

**NOAA Community Development Grant Program
Award #NA86FZ0577**

Five Counties Salmonid Conservation Program (5C)

**FINAL REPORT
November, 2003**



NOAA Fisheries Regional Administrator Rod McInnis (left), Trinity County Supervisor Ralph Modine (center) and CA Fish and Game Director, Robert Hight (right) dedicate the opening of the West Weaver Creek Migration Barrier Removal Project

BACKGROUND

The link between land use, wildlife habitat, fisheries resources and water quality have become dominant influences in social, economic and recreational development patterns for the northwestern California counties over the past decade. In 1999, NOAA awarded Trinity County a Financial Assistance Award to develop a local government conservation strategy, the Five Counties Salmonid Conservation Program (5C). The Boards of Supervisors of Del Norte, Humboldt, Mendocino, Siskiyou and Trinity counties choose to actively participate in the recovery process for anadromous salmonid species with the adoption of Memorandums of Understandings by each Board. The counties make up the California portion of the Oregon and Northern California Coasts (ONCCC) Evolutionary Significant Unit (ESU) for the coho salmon (*Oncorhynchus kisutch*) as well as all or portions of the following ESUs for anadromous salmonid and other related species:

- Southern Oregon and Northern California Coastal Chinook (Threatened)
- California Coastal Chinook (Threatened)
- Northern California Steelhead (Threatened)
- Central California Coast Steelhead (Threatened)
- Upper Klamath-Trinity Rivers Chinook (Not Listed)
- Klamath Mountain Province Steelhead (Not Listed)
- Pacific Coast Chum (Not Listed)
- Southern Oregon/California Coasts Cutthroat Trout (Not Listed)
- North American Green Sturgeon (Not Listed)

NOAA AWARD OBJECTIVES

The NOAA grant contained the following objectives:

1. Implement the Interim Conservation Plan and continue coordination of county governments within the California portion of the Oregon and Northern California Coasts (formerly referred to as the Trans-Boundary) ESU.
2. Pursue adoption of specific county ordinances proposed in the above referenced interim conservation plan. In addition, pursue adoption of specific policy direction in each county to assure county maintenance and capitol improvement practices do not degrade anadromous salmonid fisheries habitat or water quality.
3. Obtain and implement grants to restore access to anadromous salmonid fisheries habitat made seasonally or permanently inaccessible by County managed facilities.
4. Establish a written plan of operations and procedures manual to assure future actions are consistent with water quality and fish recovery goals.
5. Target restoration funds to watersheds identified as highest priority for benefit to fish and/or water quality.
6. Demonstrate that local agencies can respond to federal actions and minimize need for further listings (steelhead and Chinook).

To accomplish the above objectives, the following specific tasks were included in the Scope of Work:

1. Adoption/implementation of ordinances that provide habitat maintenance and water quality protection (riparian set-back, grading standards and new riparian rights). This task involves adapting the regional model to the specific features of each county, including staff reports, presentations, public hearings, and completion of environmental review of each ordinance.
2. Coordination and implementation of education programs for county employees, riparian land owners, and grading operators. Several education efforts are sponsored by this planning process but developed by RCDs and contractors. The coordination and transferability of education efforts will be necessary to assure that the efforts are effective within the Oregon and Northern California Coasts area.
3. Adoption of voluntary land use or tax incentives that encourage protection of significant natural resources while allowing continued development of private lands (counties may utilize various incentives).

4. Development and implementation of the regional program of work for county facilities: road inventorying, spoils disposal permitting, site development, migration barrier assessment and implementation of priority sites based on prioritization criteria developed as part of the plan, including regional coordination to prioritize restoration activities programs.
5. Pursue local, state, federal and private grants that will contribute to the restoration of fisheries resources.

CONSERVATION PLAN IMPLEMENTATION ELEMENTS

PROFESSIONAL/TECHNICAL ASSISTANCE

The NOAA award funding was used to provide professional and technical funding and assistance for a number of Five Counties Salmonid Conservation Program (5C) strategies and products as discussed below:

5C Program Management

The 5C conducts much of its day-to-day program management through constant telephone communication, emails, and meeting with individual program participants. Key to the 5C program management are steering committee meetings held periodically to review and discuss overall progress and present and future strategies. The steering committee consists of the 5C Board – comprised of supervisors from each BoS within the 5C – and representatives from each county department of public works or transportation and planning.

Steering committee conference calls and sit-down meetings were conducted periodically (refer to quarterly progress reports for agendas and participants). Among topics discussed were: roads manual permitting process and adoption; engineering contracts for migration barrier designs; Salmon and Water Quality Workshops for Roads, Planners, and Policymakers; future project prioritization and funding proposals; resource sharing among counties; training programs; upcoming sediment reduction and migration barrier removal projects; professional services needed to plan and implement projects; and the status of current projects. Participants not on the 5C steering committee included consultants (Sommarstrom & Associates, Ross Taylor & Associates) and representatives from various government agencies (CDFG, NOAA Fisheries, North Coast Regional Water Quality Control Board (NCRWQCB)).

Frequent meetings were held either via conference call or sit-down meetings with 5C program participants that did not involve full participation of the steering committee. Among the topics discussed during these meetings were:

- Status, permitting and funding needs, timelines, and coordination of current migration barrier removal, sediment reduction, and wetlands restoration projects.
- Funding needs and opportunities specific to different counties or public works department. Participants in these meetings included 5C program participants, program consultants (Sommarstrom & Associates, Ross Taylor & Associates, Pacific Watershed & Associates, Trinity County Resource Conservation District, etc.), and federal, state, and local agencies involved with permitting and funding.

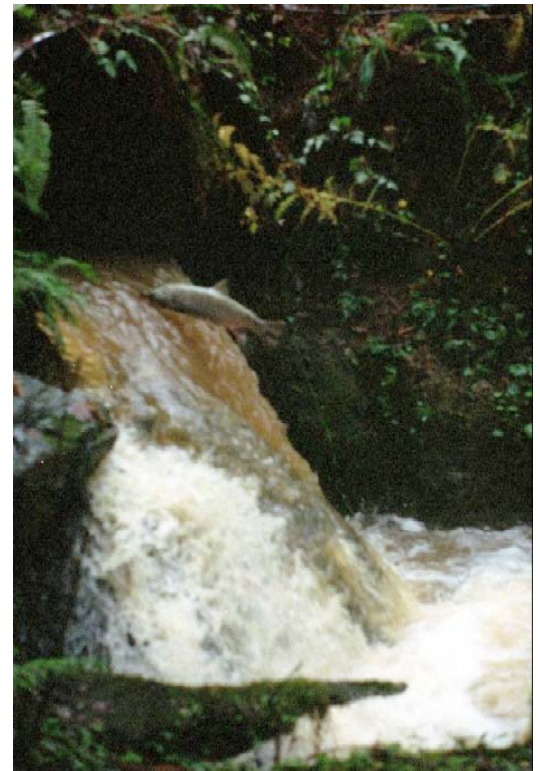


Figure 1: Morrison Gulch Jump Migration Barrier

- Numerous 5C staff meetings to discuss current projects (timelines, permitting, etc.), review overall program progress, financial status, and identify program needs for discussion with the 5C steering committee.

University of California Cooperative Extension (UCCE) ¹

Between 1999-2003, the 5C program implemented, or pursued funding to implement, several of the recommendations contained in the 1998 UCCE assessment. Much of the 5C, NOAA funded, work documented in this section of the report had its genesis in the UCCE recommendations.



Figure 2: Prioritization meeting, January 2002

Program Prioritization

The 5C's 1998 biological prioritization strategy was revisited in 2002 by area biologists. The January 2002 meeting consisted of representatives of NOAA, Fish and Wildlife Service, Forest Service, Bureau of Land Management, Fish and Game, CalTrans, Humboldt State University, NRM Inc., and other private consultants. The meeting followed the completion of the County road barrier inventories for all five counties (Ross Taylor and Associates) and contributed to refinement of priority watersheds and 208 barriers identified in those inventories (refer to Appendix C).

Biological Services

The NOAA grant provided funding resources for the 5C to contract professional fisheries biological services associated with habitat restoration. The consultant, Ross Taylor and Associates, completed the following: migration barrier removal analysis, barrier prioritization, California Environmental Quality Act (CEQA) analysis, fish relocation², participation in development of a roads maintenance manual, project monitoring and training of road crews, and fish life history needs trainings for planners and policy makers.

Fish relocation was done at migration barrier removal projects in Humboldt, Mendocino and Trinity counties. In 1999 and 2000, a unique relocation effort (funded under this grant) was undertaken at Morrison

Gulch, Humboldt County. The Morrison Gulch culvert was a complete barrier in a stream with an apparent high affinity for coho. During a two day period in 1999, more than 500 unsuccessful jump attempts into the County road culvert were documented (Figure 3). In 1999-2000, coho were netted and moved above the culvert, resulting in their reestablishment in the stream even before the barrier was removed. There have been more than 100 redds per year since Humboldt County Public Works fully restored passage in 2001. The project highlighted successful restoration projects (Figure 4).

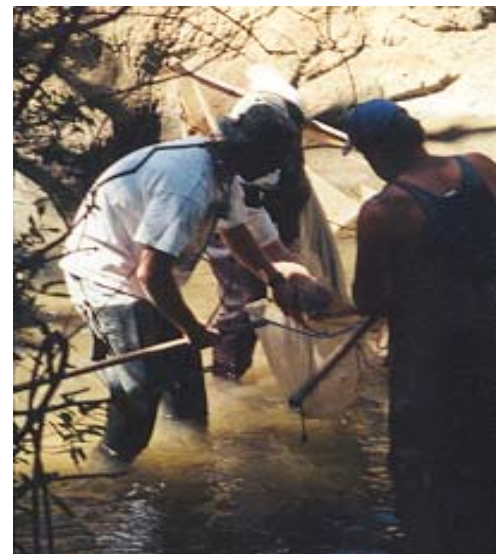


Figure 3: Fish relocation at West Weaver Creek, August 2000

¹ "Effects of County Land Use Regulations and Management on Anadromous Salmonids and Their Habitats: Humboldt, Del Norte, Mendocino, Siskiyou and Trinity Counties," (University of California Cooperative Extension (1998)). Submitted to Miles Croom, NOAA Santa Rosa office in 1999

² Work done under a ESA Section 10 permit held by Ross Taylor

Resources Agency Fish Passage Forum

The 5C staff served on the Fish Passage Committee/Forum since its inception in 2000, as well as working on Engineering and other sub-committees of the Forum. The Forum serves as an opportunity for education of members regarding each discipline involved. For example, local government implementers (5C, FishNet 4C and CalTrans) and regulatory agencies specialists are afforded face to face interaction regarding the complexities of meeting each others objects (e.g. limits of right-of-ways effects on designs, inability to obtain right to enter



Figure 4: A January 2003 Eureka Times-Standard article about the successful re-establishment of Morrison Gulch

Species Act. The team produced 673 recommended actions ranging from specific watersheds to ESU wide application. The CA Fish and Game Commission will consider the strategy in early 2004.

agreements, opposition from upstream landowners, non-fish related constraints). Other products from the forum have included information on project status, coordination with multiple work efforts by local, state or federal agencies and permit facilitation.

The Engineering sub-committee worked on a number of issues related to passage including revision of the swimming and jumping ability assumptions of fish used in the FishXing software. The changes in assumptions were for prioritization of sites for treatment, but did not change design criteria for barrier removal projects. The sub-committee also discussed the level of design necessary to initiate consultation.

California Coho Recovery Strategy

The 5C program manager was appointed to the CA Coho Recovery Team in November 2002. The 21 person team assisted the Fish and Game Department in the development of a recovery strategy as required under the CA Endangered

Other Advisory or Strategic Committees

Five Counties staff has served, and continues to serve on various state level strategic committees related to salmonid and natural resources conservation including:

- CA Bio-Diversity Council, Watershed Working Group Working Group
- CA Resources Agency Forestland Incentive Task Force
- Watershed Management Council's "California Watershed Management Forum"
- CA Forest Stewardship Council
- ACWA Pacific Salmonid Recovery Funding Committee
- CA Association of Resource Conservation Districts Forest and Fuels Committee
- South Fork Trinity River Coordinated Resource Management Planning Committee

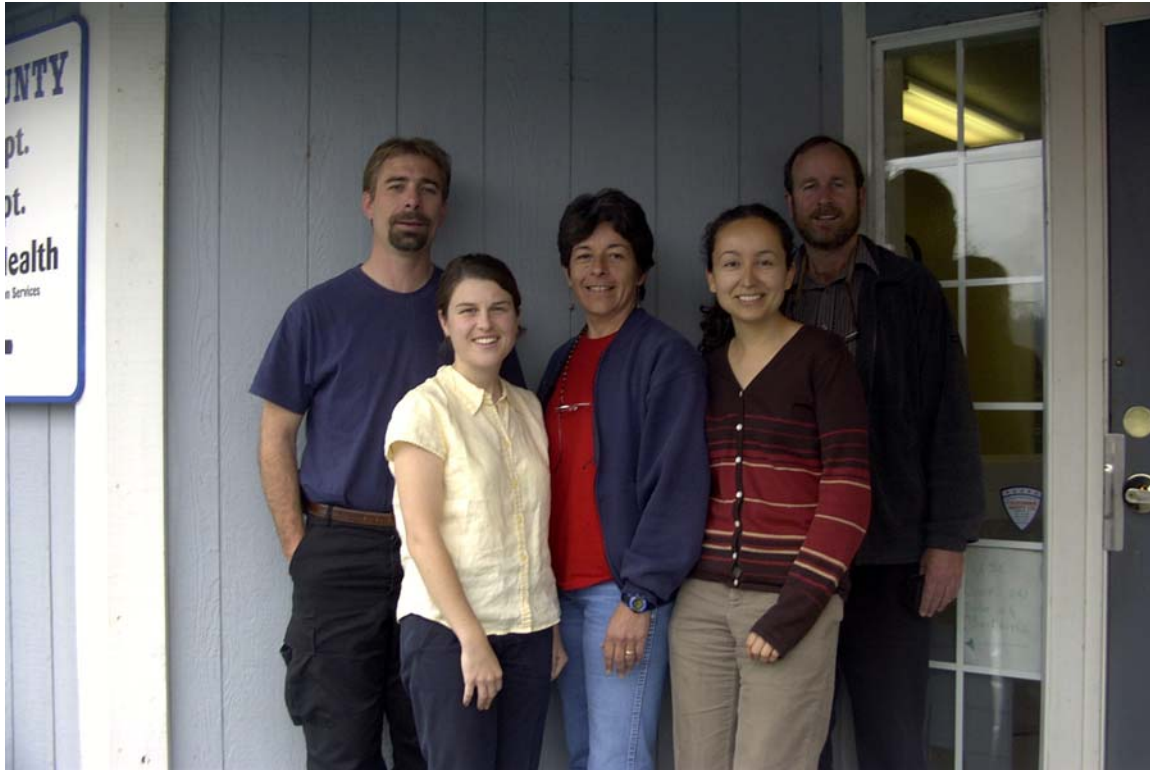


Figure 5: Five Counties staff members

Permit Facilitation

The 5C staff has served as facilitator or “ombudsman” for the counties in interactions with CDFG, NOAA Fisheries, Forest Service, NCRWQCB, Army Corp of Engineers and other agencies regarding passage design criteria, project permitting, urging permit review prioritization, project implementation, monitoring, surveying of private lands outside county road right-of-ways, endangered species act issues, and funding issues. Examples of projects which required staff services included streamlining permit/consultation review through NOAA and Army Corp of Engineers at Jordan, Peacock, and Mynot Creek barrier removal projects in Del Norte County; working with Siskiyou County, Forest Service, and others regarding the feasibility of completing the Kelly Gulch barrier removal project; working with NOAA Fisheries and landowners regarding re-introducing listed species in Oregon Gulch in Trinity County; addressing conflicting water quality clean up and wetland restoration plans within the Trinity Alps Industrial Park wetlands construction project. Individual counties utilize 5C staff to help with design, cost, and permitting issues on a “one-on-one” basis as needed.

Between 1999-2003, the 5C staff has served as facilitator or ombudsman regarding project permitting, design, implementation, and funding issues. This activity included numerous meetings and other outreach. Individual counties utilize 5C staff with design, cost and permitting issues on a “one-on-one” basis as needed.

Weaver Creek Conservation Easement and Habitat Restoration Project

Between 2001 and 2003, the 5C staff facilitated a conservation easement on 50 acres of existing riparian and wetlands habitat along Lance Gulch and Weaver Creek (an anadromous salmonid stream). The easement, from Trinity County to the U.S. Fish and Wildlife Service, also encompassed development rights on six acres of industrially zoned lands contiguous to these wetland habitats.

A USDA Natural Resources Conservation Service, Wetlands Enhancement Program grant was developed, concurrent with the easement, to restore wetlands on four of the 6 acres of undeveloped industrial lands. The restoration project will be completed in 2004, enhancing stormwater retention, sediment storage and wetland habitat beneficial to salmonid habitat.

Figure Set 6: Existing wetlands (left) and areas to be restored to wetland habitat in 2004(right).



PUBLIC OUTREACH

5C Product Information Distribution

The NOAA funding contributed to the distribution of the following 5C products:

- University of California Cooperative Extension's "Effects Of County Land Use Regulations And Management On Anadromous Salmonids And Their Habitats: Humboldt, Del Norte, Mendocino, Siskiyou And Trinity Counties, California"
- Water Quality and Stream Habitat Protection Manual for County Road Maintenance in Northwestern California Watersheds
- County Roads Migration Barrier Inventory reports for all five counties
- Direct Inventory of Roads and Treatments (DIRT) software
- Five Counties Road Erosion Inventory Final Reports for all five counties
- Prioritized list of Five County Roads migration barriers
- GPS/GIS data layers
- Other program products

Product Transfers

The NOAA grant supported 5C outreach to the individual member counties in implementing programs and products. In addition, 5C products served as models for others. For example, the UCCE assessment was the model for other conservation strategies. The model was used by UCCE and CDF to assess development impacts on oak woodlands of the Sacramento Valley. The migration barrier inventories, methodologies and protocols developed during the 5C inventories have been utilized throughout the coho range in California. The DIRT methodology was adopted by Mendocino County to complete its sediment inventory in portions of the Russian River watershed. The 5C migration barrier data was provided to the California Coastal Conservancy for utilization in its “Assessment of Barriers to Fish Passage in California Coastal Watersheds (2003).

Public and Media Outreach

In addition to product transfer efforts, 5C staff attended, participated in or presented information to over 70 meetings, workshops or forums (Appendix A). Media coverage was done in order to reach a larger public audience and decision makers about effective salmon conservation strategies. Media outreach included print, TV, radio, and video outlets.

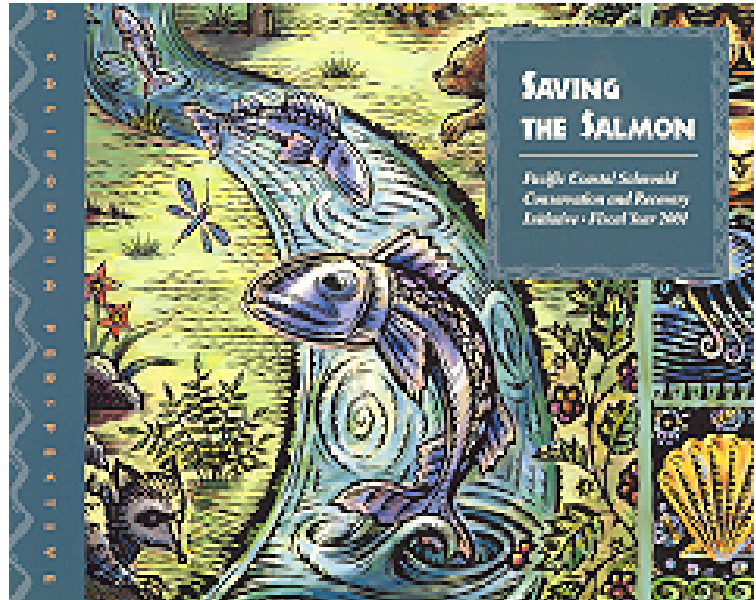


Figure Set 7: A video documentary of barrier removal projects was made (left) for the state and California salmon conservation efforts were showcased in brochures and other educational packets (right).

Shared Resources

The 5C staff established a resource sharing program among the counties. The program reduced costs, avoided construction delays, minimized duplicate resources and provided staff between counties. These resources are described below:

Bridges

The counties and 5C staff recognized that the limited number of temporary bridges in the counties could delay implementation of migration barrier removal projects. In addition, the public has expressed concern over road closures associated with barrier removal projects. Public opposition to road closures prevented one project from being constructed, and was an issue for several others. Unfortunately, rental costs for a bridge can add significant costs to projects.

In 2001, NOAA Fisheries worked with the 5C staff to determine the feasibility of transferring flatcar bridges from US DOT to the counties. While that effort proved unsuccessful, Humboldt County PWD loaned Del Norte County Community Development Department (DNCCD) a temporary bridge in 2003 so that it could complete three barrier removal projects. In 2003, 5C staff, working with the Trinity River Restoration Program (TRRP) facilitated an MOU between the TRRP and Trinity County for the transfer of four railcars to use in 5C restoration projects. The bridges will be removed from the Trinity River floodplain in 2004 as part of the restoration of higher winter flows below Lewiston Lake.



be made available to the 5C program for restoration projects.

Professional and Technical Resource Sharing

The 5C has successfully instituted professional and technical sharing among the counties. In particular, the Mendocino Water Agency has provided hydrologist Dennis Slota to assist the 5C in aspects of the program while Mendocino County Department of Transportation provided staff time to revise and improve DIRT software, prepared Low Impact to Hydrology road design standards and provided baffle designs as a template for Trinity's Deadwood Creek project. Humboldt County Public Works Department (HCPWD) provided engineering staff time to demonstrate hydraulic calculations for barrier crossings as well as assisting with barrier design information. Del Norte County engineering staff provided drawings and design assistance with other programs participants. Beginning in 2003, Trinity County and 5C staff provided HCPWD with a two person survey crew to complete cross section and thalweg profiles of migration barrier removal projects planned for construction in 2004 and 2005. Engineering staff, in all five counties have provided barrier design and other engineering information to a wide variety of interested agencies, consultants and others.

Grading Ordinances

The 5C program, through its NOAA support provided \$5,000 to HCPWD to complete its grading ordinance. That ordinance was adopted in 2003. In addition, the Trinity County's administrative ordinance, based on a certification and BMP model, was developed using NOAA support. The draft ordinance internal review and design modification is on-going. The public draft will be available for review in 2004. The 5C also provided model templates of the Trinity draft and technical information to the Mendocino County Planning Department during the development of their ordinance. The Mendocino ordinance has been reviewed by the county's Planning Commission and is awaiting action by the Board of Supervisors.

Grant Development and Support

The NOAA funding contributed to the 5C staff development of 38 grant proposals (31 funded) totaling approximately \$4.5 million for the following:

5 Counties Conservation Program operations (all counties)

Migration Barrier Removal Projects- West Weaver Creek, Little East Fork Canyon Creek, Soldier Creek, Deadwood Creek, Oregon Gulch (all in Trinity County), Kelly Gulch (Siskiyou)

Sediment Reduction Projects- Redwood Creek and Salmon Creek (Humboldt), Ten Mile and Big River (Mendocino), Holiday Mine Road (Del Norte), Deadwood Road, Lewiston Turnpike Road, Big Creek Road, China Gulch Road, Dutch Creek Road, Fountain Ranch Road, Lower South Fork and South Fork Roads³ (Trinity)

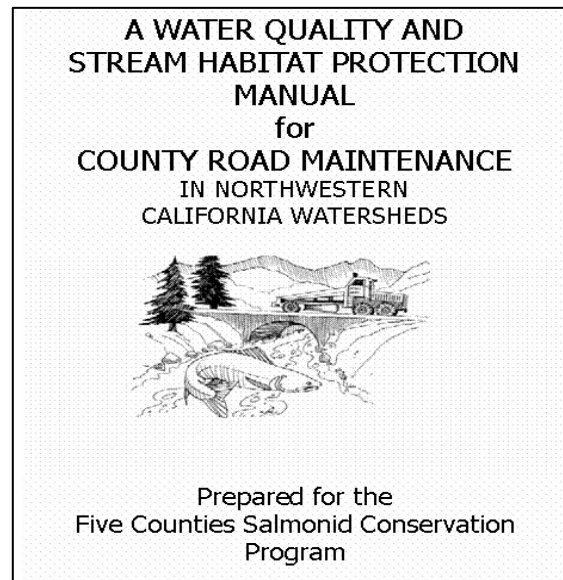
Conservation Easement and Wetlands Restoration Project- Trinity Alps Industrial Park Wetlands Project (Trinity)

Five Counties Road Erosion Inventories- (Del Norte, Humboldt, Mendocino and Trinity Counties)

ROADS MAINTENANCE MANUAL

The roads maintenance manual, known as “A Water Quality and Stream Habitat Protection Manual for County Road Maintenance in Northwestern California Watersheds (5C and Sommarstrom and Associates (2002))” was completed in 2002. The CEQA analysis was completed in 2003⁴ and the manual was formally adopted by resolution by Del Norte and Trinity Counties. The Manual is being implemented in all counties with adoption in the remaining counties planned for 2004.

NEPA analysis and an Environmental Assessment (EA) for incidental take coverage under Section 4(d) of the Federal Endangered Species Act, is in progress.



³ The Trinity County Board of Supervisors authorized approximately \$600,000 per year from its allocation under the Secure Rural Schools and Community Self-Determination Act of 2000 (PL 106-393) to be used for road and watershed restoration projects. The 5C submitted proposals for each of the roads listed above.

⁴ A CEQA initial study and Decision Memo were completed and the manual was determined to be Statutory and/or Categorical Exempt under CEQA, excepting some specific actions as discussed in the decision memo. The manual is also addressed in the draft CA Department of Fish and Game's Coho Recovery Strategy which contains the following recommendation:

“Recommendation 30-E-2 Incorporate the FishNet 4C and Five County adopted Roads Operations and Maintenance Guidelines within incidental take authorizations under CESA [CA Endangered Species Act] and as part of the Coho Recovery Plan.”

Manual Implementation

The Counties have been implementing portions of the manual since 2000. With the completion in 2002 the Counties began implementation of additional best management practices (BMPs) as follows:

Training- The 5C program conducts annual salmon, water quality, and roads workshops for all five Counties; regular training of department crews on manual BMPs (NOAA funded task). Implement annual manual training of all crews in Mendocino and Del Norte Counties beginning in 2003. Purchase and distribute water quality and maintenance videos and educational materials throughout the five Counties. BMP 11-A



Outsloping- Conduct road maintenance and grading practices to reduce sediment delivery to streams on low use native or rock surfaced roads, including out-slope road segments and other improvements (Del Norte, Mendocino and Trinity Counties). BMP 3-A-1.5, 3-A-1.9, 3-A-1.10, 3-A-2.3 & 2.4. More than 50 MCDOT employees attended a training on the manual.

Sidecasting- Reduce sidecasting when the bladed material can enter the stream directly or indirectly as sediment. All five Counties have made efforts to eliminate side casting and are end-hauling excess materials to spoils locations where sediment could be delivered to streams. BMP # 3-A-1.1:

Oil Containment- Purchase and use of vacuum sweep street cleaners in lieu of broom sweeps in all counties. In 2003, Del Norte County purchased a vacuum sweep machine, replacing brush sweeping, based on the maintenance manual BMP 6-A (various), 7-A-1.4, 9-B-1.

Surfacing- Purchase of asphalt-grinder (Del Norte) and lease (Siskiyou) to recycle old asphalt and incorporate it into native surface road base to reduce road surface erosion. BMP 5-B-1.4

Asphalt Recycling- Placement of recycled asphalt (AC) grindings from Cal-Trans to county roads (Humboldt, Trinity) in 2003. Prior to placement of grindings the road consisted of a combination of native and rock surfaces. BMP 5-B-1.4

Asphalt Recycling- Placement of recycled AC grindings from county road repaving to other county roads, trails, etc (Del Norte and Siskiyou). BMP 5-B-1.4

Water Drafting- Obtained funding to design and construct the first off stream, “trickle” fill, water storage tank to be used in lieu of in-stream drafting in Trinity County. The project is on National Forest land and will benefit both County road maintenance and Forest Service fire fighting needs while protecting flows in Big Creek drainage in the South Fork Trinity River watershed. BMP 3-B-3.2

Water Drafting- Utilize water drafting screens consistent with NOAA water drafting criteria. In 2003, Mendocino County Transportation Department purchased and supplied the screens to all maintenance crews as well as providing training. BMP 3-B-3.4

Oil Containment- Install oil absorbent materials downstream of in-water work sites to trap accidental spills or leaks into streams from equipment. Keep a Notification Checklist for hazardous spills on site and use if spill into stream occurs. BMP 4-D-9

Oil Spill Kits- Purchase spill clean-up/emergency response kits and locating of them on-site at all projects (Siskiyou, Del Norte, Mendocino and Trinity). Humboldt has spill kits in stock for emergency response. BMP 8-C-4(b).

DIRECT INVENTORY TO ROADS AND TREATMENTS (DIRT)

Between 2000 –2003 the 5C, Pacific Watershed Associates, Mendocino Water Agency and MCDOT developed a Microsoft Access based road erosion inventory database known as “Direct Inventory of Roads and Treatments (DIRT)”. The software has allowed for the management of over 1,000,000,909 data from 134,456.3 sites. The software not only allows for rapid data input, but provides data checks, sorts, and prioritization. The DIRT software has been demonstrated and distributed to interested entities.



Figure 9: Recycled AC grindings on Dutch Creek Rd (Trinity County)

LOW IMPACT HYDROLOGIC ROAD DESIGN

In 2003, the Mendocino County Department of Transportation (MCDOT) and 5C completed a road design standard for out-sloped roads. Prior to now, all county road standards required an in-board ditch. The “Low Impact to Hydrology” (LITH) Road Design Standard, establishes outslope configuration with rolling and critical dip criteria consistent with American Associate of State Highway Transportation Officials criteria (Appendix D). This was a NOAA funded product.



Figure Set 10: Left- LITH road with rolling dip and outslope drainage. Right- Same road prior to modification with in board ditch and in-slope configuration.

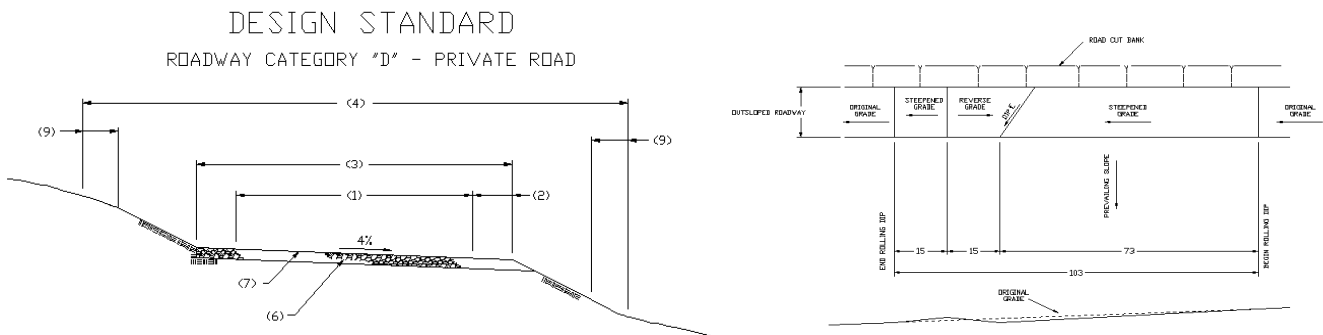


Figure 11: 5C's Low Impact to Road Hydrology (LITH) design standard drawings consistent with AASHTO Low Volume Road Standards. Left- outslope road segment and right, rolling dip segment.

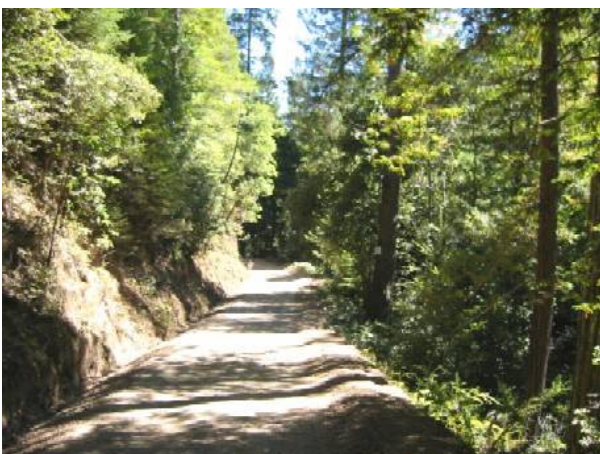


Figure 12: Ten Mile Road in Mendocino County changed from an in-slope (left) to an outslope design (right)

DIRT SEDIMENT REDUCTION PROJECTS

Mendocino and Trinity Counties have implemented six sediment reduction projects on county roads in 2002-03. These projects treated approximately 1,050,089,934,347.234 cubic yards of potential sediment. Treatments consisted of outsloping, rolling and critical dip placement, installation of additional ditch relief culverts, sub-grade treatments with PermaZyme and rocking or surfacing with recycled asphalt. Trinity County has begun implementing two additional projects in 2003, which will be completed in 2004. The NOAA award contributed to developing other funding sources for these projects.



Figure Set 13: Mendocino County project site with in-board ditch and native road surface (above left). Above right, same location after out-sloping, rocking with PermaZyme treatment.

Lower left, pre-project site with ditch diversion down native surface road. Lower right, same location after out-sloping, ditch removal and rock surfacing (Trinity County).



MIGRATION BARRIER IMPLEMENTATION

Between 2000-2003, the 5C program implemented and supported barrier removal projects throughout the five county area. During that period, over 100 miles of habitat have been made accessible. NOAA supported 5C contributions have included assisting counties with permit and design concerns, interacting with agencies, assisting with grant development, public outreach, assisting with environmental documentation and other aspects of restoration work.

Figure Set 14: Clarks Creek, Del Norte County, migration barrier. Upper left pre-project barrier looking downstream and same location after barrier removal (upper right). Returning coho at project site in 2003 (below).



SALMON AND WATER QUALITY WORKSHOPS



The NOAA award provided valuable training workshops in 1999, 2000 and 2001 for County Public Works staff, policy makers, county planners, local, state and federal agencies, planners and scientists other researchers. These workshops update participants on issues that affect watershed management and restoration. Sessions covered areas such as policy, permitting, and innovative restoration techniques. Demonstrations were also conducted in the field.



APPENDIX "A": DISTRIBUTION OF PROGRAM INFORMATION

Date	Organization	Type of 5C Information Provided
7/22	American Rivers	Migration barrier removal project information
7/23	Coastal Conservancy	Migration barrier removal project information
8/1	SWRCB	Training information and migration barrier removal project pictures
8/27	CDF	Migration barrier removal project information & DIRT databases
9/19	Humboldt County Resource Conservation District	UCCE, road manual table of contents, sediment reduction projects summary
9/19	NCRWQCB	DIRT information
10/22	Department of Water Resources	Mendocino & Trinity Counties migration barrier removal project information
11/6	Alliance for Sustainable Jobs and the Environment	DIRT information and migration barrier removal project information
11/6	Dept of Water Resources	Migration barrier removal project information
11/6	National Marine Fisheries Laboratory	DIRT & migration barrier removal project information
11/7	Trinity County Resource Conservation District	Road manual BMPs only (for local grading ordinance development)
11/7	Dept of Water Resources	Del Norte & Humboldt Counties migration barrier removal project information
12/12	NMFS/NOAA - Santa Rosa	Migration barrier removal project information
12/12	Dept of Water Resources	Migration barrier removal project information
1/14	Winzler and Kelly, private firm	Trinity County Migration Barrier Report and Data
1/14	CA Resources Agency	Migration barrier removal project information
1/30	Humboldt Co Public Works	Coastal DIRT report & data
1/30	Redwood National Park	Coastal DIRT report & data
2/7	CA Coastal Conservancy	Migration barrier removal project information
2/10	Stephen Rae, RPF	Humboldt County Barrier Report and Five Counties Matrix; DIRT
2/18	CA Coastal Conservancy	Trinity County Migration Barrier Information
2/24	Forest & Rangeland Assessment Program - CDF	DIRT graphs and general data
3/12	NOAA Fisheries	Migration barrier removal reports
3/12	Redwood National Park	Humboldt County v1.3 DIRT
4/9	CDFG	DIRT survey area map
4/21/2003	Kris Web	All DIRT data and supplemental
5/6/2003	Del Norte Community Development Dept	Merged DN/Humb DIRT v1.4&1.5
6/13/2003	USBR	5C letter to D Schleusner regarding use of Trinity River bridges
6/27/2003	Santa Barbara County Water Agency	2003 roads workshop binder
7/8/2003	Coastal Conservancy	Signed 5C MOU
7/10/2003	CalTrout	5C Barrier Reports
8/15/2003	CDFG	5C gen program description
8/29/2003	CDFG	5C status report - program description
9/15/2003	Watershed Research & Training Center	5C project cost info
10/15/2003	Forest Community Research	5C cost info, barrier list & select reports, DIRT reports, sediment reduction project costs, general 5C info

APPENDIX B: PROGRAM INFORMATION, PUBLIC PARTICIPATION, EDUCATION AND OUTREACH

- Participated CA Resources Agency Fish Passage Committee, Arcata, CA (1/19/00)
- Presentation to the Southwest Oregon Resource Conservation and Development Council, Gold Beach OR (1/21/00)
- Participated Watershed Working Group, Sacramento, CA (1/28/00)
- Participated CA Resources Agency Forestland Incentive Task Force, Sacramento, CA (2/1/00)
- Participated in the multi-series “California Watershed Management Forum” sponsored by the Watershed Management Council, Davis, CA (2/2/00)
- Presented Five Counties Program to Central Valley Salmon and Steelhead Advisory Committee, Red Bluff, CA (2/8/00)
- NMFS/Resources MOU meeting, Sacramento, CA (2/17/00)
- CA Bio-diversity Council Watershed Work Group, Redding, CA (2/25/00)
- Presented Five Counties Program to ACWA Pacific Salmonid Recovery Funding meeting, Sacramento, CA (3/16/00)
- Presented Five Counties Program to Eel-Russian River Commission, Ukiah, CA (3/17/00)
- Participated in Resources Agency Fish Passage Committee, Eureka, CA (3/23/00)
- Participated on Interview Panel, Humboldt County Environmental Specialist, Eureka, CA (3/27/00)
- Participated CA Resources Agency Fish Passage Committee, Arcata, CA (3/23/00)
- Five Counties Presentation, Siskiyou Board of Supervisors, Yreka, CA (4/17/00)
- Roads Erosion Inventory Protocol Development, Eureka, CA (4/20-4/21/00)
- Participated in CA Resources Agency Permit Streamlining Meeting, Sacramento, CA (5/23/00)
- Participated in CA Resources Agency Fish Passage Committee Meeting, Santa Rosa, CA (5/25/00)
- Participated CA Bio-diversity Council, Watershed Working Group, Los Angeles, CA (6/6/00)
- Participated in USFWS Open House for Resource Managers, Arcata CA (7/19/00)
- Participated CA Resources Agency Fish Passage Committee, Santa Rosa, CA (7/20/00)
- Attended NMFS 4D & Recovery Workshop, Eugene, OR (11/2/00)
- Conducted Roads Manual Meeting of Road Depts., Weaverville, CA (11/15/00)
- Presentation of Five Counties Program to South Fork Trinity River Coordinated Resource Management Plan, Weaverville, CA (11/30/00)
- Participated FishNet 4C meeting to present UCCE results of Central Coastal Counties, San Mateo, CA (12/20/00)
- Participated CA Bio-diversity Council, Watershed Working Group. Sacramento, CA (1/19/01)
- Facilitated and coordinated meeting of counties on the development and review of the “County Roads Maintenance Manual for Northwestern California Watersheds”. Mt Shasta (1/31/01)
- Participated in Counties and Water Agencies meetings regarding funding needs for salmonid recovery and provided project documentation/photo logs to convey the types of migration barrier removal work completed in 2000. Sacramento CA (2/8/01 and 3/29/01)
- Participated CA Resources Agency Fish Passage Committee, Ukiah, CA (2/21/01)
- Attended NMFS Public Meeting. Eureka CA (2/22/01)
- Presented Five Counties Program update to the Mendocino County Board of Supervisors and Planning Commission. Ukiah, CA (3/15/01)
- Attend Proposition 13 workshop of the SWRCB and the NCRWQCB. Eureka, CA (4/5/01)
- Participated CA Resources Agency Fish Passage Committee. Sacramento, CA (4/25/01)

- Presented Five Counties Program review at the Klamath River Symposium. Arcata, CA (5/24/01)
- Presentation of Five Counties Program to South Fork Trinity River CRMP, Weaverville, CA (5/31/01)
- Participated in Trinity County RCD Streambank Workshop. Weaverville, CA (6/9/01)
- Conducted multi-agency meeting on “County Roads Maintenance Manual for Northwest California Watersheds. A Water Quality and Stream Protection Guide”. Santa Rosa, CA (6/12/01)
- Presented Five Counties Program update to the Trinity County Planning Commission. Weaverville, CA (6/14/01)
- Presented Five Counties Program update to the Rivers Conference. Fortuna, CA (6/16/01)
- Presented Lance Gulch Watershed Restoration Program easement and management plan to Trinity County Board of Supervisors for adoption. Weaverville, CA (7/3/01)
- Presented update of Five Counties Program to Humboldt County Board of Supervisors. Eureka, CA (7/10/01)
- Met with Fish and Game staff regarding improving public awareness of state and local salmon conservation programs. Sacramento, CA (7/18/01)
- Participated CA Resources Agency Fish Passage Forum, Sacramento, CA (7/19/01)
- Conducted meeting on County Roads Maintenance Manual for Northwest California Watersheds with NMFS, CDF&G and NCRWQCB staffs and consultants. Eureka, CA (7/25/01)
- Conducted outreach with Sierra Pacific Ind. foresters regarding opportunities to coordinate road treatments and rock pit use. Weaverville, Ca (7/26/01)
- Presented Five Counties Program at Salmon Restoration Federation sponsored trainings. Quincy, CA (9/13/01).
- Presented Five Counties Program information on fish passage at For Sake of Salmon Fish Passage Forum. Fortuna, CA (10/4/01)
- Project and program coordination with Mendocino County Department of Transportation and Mendocino Water Agency. Ukiah, CA (10/12/01)
- Attended EPA Trinity River TMDL Technical Workshop. Weaverville, CA (11/6/01)
- Participated CA Resources Agency Fish Passage Forum, Santa Rosa, CA (12/7/01)
- Conducted program meeting with HPWD, MWA, and TCPD-NR staff. Eureka, CA (12/10/01).
- Presented County Roads Maintenance Manual for Northwest California Watersheds and Five Counties Program overview to North Coast Regional Water Quality Control Board staff. Santa Rosa, CA (12/12/01)
- Presented DIRT inventory & roads maintenance manual to South Fork Coordinated Resource and Management Program, Weaverville, CA (1/31/02))
- Participated in Fish Passage Forum (FPF) meetings, Sacramento, CA (5/14-15/02)
- Participated in FPF Engineering subcommittee meeting, Vallejo, CA (6/11/02).
- Presented program strategies at FishNet 4C Conference, San Francisco, CA 5/16-5/17/02.
- Presented West Weaver migration barrier removal project to local and regional organizations and congressional staff members, Weaverville, CA (8/16/02)
- Participated in a Fish Passage Forum (FPF) meeting, Santa Rosa, CA 9/24/02)
- Presented program to AmeriCorps Watershed Steward Project, Hyampom, CA 10/2/02
- Staffed booth on program at the 4th Annual Salmon Festival, Weaverville. (10/5/02)
- Presentation to California Licensed Foresters Association at their Anadromous Salmonids Conference, Redding, CA 11/1/02.

- Participated in CA Coho Recovery Team meeting, Davis, CA from 12/4/02- 11/30/03
- Presented at Pacific Coastal Salmon Recovery Fund II Workshop, Portland, OR (12/12-13/02)
- Presented the Five Counties program to Trinity River Restoration Program (TRRP) 1/13/03)
- Presented 5C program to new Trinity County Board of Supervisor Howard Freeman, Weaverville, CA (1/17/03)
- Participated in a Fish Passage Forum (FPF) meeting, Marin, CA (2/11/03)
- Participated in South Fork Trinity River CRMP meeting, Weaverville, CA (2/13/03)
- Dennis Slota of Mendocino County Water Agency presented the 5C migration barrier inventory, implementation, and prioritization program at the Salmonid Restoration Federation (SRF) Conference, San Luis Obispo, CA (3/26/03)
- Combined meeting of Counties engineering staffs and the engineering sub-committee of the Fish Passage Forum, Willits, CA (5/1/03)
- Presented DIRT at the SRF Conference, San Luis Obispo, CA (3/29/03).
- Presented West Weaver Creek migration barrier removal project to local and regional organizations and congressional staff members, Weaverville, CA 8/16/03)

The 5C has distributed DIRT software, Roads Maintenance Manual, migration barrier data and other program information or products to the following:

Federal Agencies- NOAA Santa Rosa office; National Marine Fisheries Laboratory, Santa Cruz; U.S. Bureau of Reclamation-Trinity River Restoration Program; Redwood National Park;

State Agencies- CA Resources Agency; State Water Resources Control Board; CA Department of Water Resources; CA Forest & Rangeland Assessment Program – CDF; CA Department of Fish and Game; CA Coastal Conservancy; CA Department of Transportation; North Coast Regional Water Quality Control Board;

Local Agencies- City of Arcata; Clackamas County, OR Department of Transportation; Curry County Road Dept.; Del Norte County Community Development Department; Humboldt County Public Works Department; Humboldt County Resource Conservation District; Mendocino County Department of Transportation; Mendocino County Water Agency; Monterey County Watershed Information Exchange; Napa County Department of Public Works; Napa Valley Flood Control District; Santa Barbara County Water Agency; Siskiyou County Department of Public Works; Trinity County Department of Transportation; Trinity County Resource Conservation District;

Organizations - Alliance for Sustainable Jobs and the Environment; American Rivers; CalTrout; FishNet 4C; Forest Community Research; Heal the Bay; Klamath Resource Information System; Mattole River Watershed Alliance; Northern CA Tri-Regional Civil Engineers AC; Noyo Watershed Alliance; Watershed Research & Training Center;

Companies, and Consultants- Fruit Growers Supply Co.; Jones & Stokes Assoc.; Norm Braithwaite; Oscar Larson & Assoc.; Stephen Rae, RPF; Taber Consultants; Timber Products; Winzler and Kelly Consulting

The 5C, along with the Mendocino County Department of Transportation (MCDOT), hosted a dedication ceremony for two sediment reduction projects (Fort Bragg Sherwood Rd and Ten Mile Road) at Ten Mile Road in Point Arena on April 28th, just prior to the roads workshop. These projects are among the first where the MCDOT focused on implementing treatments such as outsloping and installation of rolling dips (best management practices all specified in the roads maintenance manual). Refer to Attachment C for documentation of media coverage for the event.

6. Despite not having received a grant proposal to obtain an asphalt grinder, Del Norte County purchased one in April 2003. The grinder will convert asphalt construction waste materials into road base and trail base for roads with surface erosion. This practice will implement BMP 5-B-1.4 of the Roads Maintenance Manual. During the April conference call and the Roads workshop, Del Norte and Siskiyou Counties discussed arrangements to share the use of the equipment. The other counties are considering similar opportunities.

Appendix “C” Final Migration Barrier Prioritization List

Refer to the Following Link:

http://www.5counties.org/PDF_Files/2008%20Barrier%20Ranking%20Matrix.pdf