is included as Attachment C.

15. DIRT Methodology Workshop (Task 15)

Training on the Direct Inventory of Roads and Treatments (DIRT) was offered to individual member counties and, via a central workshop, to interested agencies, organizations, and individuals. The Program Manager conducted a hands-on training for Siskiyou County Department of Public Works (SDPW) staff in March 2009 in Yreka. The focus was on the fundamentals of using Access and the specifics of the 5C DIRT database, which included navigating the main DIRT dataform, an explanation of the tabs and fields within the form, and making relatively simple queries.

The Program Manager updated the DIRT user guide, based on results from the Scott and Salmon River Watershed Roads Erosion Inventory completed in 2008 as well as on feedback received during subsequent sediment education efforts.

A workshop on the DIRT methodology was held on January 19th in Bayside, Humboldt County. A classroom portion featured Pacific Watershed Associates and 5C staff presentations followed by a field tour. Participants included county roads staff, state and federal agencies, professional consultants, and landowner groups. Topics focused on road sediment sources, how sites are assessed with the DIRT

methodology, and generally how DIRT treatment prescriptions are formulated. Several documents and relevant tools were included on a CD that was provided to participants: general DIRT description and methodology; the updated user guide; a sample copy of the DIRT database; 5C Low Impact to Hydrology Road Standards; and 5C Road Manual.

16. 5C WEBSITE

The Program Assistant Manager maintained the 5C website with updated information on 5C events and projects, 5C e-newsletters, and contact links throughout the contract period as needed. Major upgrades were performed twice. The 5C website was also utilized to provide the water resources planning grantor with access to maps provided as part of that project's deliverables (see Task 9 above).* In this way, the 5C hopes to expand the use of the database to facilitate better information sharing.

17. PROGRAM COSTS & MATCHING FUNDING

The total expenditures for the project from all sources totaled $553,566. Of that total, 41.3% ($228,567) came from matching sources as shown in Table 1 below. This is more than the amount of matching funds originally projected (35.3%). A total of 3,764 personnel hours were expended under this contract. Due to state bond funded grants being frozen, 5C staff was furloughed from July 2009 to June 2010. Matching sources primarily consisted of engineering or design work for sediment reduction and fish passage projects.

TABLE 1: PROJECT COSTS			Matching Source Breakdown									
GRANT LINE ITEMS	GRANT FUNDS	TOTAL MATCH	CA Coastal Conservancy	West Coast Watershed	Humboldt County Prop 50 NCIRWMP	USFS Challenge Cost Share	NOAA Community -based Restoration Program	BOR Klamath River Restoration Program	DIRT workshop participants non-5C	5C member county time & in-kind	RC&D Council	5C staff
PERSONAL SERVICES												
Program Director	$ 39,519	$ 15,479	$10,135	$ 2,056	$ 776	$ 809	$ 1,275	$ 429	$ -	$ -	$ -	$ -
Benefits @	$ 25,976	$ 10,448	$ 6,874	$ 1,400	$ 615	$ 479	$ 785	$ 296	$ -	$ -	$ -	$ -
Program Manager	$ 55,760	$ 8,836	$ 530	$ 773	$ 2,255	$ -	$ 264	$ 3,803	$ -	$ -	$ -	$1,212
Benefits @	$ 32,223	$ 5,634	$ 315	$ 459	$ 1,764	$ -	$ 171	$ 2,224	$ -	$ -	$ -	$ 702
Assistant Program Manager	$ 6,749	$ 43,566	$22,198	$ -	$ -	$12,299	$ 5,583	$ 3,486	$ -	$ -	$ -	$ -
Benefits @	$ 3,757	$ 26,441	$13,302	$ -	$ -	$ 7,072	$ 3,432	$ 2,635	$ -	$ -	$ -	$ -
Natural Resources Technician	$ 727	$ 238	$ -	$ -	$ -	$ 238	$ -	$ -	$ -	$ -	$ -	$ -
Benefits @	$ 84	$ 27	$ -	$ -	$ -	$ 27	$ -	$ -	$ -	$ -	$ -	$ -
Natural Resources Aide	$ -	$ 95	$ -	$ -	$ -	$ -	$ -	$ -	$ 95	$ -	$ -	$ -
Benefits @	$ -	$ 11	$ -	$ -	$ -	$ -	$ -	$ -	$ 11	$ -	$ -	$ -
Accountant/Office Manager	$ 5,478	$ 4,925	$ 2,194	$ -	$ -	$ -	$ 1,481	$ 1,251	$ -	$ -	$ -	$ -
Benefits @	$ 3,348	$ 3,172	$ 1,415	$ -	$ -	$ -	$ 974	$ 783	$ -	$ -	$ -	$ -
Program Partners		$ 44,963	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,510	$30,453	$6,000	$ -
SUBTOTAL	$173,621	**$163,836**	**$56,962**	**$ 4,688**	**$ 5,409**	**$20,923**	**$ 13,966**	**$ 14,906**	**$ 8,616**	**$30,453**	**$6,000**	**$1,914**

OPERATING EXPENSES	GRANT FUNDS	TOTAL MATCH	CA Coastal Conservancy	West Coast Watershed	Humboldt County Prop 50 NCIRWMP	USFS Challenge Cost Share	NOAA Community -based Restoration Program	Bureau of Reclamation Klamath River Restoration Program	DIRT workshop participants non-5C	5C member county time & in-kind	RC&D Council	5C staff
Subcontractors												
Trinity County Specialists	$ 84,083	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
UCCE Consultants	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
UCCE other specialists	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Road Manual Consultant	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fisheries Biologist	$ 3,073	$ 7,781	$ -	$ -	$ -	$ -	$ 7,781	$ -	$ -	$ -	$ -	$ -
Other Prof Services	$ 6,650	$ 34,183	$14,563	$ -	$ -	$ -	$ 3,620	$ -	$ -	$16,000	$ -	$ -
Workshop Consultants	$ 2,190	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Workshop Facilities	$ 885	$ 390	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 390	$ -	$ -
Workshop services & supplies	$ 540	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Transportation for Workshop Speakers	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lodging, per diem	$ 2,057	$ 470	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 195	$ -	$ 275
Program Transportation	$ 3,262	$ 4,451	$ 1,849	$ 287	$ -	$ -	$ 876	$ -	$ 155	$ 1,284	$ -	$ -
SUBTOTAL	$102,740	$ 47,275	**$16,412**	**$ 287**	**$ -**	**$ -**	**$ 12,277**	**$ -**	**$ 155**	**$17,869**	**$ -**	**$ 275**
SUBTOTAL	$276,361	$211,111	$73,374	$ 4,975	$ 5,409	$20,923	$ 26,243	$ 14,906	$ 8,771	$48,321	$6,000	$2,188
Administrative Overhead	$ 48,639	$ 17,456	$ 7,324	$ 19	$ -	$ -	$ 3,575	$ 4,844	$ -	$ 1,464	$ -	$ 229
TOTAL	$324,999	**$228,567**	**$80,698**	**$ 4,994**	**$ 5,409**	**$20,923**	**$ 29,818**	**$ 19,750**	**$ 8,771**	**$49,785**	**$6,000**	**$2,418**

Match Source List:

- CA Coastal Conservancy grant: Project planning, engineering, and design work for various restoration projects – primarily fish passage with some habitat improvement and sediment reduction. (Contract #s 05114 & 08090)
- West Coast Watershed contract: Part of the larger NCIRWMP regional planning effort for energy independence and water resources. (Contract # NCENG)
- Humboldt County Prop 50: Part of the larger NCIRWMP regional effort for water resources planning. (Contract # 07090)
- USFS Challenge Cost Share: Work with the Shasta-Trinity forest to conduct environmental planning work to facilitate implementation projects. (Contract # 00041)
- NOAA Community-based Restoration Program: Long term monitoring work in the Little Browns Creek watershed. (Contract 30162)
- Bureau of Reclamation Klamath River Restoration Program: Portion of project planning, permitting, and support work for Whites Gulch migration barrier project. (Contract 00119)
- DIRT workshop participant non-5C: Time and travel expenses for those participants that are not staff to the 5C member counties. (in-kind)
- 5C member County: Time, travel, and other in-kind services provided during participation in 5C Program steering committee meetings, Program prioritizations, project development and engineering, land use planning meetings, and 5C workshops (DIRT, Road Manual BMP). (in-kind)
- RC&D Council: Council members' time spent meeting on 5C specific work and Program activities. (in-kind)
- 5C staff: As described above, 5C staff was furloughed between July 2009 and June 2010. However, staff worked additional hours and incurred program and project related costs (e.g., travel and lodging costs for trainings) that were not reimbursed. (in-kind)

18. SUMMARY

Activities and efforts conducted under this contract represent some of the most vital work the 5C Program conducts despite the fact that direct on the ground restoration is not included. This work allows the 5C Program to remain vibrant and dynamic through the examination of Program goals and objectives and continued development of Program work elements (see Task 7). Additionally, new opportunities for restoration often arise out of work and outreach done under the tasks described above. What distinguishes the 5C Program from a consultant simply doing on the ground restoration is that it actively engages member county staff, agencies, and other partner organizations on a consistent basis beyond very specific projects. This facilitates the refinement and/or development of local and regional restoration priorities, pooling of resources, and identification of new restoration opportunities. This contract has allowed 5C staff to:

- provide member counties with the expertise and resources needed to progress on migration barrier and sediment project designs without which construction would be delayed or not pursued (see Task 3);

- continue education and training for: a) member county staff on road maintenance and restoration issues (see Task 8); and b) member county staff, restorationists, and other interested parties on road related sedimentation (see Tasks 14 & 15);
- pursue programmatic regulatory coverage of 5C products (see Task 3D and 8);
- monitor 5C Program projects, practices, and activities to ensure work remains consistent with goals and objectives (see Tasks 3A, 5, & 8);
- engage county planners in current land use issues, water resources, and other topics of local concern (see Task 13);
- develop tools to facilitate better land use planning (see Task 9);
- evaluate high the next high priority sediment source and migration barrier sites and pursue funding to ensure ongoing restoration projects and efforts may be completed (see Task 10). This often includes making the case for salmon recovery to be considered in policy and non-traditional funding sources (see Task 11); and
- sustain relationships with Program member counties, partner agencies, restorationists and others to facilitate numerous collaborative efforts including local watershed council prioritization, Fish Passage Forum efforts, and data sharing (see Tasks 2, 11, 12, & 16).

These activities have addressed multiple priorities within and beyond the 5C Program to the benefit of anadromous salmonids, water quality, and stream habitat. For example, the following tasks within the *Recovery Strategy for California Coho Salmon* have been addressed via work in this contract:

- *RW-XXX-E-01 - Continue to implement FishNet 4C and Five County Salmon Restoration goals, including adopting and implementing written Operations and Maintenance Guidelines, training staff on guidelines, addressing fish passage and road sedimentation issues, developing riparian protections, promoting alternatives to conventional bank stabilization, and developing land use policies favorable for coho salmon.*
- *RW-III-A-01 - Continue and complete assessments and prioritizations for correction of fish passage barriers.*
- *RW-III-C-01 - Encourage funding authorities to allocate adequate resources to construct new crossings and upgrade existing crossings (bridges, culvert and fills, other crossings) within the range of coho salmon to accommodate 100-year flows and associated bedload and debris. Priority for upgrading should be based upon the potential impact to coho salmon habitat.*
- *RW-III-C-06 - Encourage funding authorities to allocate adequate budgets to Federal, State, and local agencies for fish passage projects. This includes, but is not limited to, funding for road maintenance programs and capital project activities.*
- *RW-XXV-B-07 - Develop and implement county, city, and landowner initiatives to expand inadequate stream buffers and protect riparian and wetland habitat for coho salmon recovery.*

- *RW-XXVIII-B-01 - Support local governments, interested parties, and property owners in the development of incentives for landowners who participate in activities that exceed legal requirements or timelines to protect and/or restore coho salmon habitat and watershed processes. RW-I-D-03 Provide conservation incentives to minimize negative effects of water drafting for roads and fire suppression.*
- *RW-VI-A-02 Identify and prioritize specific sediment source locations for treatment that may deliver sediment to coho salmon streams. Encourage the use of protocols, such as the California Stream Habitat Restoration Manual Guidelines. Work with others to educate and provide technical assistance to landowners to implement upgrades.*

Many high priority tasks in relevant watersheds outlined in the Recovery Strategy are also addressed. The following is a more quantitative summary of results according to CDFG FRGP metrics:

Habitat Protection and Restoration Project Reporting Metrics are not applicable to this project type.

Public Outreach Metrics:

- Will the project focus on sustainability, restoration (where needed), and the maintenance of watershed and salmon population health?

  Yes

- Number of workshops/training events held with the project:

  Four workshops/training events were organized and held by the 5C Program. However, 5C staff presented on 5C products, methodologies, and projects at three additional workshop events held by other partner entities.

  Four sit-down meetings/mini workshops were also held with Program member county planners to discuss specific topics such as land use and relevant policy.

- Number of participants in workshops/training events within the project:

  120 participants attended the workshop/training events held by the 5C Program. Hundreds of people attended the other events held by Program partners at which 5C staff presented.

  Seventeen planners participated in land use meetings/mini workshops.

- Number of publications completed and distributed within the project:

  Nine publications were completed and distributed: 3 5C enewsletters were sent to hundreds of recipients; an updated DIRT user guide was distributed at the DIRT workshop; an educational video on road related sediment (300 DVDs produced with online version); a summary of 5C Road Manual BMP implementation; a mainstem Trinity River water resources planning report; an assessment of alternative energy sources in the north coast region; and one article was published of an interview given by the Program Director.

- Number of schools or classrooms and other institutions reached within the project:

  During the abundant outreach and collaborative efforts described in Tasks 11 and 12 as well as via the publications listed above, dozens of institutions and organizations were reached. This includes no less than: 21 governmental agencies or entities including 5C member counties; 3 regional groups focused on specific types of restoration; 4 special districts/service agencies; and 9 watershed groups, educational institutions, and other restoration partners.

- Include a description of the results of student/teacher evaluations:

  Not applicable

Many activities described above are new and unique to this contract. These include:

- Development of a framework Conservation Strategy for the 5C Program;
- Exploration of a larger regional salmonid restoration effort with southern Oregon counties and central coast FishNet 4C that was outlined as presented as a proposal to a national NOAA grant opportunity;
- Broadening the scope of the 5C Program by exploring work with non-county entities. One example is the coordination with NRCS on a regional draft cooperative CCPI proposal for a Forestry Management, which would include work with private landowners;
- Completion of a water resources planning report focusing on the mainstem Trinity River*;
- Pursuit of alternative energy strategies and an assessment of energy (particularly in regards to water resources) as outlined in the "Northwest California Sustainable Energy and Water Conservation Outreach" report*;
- Providing DIRT and road related sediment training to non-county entities; and
- Producing an educational video on road related sediment for broad distribution.

ATTACHMENTS

A Electronic copy of final report (CD format)

B Framework 5C Conservation Strategy

C 5C Program educational sediment video: "Addressing Road-Related Sedimentation" (DVD format)