319(h) & Timber Program - BUDGET SUMMARY

Applicant: Northwest CA Resource Conservation & Development Council

Project: Sugar Creek Road Sediment Treatment Project # 41792

FAAST PIN: 41792

	Requested Grant Funds	Match Funds	Budget Summary Total (Grant + Match)	Percentage of Local Match	Other Funding	Project Total
1. Personnel Services	**$57,479**	**$0**	**$57,479**	**0.00%**	**$0**	**$57,479**
Project Agreement Management	$18,849		$18,849			$18,849
Design, Site Review, & Layout	$490		$490			$490
Permitting	$120		$120			$120
Final Staking & Photo Point Establishment	$540		$540			$540
Mobilization	$0		$0			$0
Construction	$20,750		$20,750			$20,750
Post Construction Photo Monitoring	$4,720		$4,720			$4,720
Outreach	$10,050		$10,050			$10,050
Final Report	$1,960		$1,960			$1,960
2. Operating Expenses	**$14,842**	**$0**	**$14,842**	**0.00%**	**$0**	**$14,842**
Project Agreement Management	$0		$0			$0
Design, Site Review, & Layout	$333		$333			$333
Permitting	$10,387		$10,387			$10,387
Final Staking & Photo Point Establishment	$75		$75			$75
Mobilization	$0		$0			$0
Construction	$3,456		$3,456			$3,456
Post Construction Photo Monitoring	$259		$259			$259
Outreach	$333		$333			$333
Final Report	$0		$0			$0
3. Professional/Consulting Services	**$225,935**	**$9,363**	**$235,298**	**2.23%**	**$0**	**$235,298**
Project Agreement Management	$22,428		$22,428			$22,428
Design, Site Review, & Layout	$10,934	$368	$11,303			$11,303
Permitting	$2,367		$2,367			$2,367
Final Staking & Photo Point Establishment	$1,176	$92	$1,268			$1,268
Mobilization	$8,112	$184	$8,297			$8,297
Construction	$168,694	$1,658	$170,352			$170,352
Post Construction Photo Monitoring	$5,608	$3,576	$9,184			$9,184
Outreach	$5,620	$3,484	$9,104			$9,104
Final Report	$996		$996			$996
4. Construction	**$93,735**	**$0**	**$93,735**	**0.00%**	**$0**	**$93,735**
Project Agreement Management	$0		$0			$0
Design, Site Review, & Layout	$0		$0			$0
Permitting	$0		$0			$0
Final Staking & Photo Point Establishment	$0		$0			$0
Mobilization	$0		$0			$0
Construction	$93,735		$93,735			$93,735
Post Construction Photo Monitoring	$0		$0			$0
Outreach	$0		$0			$0
Final Report	$0		$0			$0
5. Indirect Costs	**$18,169**	**$936**	**$19,106**	**0.22%**	**$0**	**$19,106**
Indirect on MTDC Personnel & 25k Subcontractor	$7,312	$936	$8,248			$8,248
Indirect on MTDC Operating	$10,858	$0	$10,858			$10,858
			$0			$0
6. Equipment Over $5,000 (if applicable)	**$0**	**$0**	**$0**	**0.00%**	**$0**	**$0**
			$0			$0
			$0			$0
			$0			$0
			$0			$0
			$0			$0
Other Funding Sources:						
Grand Totals:	**$410,161**	**$10,299**	**$420,460**	**2%**	**$0**	**$420,460**

Note: CHECK YOUR NUMBERS! Do NOT assume this Excel spreadsheet is correct. Please refer to the READ ME tab.

Does the Budget Summary Total (Grant Funds + Match Funds) match the Budget Details Total? YES

MEMORANDUM OF AGREEMENT
BETWEEN THE COUNTIES OF TRINITY, DEL NORTE, HUMBOLDT, MENDOCINO, SISKIYOU, AND THE NORTHWEST CALIFORNIA RESOURCE CONSERVATION & DEVELOPMENT COUNCIL

This Memorandum of Agreement (MOA) is made and entered into between the Counties of Del Norte, Humboldt, Mendocino, Siskiyou, and Trinity, political subdivisions of the State of California (Counties) and the Northwest California Resource Conservation & Development Council (Council), a California 501(c)(3) Non-Profit Corporation.

WHEREAS, the Coho salmon, Chinook salmon, and Steelhead have been listed under the California and Federal Endangered Species Acts throughout Del Norte, Humboldt, Mendocino, Siskiyou and Trinity Counties, and

WHEREAS, a significant portion of the habitat and the most abundant stocks for Chinook, Coho and Steelhead within California are within these five counties; and

WHEREAS, these rivers and watersheds cross county boundaries and require a concerted and coordinated effort to assure a balanced protection and restoration effort capable of assuring a more certain environmental and economic future for these Counties; and

WHEREAS, there are numerous policies and practices within the five Counties that affect salmonid populations as outlined in a 1998 assessment completed by the University of California Cooperative Extension (UCCE); the assessment identifies many opportunities to enhance county policies and practices for the purposes of salmonid conservation and restoration with benefits to county infrastructure; and

WHEREAS, the Counties have worked towards maintaining and restoring salmonid habitat while striving to assure economic stability within each County as the Five Counties Salmonid Conservation Program (5C) since 1999 by successfully implementing numerous conservation actions and strategies based on the UCCE Assessment; and

WHEREAS, the scope of the 5C work encompasses all of the watersheds in the Five Counties excepting the Russian and Sacramento River watersheds; and

WHEREAS, nearly all waters within the counties have been designated as water quality impaired due to sediment and/or temperature; there is a strong, widely recognized link between anadromous salmonid habitat and water quality; and

WHEREAS, the Five Counties and their residents will have the most direct environmental, economic, and social benefits to and impacts from the protection and restoration of the aforementioned species and improvement of water quality; and

WHEREAS, the County of Trinity (Trinity County) has been the legal, fiscal and administrative entity for 5C programs, grants, personnel and all other fiscal and legal matters since 1998 and beginning on the effective date of a memorandum of Agreement between Trinity County and the Council, those functions will be assumed by the Council; and

WHEREAS, the Counties and Council wish to replace all previously adopted MOA's, MOU's and Resolutions with this Agreement.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF SUPERVISORS OF DEL NORTE, HUMBOLDT, MENDOCINO, SISKIYOU, AND TRINITY COUNTIES AND THE NORTHWEST CALIFORNIA RESOURCE CONSERVATION & DEVELOPMENT COUNCIL THAT THE ORGANIZATION KNOWN AND DENOMINATED AS THE FIVE COUNTIES SALMONID CONSERVATION PROGRAM (5C) IS HEREBY REAFFIRMEND, AS SET FORTH BELOW.

Section 1. Transfer of 5C Program's Fiscal and Administrative Management from Trinity County to the Northwest California Resource Conservation & Development Council

A. The 5C staff and operations shall be transferred from Trinity County to the Northwest California Resource Conservation & Development Council on the effective date of this Agreement. The Council shall manage the 5C Program's fiscal, personnel, and legal obligations consistent with this Agreement.

B. Counties and Council understand that both historic and evolving conservation strategies, goals and objectives shall guide the development of the 5C Program, which will be overseen and directed by the 5C Executive Committee as described in Sections 4 below.

Section 2. Purpose, Goals and Objectives

A. Continue implementation of a 5C Conservation Strategy through the adoption of this MOA, consistent with the following Program Goals:

"To strive to protect the economic and social resources of Northwestern California by providing for the conservation and restoration of salmonid populations to healthy and sustainable levels and to base decisions on watershed rather than County boundaries";

"Develop, utilize and implement incentive and educational conservations strategies to the extent practical and feasible. Work with local, state, and federal agencies and policy makers to assure local government participation in rule making and to effect a greater role for economic incentives and regulatory relief as a result of conservation actions";

"Coordinate county strategies to achieve economically viable runs of anadromous fisheries, economically viable natural resources utilization, and to provide for sustainable growth. This will be done by pooling political and economic resources; seeking funding to implement conservation strategies sharing informational implementing adaptive policies to reflect the current best available information; and maintaining a communication link between the participating Counties";

"Implement the 5C Conservation Strategy based on the work and products already completed and/or in progress and to develop additional work and products through updates of the 5C scope of work"; and

"Integrate the 5C Program's Goals with the Council's "2008-2013 Area Plan" Goals".

B. Continue to provide comments on and/or participate, to the extent possible and in a manner mutually beneficial to all parties involved, in:
1. the proposed listing of candidate species under state and federal Endangered Species Acts as approved by the 5C Executive Committee;

2. the designation of impaired water bodies under the federal Clean Water Act;
3. proposed updates, amendments, and policies related to the Basin Plans as designated in the Porter Cologne Act; and
4. proposed state or federal actions that would regulated activities within the scope of this MOA.

C. Authorize the 5C Staff to prepare and submit grants and/or assist individual Counties and other entities in preparing grant applications to complete work set forth in this MOA. All grant awards and associated contracts that require funding by or from a County must be approved by that County's Board of Supervisors.

D. The 5C Program staff shall coordinate with the appropriate county departments or agencies and provide to the individual Counties technical, administrative and other support services related to the Work Program, as grant funds allow.

Section 3. Conservation Strategies and Plan Elements

In accordance with the 5C Goals and Objectives, the 5C Program has undertaken multiple strategies and projects since its inception through the development of various elements that target different aspects of salmonid restoration and water quality/quantity improvement. The 5C Conservation Strategy has and shall continue to address, but not be limited to, the following:

A. Land Use Element
1. Development of model conservation standards and incentive based tools for discretionary land use projects.
2. Development of model environmental review guidelines to facilitate protection of salmonids and water quality.
3. Working with regulatory agencies to consider non-regulatory alternatives, where practical or feasible, to proposed rules or standards that relate to natural resources, including water quality and salmonids, and may affect discretionary land use development or land use processes.

B. Water Quality Element
1. Working with Counties to develop and recommend operational standards and best management practices to reduce sediment and other pollutants from County routine maintenance activities on County owned and operated roads, grounds and facilities.
2. Working with Counties to develop and recommend incentive techniques, trainings and other tools to assist Counties in meeting state and local required water quality regulations for new development.
3. Working with individual counties in the modification of road designs to provide for reduced maintenance and to minimize adverse effects to water quality while maintain County road standards for safety.
4. Working with individual counties to identify, via erosion inventories completed as part of the 5C work program, roads and facilities that may have the potential to deliver sediment to streams. Working with individual counties to fund and implement modifications of roads and facilities (e.g., stream crossing upgrades, and other treatments designed to reduce sediment) that have been identified in the inventories. This work will be based on data, economic, and managerial considerations and prioritizations. Each County will review the work and consider implementation at its discretion.

C. Water Quantity Element

1. Assisting individual counties and special districts to address water availability, water reuse, reclamation, and conservation methods, including pursuing grants and other opportunities where appropriate.
2. Working with individual counties to develop methods, incentives and techniques to meter increased peak flows from impervious surface areas.
3. Working with individual counties to minimize effects of water withdrawal from streams for roads and land use development.
4. Assisting local organizations and agencies with workshops and dissemination of technical information on non-regulatory methods to reduce impacts to water quality and quantity and reduce or prevent water pollution.

D. Fish Passage Improvement Element

Working with individual counties in the identification and removal of barriers to fish passage associated with County facilities. Minimize non-county projects to those that are related to the 5C Goals and Objectives and which do not extend staff resources beyond their fiscal and staff capacity. Fish passage projects will be based on biological, economic, budgetary and managerial considerations and prioritizations.

E. Habitat Element

1. Identification and recommendation of opportunities for conservation and restoration of riparian and aquatic habitats that would benefit salmonids and/or water quality.
2. Development of model proposals to conserve functioning riparian, wetland and estuary habitats utilizing incentive based approaches.
3. Strengthen noxious and invasive species management, prevention, and eradication efforts while encouraging the establishment of suitable native species.

F. Outreach and Collaboration with Other Stakeholders Element

1. Development and implementation of educational outreach efforts to the public including urban stream programs, community outreach, and other venues to present conservation strategies.
2. Coordination with the public, agencies, and other conservation efforts to facilitate conservation strategies and implement County approved projects consistent with stated 5C goals. Coordinate with these parties on priority non-County projects with similar conservation goals to the extent that staff time and grant resources allow it and it does not interfere with priority County projects.
3. Participation in local, state, or federal forums or recovery processes, to the extent practical and feasible.
4. Assist with aspects of community wildfire protection plans and sustainable forestry management that contribute to protection of water quality and habitat maintenance.

G. Other Actions Needed to Implement Program Elements

1. Implement monitoring and reporting to determine strategy effectiveness, measure outcomes, perform adaptive management of projects, and modify conservation strategies as needed to ensure achievement of 5C goals.
2. Development of resource sharing agreements between counties for specialized equipment, bridges and staff assistance as needed.

Section 4. Operations, Authorities, and Responsibilities of Parties

A. Council agrees to assume the administrative and management functions of the 5C Program from Trinity County and to continue to pursue grants, education, outreach, training, incentive based work products and other tasks of the 5C Program consistent with the terms specified in this Memorandum of Agreement and any subsequent revisions to the Agreement.

B. Council agrees to establish and maintain a 5C Executive Committee to its Board of Directors to guide implementation of the 5C Program. The 5C Executive Committee shall consist of one member of the Board of Supervisors, and/or their designee, from each of the Counties of Del Norte, Humboldt, Mendocino, Siskiyou and Trinity as well as the chairperson, or designee, of the Council. The 5C Executive Committee will guide the Council's 5C Program staff on program activities, grant submittals or approvals.

C. The 5C Program staff shall be employees of the Council and will consist of a Director and other personnel as necessary, based on fiscal plans approved by the 5C Executive Committee and Council. The Council and its staff when working with Counties are independent contractors.

D. 5C Program Director and staff shall develop a 5C Program scope of work for review and approval by the 5C Executive Committee and Council. Individual member Counties shall be responsible for consideration of adoption and/or implementation of specific 5C products, trainings, and coordination of other activities within said County.

E. County resources (in-kind and/or cash) to implement Program activities will be committed by each County at their own discretion excepting that each County shall provide $15,000 in Fiscal Year 2008-09 or other time approved by the Council or its designee. These funds shall be used in part for Program grants which provide resources, implementation, and/or training to the Counties as well as reimburse Trinity County for certain indirect expenses incurred by the 5C Program as specified in Section 11 of Memorandum of Agreement (#08-177) between the County of Trinity and the Northwest California Resource Conservation & Development Council signed and effective 1/12/2009.

F. 5C staff shall implement the approved scope of work through procurement of suitable grants matched to available County resources as outlined in Section 3 of this Agreement. Funding for the work elements necessary to maintain the basic 5C Program elements are secured under 5C "Program Grants" through one or more funding sources. Funding to implement specific, discrete projects such as migration barrier removal, road drainage modification, urban stream renewal, and similar design and construction grants is secured individually and is not part of the Program Grant tasks.

G. Council shall provide 5C staff a detailed summary of costs associated with administering the 5C Program each fiscal year so that the 5C staff may budget and allocate those costs among the Program's grants.

H. This agreement authorizes the Council to reimburse 5C member Counties for costs incurred to implement the 5C scope of work that is within the scope of the Program's grant contracts and eligible for reimbursement. Invoices from the Counties will be consistent with accounting procedures of the Council and grant agencies. All project work will be done to acceptable standards of the 5C Director and grant agencies. Council will reimburse each

member County for eligible expenses within 45 days after Council has received payment from the appropriate grant agencies.

I. This agreement authorizes the 5C member Counties to reimburse the Council for costs incurred to implement 5C work that are identified a reimbursable expenses of County within the scopes of work of grant contracts, provided that invoices from Council are consistent with accounting procedures of the Counties and grant administrators and that all work was done to acceptable standards of the County. Counties will reimburse Council for eligible expenses within 45 days after County has received payment from th appropriate grant agencies.

J. Council and Counties Responsibilities shall include:
1. Provide representation through the 5C Executive Committee (as outlined in "B" above);
2. Provide in-kind resources necessary to complete grant funded projects, committed by each County at their own discretion;
3. Perform work as agreed upon by the individual County and the 5C staff that is included in the scope of work of a Program Grant(s) as described in the appropriate Statement of Work and Budget, consistent with the requirement of the Program Grant(s).
4. Among other factors, consider the modification of existing or draft County policies based on information generated through the 5C's efforts when a change(s) to those policies would help to achieve the stated 5C goals and Conservation Strategy.

K. Nothing in this MOA is intended to grant to the Council, or to any participating County, powers and authorities that they do not otherwise possess under the constitutions, statutes, laws and rules of the State of California or the United State of America.

L. Nothing in this MOA shall be construed as limiting or affecting in any way the statutory authority or obligations of the parties to this MOA.

M. Each County may choose to participate in or adopt some, or all, 5C Conservation Strategy elements to the extent that said County determines that the elements are: effective in meeting the goals set forth in this MOA; consistent with the General Plan, ordinances, and policies of said County; not already addressed by existing County policies; and not fiscally onerous to the County to implement. Each County Board of Supervisors retains the authority to decide which 5C work products, programs, or recommendations it will implement within its jurisdiction.

N. Nothing in the 5C Conservation Strategy shall obligate Council or Counties to expend funds in any manner inconsistent with legal requirements for the use of such funds.

O. Any member County may, at any time, withdraw from the 5C and this Agreement by adopting a resolution from its Board of Supervisors. The withdrawal of that member County shall become effective ninety (90) days after the resolution for withdrawal is received by the 5C Staff.

P. 5C Program Staff shall consist of a 5C Director and Staff, established to manage and execute the 5C Program as described in Section I (Establishment) above, who shall provide coordination between the Council and participating Counties. This includes:

1. Reporting to the 5C Executive Committee at least quarterly and making presentations to the Council, individual Boards of Supervisors, Planning Commissions, and other entities as deemed necessary and appropriate by the 5C Executive Committee, its individual members, and/or the 5C Staff;
2. Preparing grant applications, or assisting the Counties in preparing applications, to complete work set forth in this MOA;
3. Coordinating with the appropriate County departments to develop and implement the 5C Scope of Work;
4. Administering and managing the work done under the 5C Program grant contracts. This includes preparing invoices, progress reports, and other grant contract requirements;
5. Coordinating with the Executive Committee and Council on executing the 5C work to ensure compliance with the financial requirements and processes of the Council (e.g., billing and contracting procedures);
6. Providing to the Counties, at their request, any technical, administrative, or other services related to the Scope of Work that further 5C goals and are funded through grants;
7. Providing, with prior Executive Committee and Council approval, services similar to those described above to non-member cities, Counties, special districts, agencies, non-profits and individuals where program funding provides for full cost reimbursement and furthers 5C Program goals;
8. Immediately notifying the remaining member Counties in the event that any member County(ies) withdraws from the 5C Program as described in "O" above and provide them with copies of the resolution for withdrawal.

Section 5. Public Involvement

The Council, Counties, and 5C Staff are committed to continued public outreach and education. Public review of any document prepared for adoption by the Council or County(ies) and any modifications after preparation will be made available for public review prior to any final action by the Boards of Supervisors.

Section 6. Indemnification

Counties and Council agree that each party shall defend, indemnify and hold the other parties, their officers, employees and agents harmless from and against any and all liability, loss, expense including
reasonable attorneys' fees, or claims for injury or damages arising out of the performance of this Agreement but only in proportion to and to the extent such liability, loss, expense, attorneys' fees, or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of the indemnifying party, its officers, agents, or employees.

Section 7. Amendments to Agreement

All amendments to this Agreement shall be in writing and approved by the parties of this Agreement.

BE IT FURTHER RESOLVED AND ORDERED that this MOA shall replace and supersede prior MOAs between the Five Counties.

COUNTY OF SISKIYOU

Dated: May 12, 2009

Michael N. Kobseff, Chair of the Board

ATTEST:
Colleen Setzer, Clerk
Board of Supervisors

By _____
Deputy

APPROVED AS TO FORM:

_____
Thomas P. Guarino, County Counsel

The foregoing Agreement is hereby adopted by the Northwest California Resource Conservation & Development Council:

_____ Dated: 06-02-09

Patrick Truman, President
Northwest California Resource
Conservation & Development Council
PO Box 2183
Weaverville CA 96093-2183

SIGNATURE PAGE

IN WITNESS WHEREOF, the parties hereto have executed this Contract, for SC MOA (services), between Northwest California Resource Conservation and Development Council and the County of Siskiyou on the day and year first above written.

COUNTY OF SISKIYOU

N/A
County Administrator

APPROVED AS TO FORM:

JoAnn Bicego
COUNTY COUNSEL

APPROVED AS TO ACCOUNTING FORM:

2103 301010 723000
Fund Org Acct Actv

Leanna Dancer
Leanna Dancer, County Auditor

APPROVED AS TO INSURANCE:

N/A
RoseAnn Herrick, Assistant County Administrator

Attachment A: Project Narrative

Project Description

This project consists of road improvements on Sugar Creek Road in Siskiyou County that will prevent road sourced sediment from filling pools and spawning gravels in Sugar and French Creeks, two important coho streams within the Scott River watershed. Sugar Creek Road is a county road that is maintained year round. It is integral to access private residences as well as private agricultural and timber production lands, and is the primary travel route linking the National Forest and private road systems. Soils at Sugar Creek Road are largely comprised of decomposed granite soil. The particularly damaging nature of this soil type on fisheries places a greater emphasis on treating these road related sediment sources.

The project will result in both short and long term ecological and economic benefits within the watershed. Ecologically, the project will prevent and/or reduce more than 3,705 tons of road related sediment (derived largely from decomposed granite soils) from reaching French and Sugar Creeks and the Scott River. This volume estimate does not include stream channel downcutting below or upstream of the road crossing or fill failures where streams divert down roads and fail over the outboard road slope in places that cannot be predicted. Economically the project will reduce County road maintenance costs by storm proofing stream crossings and road drainage features, which in turn reduce the potential for road washouts or gullying or rilling. This work will also implement multiple forest management measures recommended by the Board of Forestry and Department of Forestry and Fire primarily for Road Management (2D) including upgrading drainage structures and treating road surfaces for increased stability.

The work in this project will not only prevent and minimize sediment delivery to anadromous streams, it will contribute to ongoing watershed projects in the Scott River watershed. The state and federal governments have invested millions of dollars in the Scott River watershed to address instream flows, fish screening of diversions, water bank and agricultural conservation projects. The County completed two barrier removal projects in the Scott River in 1999 (Rail Creek and Deep Creek). Private landowners have also implemented sediment reduction projects on private roads. This project is the beginning of a drainage and sediment reduction program for County roads in several tributary watersheds the Scott River. Siskiyou County was the last county in the 5C Program to agree to participate in the DIRT inventories of county roads. It is the intent of the 5C Program to continue to work with Siskiyou County to pursue funding to implement additional sediment treatment projects. Like the other counties, they often lack the staff time and resources to pursue work that does not directly tie in with their maintenance and critical capital improvement work. The timeframe for pursuing such projects can be slow because although grant funds are largely used to fund the restoration, it still has to be fit within the larger department of public works schedule and limited staff. 5C staff will work with them to identify additional roads within the Scott River that meets high priority salmonid and water quality benefits. This project is also part of the larger 5C Program effort to reduce road related sediment from county roads.

The Pacific Watershed Associates (PWA) protocols for forest and ranch road inventories were modified for use on County roads and standards in order to develop the 5C's Direct Inventory of Roads and Treatments (DIRT). By 2009, over a hundred miles of road was inventoried for sediment sources for the Scott River Watershed DIRT inventory in Siskiyou County. That inventory contains

the basis for the volumes and treatments proposed here. Treatments were refined in coordination with Siskiyou Department of Public Works (SDPW) staff. The only remaining work needed to proceed to construction is on the ground staking of treatments, completion of permits and environmental review, pre-project photo monitoring, and preparation of any bid documentation.

Below is a summary of the implementation work proposed for this project. Quantities are shown as approximate (~). SDPW will implement proposed treatments within 18 segments of Sugar Creek Road, over approximately 4.7 miles, including:

a) Photographing project areas pre and post construction to facilitate narrative in final report
b) Upgrade ~14 stream crossing corrugated metal pipe (CMP) culverts
c) Install ~15 Critical Dips
d) Install ~7 Ditch Relief Culverts (DRCs)
e) Install ~ 6 Rolling Dips
f) Outslope ~ 250' of road
g) Rock ~ 14,400 ft^2 of road surface
h) Install ~45 yd^3 of inlet/outlet energy dissipaters and slope protection
i) Install erosion control and revegetation of disturbed sites and spoils areas
j) Utilize road manual BMPs for construction, spoils disposal, erosion control and revegetation.

Environmental permitting will occur prior to commencement of construction activities. CEQA will be prepared in coordination with regional water board staff. A California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration Agreement (LSA) will be obtained prior to stream crossing work. A notice of intent will be filed under the 5C Roads Manual's Waiver of Waste Discharge and General Water Quality Certification (5C Waiver, http://www.swrcb.ca.gov/northcoast/water_issues/programs/non_point_source/5C/). SDPW permitting staff, with assistance from 5C staff will complete any other required federal permitting.

5C will establish, monument, and obtain GPS coordinates for permanent photo points at a representative number of treatment sites. 5C will complete post-project photo monitoring for the first winter after completion of the project. The 5C will take the lead on sharing information from this project with appropriate agencies and groups including the Klamath Basing Monitoring Program. SDPW and the 5C will also utilize the proposed sites and treatments as part of training to demonstrate how various sediment treatments and construction Best Management Practices (BMPs) are implemented (refer to Task 8 Outreach for more details). A final report will be completed after construction and will be posted to the 5C website (www.5counties.org).

Watershed Description

The Scott River watershed, which encompasses approximately 520,968-acres (814 $miles^2$) is one of the Klamath River basin's larger tributary systems. Elevations in the watershed range from 2,620 feet in the valley to 8,000 feet in the surrounding mountain ranges. This project is located in the Sugar and French Creek sub-watersheds of the Scott River. These watersheds are in the west side of the Scott River basin and drain a portion of the east side of the Russian Mountains. The high gradient streams flow into low gradient, moderately confined valley bottom stream channels. The Sugar Creek subwatershed is predominately underlain with granite to grano-diorite bedrock, which

generally weathers to non-cohesive and highly erodible decomposed granite (DG) soils. The DG soils contain high percentages of sands (~2 mm size class) that are particularly prone to settling in and filling voids in gravels and cobbles critical for survival of salmonid eggs. DG soils are widely recognized as some of the most erosive soils anywhere and are highly susceptible to dry ravel, rill and gully erosion, debris slides and torrents (Sommarstrom, et al, 1990). The average annual precipitation for the entire watershed is 36 inches, although the west side receives significantly more than the east side. While much of the precipitation in this watershed occurs as snowfall, occasional warm, wet winter storms create "rain on snow" situations which increase the storm effects. These storms often result in the greatest damage to stream crossings and roads. The higher degree of erodibility and close proximity to sensitive resources makes this project of notably higher priority. The Scott River contains some of the most significant anadromous salmonid habitat in California, including threatened Coho salmon. It also supports populations of Pacific Lamprey and many native resident fish species. The Scott River has no major dams, which makes it valuable for the opportunity to maintain and restore fisheries habitat and water quality.

The Klamath National Forest administers 182,221 acres (35%) in the Scott River watershed, 54,534 acres of which are in Wilderness designation; the BLM administers 11,513 acres (2%); 133 acres are held in Tribal Trust lands; and 327,101 acres are privately owned (63%). Road Mileage by ownership is: 600 miles in the USFS system; 25 miles managed by the BLM; 41 miles in State ownership (Highway 3); 1,275 miles are private; and Siskiyou County maintains 251 miles. This sparsely populated area consists of the communities of Etna and Ft Jones as well as remote and scattered rural residential and homestead parcels. There is a small amount of Tribal Trust lands in the Quartz Valley area of the Scott Valley. The primary land uses in the Sugar and French Creek watersheds are the Russian Wilderness in the higher elevations, timber production, grazing and limited rural residential development in the middle foothill elevations and agricultural production of range and croplands in the valley. According to the Public Resources Code, "Forest land" is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. The project area exceeds 10% area for native tree cover. Historic mining from the late 1800's, combined with forest management, rural development, irrigation diversions, channel alteration, wildland fires and fire suppression have all contributed to human associated declines in watershed conditions.

Watershed Based Planning

A number of reports have indicated that within the geographic range of this inventory a variety of watershed problems could be associated with roads including: elevated water temperatures (due to reduced canopy cover on streams); sediment input from poor road drainage and undersized stream crossings; and filling of stream gravels and pools from accelerated erosion. As a result of these factors, the North Coast Regional Water Quality Control Board (NCRWQCB) developed a sediment Total Maximum Daily Load allocation plan for the Scott River. NCRWQCB staff completed a Staff Report and Action Plan for the Scott River Watershed Sediment TMDL in December 2005 and adopted the Scott River Sediment TMDL Implementation Work Plan in February 2007. The Work Plan encourages parties responsible for roads and sediment waste discharge sites to take actions necessary to prevent, minimize, and control road-caused sediment waste discharges. Such actions

may include the inventory, prioritization, control, monitoring, and adaptive management of sediment waste discharge sites and proper road inspection and maintenance.

The CDFW identified several critical habitat limiting factors within the watersheds: water diversion (resulting in lower summer flows and high summer temperatures as well as limiting fish passage), road culverts and other fish barriers, log jams and siltation; and siltation from past logging and mining activities. Wildland fires and fire suppression have also contributed to sediment mobilization in these watersheds. This proposal is part of a larger effort by Siskiyou County and 5C to address the following high priority tasks in the Scott River hydrologic area as outlined in the Recovery Strategy for California Coho Salmon (CDFW 2004):

- Task # SS-HA-02; Improvement of spawning habitat by reducing human-caused sediment input from upslope sources identified through public and private inventories.
- Task #SS-HA-03; Prioritizing and implementing remediation activities for human-caused sediment, which would include slope stabilization, minimizing sediment production and eliminating barriers to coho salmon.
- Task #SS-HA-07; Decrease the potential for stream flow to become diverted at road crossings during high flow events, resulting in flow along the road that returns to the channel at undesirable locations.
- Task #SS-HA-08; Stabilize slopes along roadways to minimize or prevent erosion and to minimize future risk of eroded material entering streams.
- Task #SS-HA-09; Minimize alteration of natural hill slope drainage patterns to decrease erosion and sediment input into the streams.

The 5C in cooperation with Siskiyou County conducted a sediment source inventory of County roads within the Scott River watershed from 2006 to 2008. A total of 579 treatment sites were identified with the potential to deliver 372,524 tons (286,557 yd^3) of sediment over a ten year period. The treatments outlined in this proposal originated from that inventory (http://www.5counties.org/docs/dirt_final_scottsalmon.pdf). The 5C completed a rapid road assessment and treatment for a large private timberland owner's road network in the Scott River watershed in 2017. The owner treated high priority diverted road crossings that same year. Since 2001 the 5C has assisted SDPW with the design, funding and permitting to replace 6 migration barrier culverts within the Scott River watershed. Additionally, landowners and other stakeholders have invested a fair amount of effort into watershed restoration. Since the late 1990s, private landowners, timber companies and others have cooperated with the Siskiyou County Resource Conservation District and Scott River Watershed Council to address some of the limiting factors to fisheries. These efforts have included installation and maintenance of over 62 fish screens with headgate structures, installation of fish passage weirs at 17 diversion sites, riparian restoration, limited road decommissioning, and forest fuels reduction projects. A Scott Valley Water Trust was formed to eventually provide water to the river during critical summer low flow periods.

This project is part of the larger 5C effort to reduce road related sediment from county roads, which is featured in the 5C Waiver, and described in the TMDL Implementation Actions. Due to the nature of County policies and requirements to adhere to driving standards for public roads, watershed groups and other stakeholders don't tend to have much influence in County infrastructure improvement projects. However, the County is occasionally approached by watershed groups when coordinating restoration efforts adjacent to county facilities. The County will coordinate with State

and Federal agencies via the standard permitting mechanisms in place for this type of project (CDFW's LSA program, 5C Waiver, and NOAA's Incidental Take coverage for the 5C Roads Manual).

At this time, it is not the intent of 5C or Siskiyou County to pursue FRGP or Prop 84 funds for this proposal. However, as 5C staff work with the large timber landowner mentioned above, it is possible that proposal will leverage other sources.

Site Selection

Project sites were selected from the Siskiyou County DIRT for the Scott River watershed. The Pacific Watershed Associates (PWA) protocols for forest and ranch road inventories were modified for use on County roads and standards in order to develop the 5C's Direct Inventory of Roads and Treatments (DIRT). DIRT has been used to inventory thousands of miles of county roads for sediment sources. It has been incorporated into memorandum of understandings between the NCRWQCB and Siskiyou County for TMDL implementation work in the Scott River watershed as well as the 5C Waiver:. The PWA model was modified to reflect the differences between private forest and ranch roads and public roads. PWA completed an intensive field-training program for all crew members and was responsible for quality assurance and control of assessments and data collection. For the field inventory, field technicians visited each site and entered data (i.e., physical characteristics) into the DIRT database. Data were then processed by the program to provide specific figures on how much erosion can be produced - both chronically in one year and episodically during a major storm or event - by that particular site. Other considerations, such as whether a site is a fish migration barrier were also noted. The field technician then prescribed specific treatments to fix the site and recommended a level of immediacy. Major factors considered in the field-based prioritization process include treatment immediacy, erosion activity, total potential sediment yield, complexity, and estimated effectiveness of treatments. For spoils disposal sites, size, ownership, and suitability were recorded. All inventory sites were located using map coordinates and GPS points and regularly downloaded into an ArcGIS platform.

Final site prioritization was based on various factors obtained directly from DIRT – treatment immediacy, potential sediment delivery volumes, and likelihood of delivery to a stream – and factors not entered into the DIRT database: biological considerations of anadromous salmonids (habitat quality and quantity), current water quality violations, TMDL criteria, cost effectiveness, scheduling of county capital improvement and maintenance projects, management, public input, complexity and design, and other professional considerations. These factors were weighed according to a Simplified Prioritization Ranking Model for final prioritization. Projects are implemented according to each County's available resources and priorities. More information on DIRT is found at the 5C website: http://www.5counties.org/dirt.htm.

The BMPs for replacing a stream crossing, sediment prevention and aquatic species relocation listed in A Water Quality and Stream Habitat Protection Manual for County Road Maintenance in Northwestern California Watersheds (5C Roads Manual) will be adhered to throughout project construction. A full copy of the manual, or specific chapters/appendices, can be downloaded from: www.5counties.org/Projects/FinalGeneralProjectPages/RoadsManual800. The Roads Manual is an integral part of the 5C Waiver. The Roads Manual was developed by the 5C in consultation with various state and federal agencies including the NCRWQCB, CDFW, and NOAA Fisheries. It is specifically designed to protect and enhance the quality of water and salmonid habitat while

maintaining the road system. 5C Road Manual BMPs are followed by each road/public works department in capital improvement and restoration projects. BMPs specific to project effectiveness monitoring have been developed for use in tracking projects.

Project Relationship to water quality

The pollutant being addressed is road related sediment from Sugar Creek Rd that results from poor road drainage and undersized stream crossings. The Scott River has a Sediment TMDL Implementation Work Plan (2007) that encourages parties responsible for roads and sediment waste discharge sites to take actions necessary to prevent, minimize, and control road-caused sediment waste discharges. Such actions may include the inventory, prioritization, control, monitoring, and adaptive management of sediment waste discharge sites and proper road inspection and maintenance.
http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/scott_river/060307/bpl/Basin_Plan_Language.pdf.
Sediment is being addressed in this project by:

- Upgrading targeted stream crossings to accommodate the 100 year storm and reduce the amount of sediment estimated to have a high to moderate potential for delivering to streams;
- Modifying the shape of target road segments to as hydrologically neutral a state as is practical and economical to reduce likelihood of erosion and sediment delivery to streams; and
- Decreasing sediment delivery from the road and adjacent delivery surfaces (e.g., cutbanks, fill faces) by rocking exposed areas.

The Scott River Sediment TMDL also has an implementation action that calls for the development of an MOU between the NCRWQCB and Siskiyou County to address roads within the watershed. The MOU was intended to facilitate identification and control of sediment discharge sites and referenced working with the 5C specifically to achieve MOU goals. The 5C Waiver incorporates the goals and elements of the MOU described in the TMDL, but on a much broader scale. This project is part of the larger 5C Program effort to reduce road related sediment from county roads.

The project is estimated to prevent and/or reduce more than 3,705 tons of road related sediment from reaching French and Sugar Creeks and the Scott River. This will be achieved through the three general treatments (upgrading stream crossings, improving surface drainage, and rocking exposed areas) as applied via the specific treatments listed in Project Description section above and Attachment B. This type of sediment is described in the Scott River TMDL Implementation Plan Sediment Load Allocation Table 4-8 anthropogenic sources (with corresponding % reductions needed) as Road Surface Erosion (54%), Road Related Stream Crossing Failures (71%), Road Related Gullies (31%), and Road Related Cut/Fill Failures (76%).

The treatment of these road related sediment sources will benefit downstream water quality and multiple beneficial uses as described in the Scott River Sediment TMDL Action Plan including: contact (REC-1) and non-contact water recreation (REC-2); commercial and sport fishing (COMM); cold freshwater habitat (COLD); rare, threatened, and endangered species (RARE); migration of aquatic organisms (MIGR); and spawning, reproduction, and/or early development of fish (SPWN).

Benefits from the proposed road improvements will be realized within the first year post implementation. The road system will be hydrologically disconnected from the stream so that road sourced sediment will not be able to reach the stream. Road outsloping and the installation of

rolling dips and ditch relief culverts will help runoff leave the road surface quickly to avoid road surface rilling, ditch down-cutting, and cutbank destabilization. Stream crossings will be sized for the 100 year flood flow, thus drastically reducing stream crossing failure rates. These improvements are expected to last for at least 50 years and require little to no maintenance.

Management Measures and Management Practices

SDPW is a local agency who has been implementing the 5C Program as standard operating policy. As described in the 5C Waiver, the Monitoring and Reporting Plan consists of 1) Implementation, 2) Effectiveness, and 3) Photopoint Monitoring. Implementation Monitoring is designed to assess whether the recommended activity or specific BMPs in the manual were fully and properly carried out as specified. Assessment is usually carried out via visual observation of the completed BMPs using the protocol specified in Item 10-B-1 of the 5C Roads Manual, or an equivalent method. Effectiveness Monitoring is designed to assess whether each of the implemented BMPs are adequately protective of water quality. Effectiveness monitoring may be as simple as conducting a visual inspection both of the BMP site and the adjacent area, or may require detailed measurements at the BMP site and the adjacent area. It is usually performed after a BMP has gone through one year or one winter period, in order to evaluate how well the BMP functioned during winter rain events and/or spring snowmelt. Photopoint Monitoring will be used to compare road conditions prior to the project and those achieved immediately upon construction of proposed treatments using the protocol specified in Item 10-B-3 of the 5C Roads Manual. Long term performance of the project will be monitored as part of the SDPW regular inspections of County roads.

Project Team

The project team consists primarily of: 1) SDPW staff: Director (Scott Waite), Deputy Director Roads/Bridge Services (Todd Lamanna), and Environmental Compliance Specialist (Kyla Burton); and 2) 5C Program staff: Director (Mark Lancaster), Project Manager (Sandra Pérez), Resources Specialist (Oliver Rogers), and Resource Technician (Cindy Buxton). Support staff to facilitate grant management, billing, and implementation include accountants and road crew staff.

As one of the 5C member counties, Siskiyou County has been proactive in facilitating the improvement of fish passage barriers and improving road maintenance practices to protect water quality and salmonid habitat per the 5C Roads Manual. The Council's 5C staff has successfully worked with SDPW staff for several years to plan, fund, and implement restoration. 5C staff communicates with SDPW regularly by phone, email, and at project site visits. This close level of communication and collaboration will be sustained in order to implement the final design, permitting, construction and monitoring phases of this work. Refer to Attachment X for the County's letter of support. 5C staff have also managed dozens of state and federal grants since inception in 1997 and assisted all of the 5C member counties in obtaining project planning and implementation funds for over 50 projects.

SDPW engineering staff is highly qualified and experienced with road drainage improvements. Scott Waite, SDPW Director, has been with the SDPW for the past 15 years. He has a degree in Civil Engineering from California Polytechnic State University San Luis Obispo and became a registered Civil Engineer with the Board of Professional Engineers and Land Surveyors in July 1999. Todd

Lamanna has worked with the SDPW for 30 years. He supervises all activities on the entire county road system and bridges. Kyla Burton has been the Environmental Compliance Specialist for Siskiyou County for 13 years. She has been an active participant in the 5C Program Water Quality and Roads Workshops as well as in the development of the 5C Waiver. These SDPW staff members have participated in several 5C Program Water Quality and Roads Workshops.

Mark Lancaster has been Director of the 5C since its inception in 1997. He has a B.S in Forest Resource Management and Natural Resources Planning from Humboldt State University and is a practicing forester. Sandra Pérez has been with the 5C for 17 years, largely as a Program Manager, and has a B.S. in Chemistry from Loyola Marymount University. She manages the inventories and the majority of sediment reduction implementation projects. Both have extensive experience in working with government agencies, watershed groups, private landowners, and the general public on various restoration projects, planning efforts, and community projects. Cindy Buxton is a Resources Technician that has been trained in the DIRT methodology and was the lead inventory crew member for a private road inventory in the Weaver Creek watershed that was completed last fall. Oliver Rogers is a recent HSU graduate with a B.S. in Environmental Resources Engineering and is new to the 5C (<1 year). He is being trained in 5C road inventory methodologies and is expected to be experienced prior to the start of this agreement.

Project Management

The following is a summary of work proposed by Task. Given that there will be at least one more winter season before an agreement for work can be executed, specific treatments proposed will be reviewed on-site to ensure that conditions still warrant them. As such, quantities are shown as approximate (~). Construction will ideally occur within one field season, but given the uncertainty of wildfire, possibly shorter dry construction windows due to wet weather patterns, and other variables, it may be completed within two field seasons. If construction extends beyond one field season, the following tasks will occur for work each field season.

Task 1. **Project Agreement Management:** The 5C will complete quarterly progress reports on behalf of SDPW staff. It will also coordinate with grantors and any subcontractors on project developments and efforts and grant compliance on a regular basis.

Task 2. **Design, Site Review, and Layout:** Site review will be done after execution of award to verify treatments with SDPW staff in light of post-2019 winter conditions. Then, initial site staking will be completed. This project will utilize typical designs for construction of rolling dips, critical dips, ditch relief culverts, and outsloping. Other activities, such as ditch cleaning and spoils excavation and storage, rely on implementation of the BMPs from the 5C Roads Manual. If SDPW chooses to contract out any part of the work, that will be arranged.

Task 3. **Permitting:** CEQA will be prepared in coordination with regional water board staff. A notice of intent will be filed under the 5C Waiver. A CDFW LSA Agreement will be obtained prior to stream crossing work. SDPW permitting staff, with assistance from 5C, will complete any other required permitting.

Task 4. **Final Site Staking and Photo Point Establishment:** 5C will establish, monument, and obtain GPS coordinates for permanent photo points at a representative number of treatment sites (at least 20% of each treatment type).

Task 5. **Mobilization:** SDPW will:

a) Move rock, rock slope protection (RSP) and other materials to the project site

b) Remaining CMP culverts, bands, erosion control materials, rock, etc. will be ordered and delivered to the work sites
c) Equipment will be moved on-site

Task 6. Construction: SDPW Implement projects within 18 segments of Sugar Creek Road, over approximately 4.7 miles, including:

a) Photographing construction to facilitate narrative in final report
b) Upgrade ~14 stream crossing corrugated metal pipe (CMP) culverts
c) Install ~15 Critical Dips
d) Install ~7 Ditch Relief Culverts (DRCs)
e) Install ~ 6 Rolling Dips
f) Outslope 250' of road
g) Rock 14,400 ft^2 of road surface
h) Install ~45 yd^3 of inlet/outlet energy dissipators and slope protection
i) Install erosion control and revegetation of disturbed sites and spoils areas
j) Utilize road manual construction, spoils disposal, erosion control & revegetation BMPs.

Upon project completion the necessary final erosion controls will be implemented at the project site. All disturbed areas including the new inboard and outboard fillslopes and adjacent streambanks will be re-vegetated with native seed species/plantings and mulched with certified weed-free material. The newly excavated streambanks will be stabilized as applicable for the project site. Any excess spoils material will be end-hauled to a pre-approved temporary or permanent disposal site and either re-used or permanently stabilized to prevent erosion. Spoils storage will be in accordance with the 5C Roads Manual BMPs in a manner as not to deliver to a stream. The project is on a County road and will be maintained by SDPW after completion. After construction following the end of this grant agreement, inspections will be done by SDPW as time and resources permit to assess unforeseen drainage issues.

Task 7. Post Project Photo Monitoring: 5C will complete post photo monitoring for the first winter after completion of the project. If construction is able to be completed within a single year, a second round of post-winter monitoring may be completed. The 5C may continue monitoring after the end of the agreement period if additional funding becomes available.

Task 8. Outreach: The 5C will take the lead on sharing information from this project. As part of the project, SDPW and the 5C will coordinate with the Klamath Basin Monitoring Program to supply project data, particularly to the Klamath Tracking and Accounting Program. SDPW and the 5C will also utilize the proposed sites and treatments as part of a training for SDPW staff to demonstrate how various sediment treatments and construction BMPs are implemented. A minimum of 8 SDPW staff not involved in planning and executing this larger project are expected to participate. Local watershed groups such as the Scott River Watershed Council and Siskiyou and Shasta Valley RCDs will be invited to attend.

Task 9. Final Report: A final report will be completed after construction but may be submitted prior to final monitoring, depending on the end date of the agreement. It will summarize all work completed under the project, including monitoring. Once complete, it will be posted to the 5C website: www.5counties.org

Schedule (Table 1)

Task	Frequency (if applicable)	Start Date	End Date
Grant Agreement Executed		6/30/2019	n/a

1. Project Agreement Management	Ongoing, with quarterly progress reports	6/30/2019	5/31/2022
2. Design, Site Review, & Layout	Annually, unless construction completed within one season	7/31/2019	10/1/2020
3. Permitting	Annually, unless construction completed within one season	9/1/2019	6/30/2021
4. Final Staking & Photo Point Establishment	Annually, unless construction completed within one season	5/1/2020	5/31/2021
5. Mobilization	Annually, unless construction completed within one season	7/1/2020	7/15/2021
6. Construction	Annually, unless construction completed within one season	7/15/2020	10/15/2021
7. Post Project Photo Monitoring	Annually, unless construction completed within one season	10/15/2020	4/1/2022
8. Outreach	Ongoing with one time training	6/30/2019	5/31/2022
9. Final Report		4/1/2022	5/31/2022
Grant Agreement End Date		n/a	5/31/2022

Project Financing and funding match

The SDPW will request a match waiver given that the project area is located within an economically disadvantaged community. However, here will be nominal matching in-kind contribution from SDPW in the form of inspections of the treated road sections after construction is complete in order to observe the effectiveness of the work completed (as described above as part of the monitoring strategy). This is estimated at ~1.7% of the total project cost. It is tracked in the SDPW's Cost Accounting Management System (common road department financial system). The SDPW and 5C contributed in-kind match (~$26,523.481) to the original DIRT inventory of the Scott and Salmon River watersheds, whose treatment prescriptions were the basis for the work proposed here.

Cost estimates are based on actual costs of recent similar work and current quotes for materials. Staff rates are based on current rates with projected or scheduled increases per SDPW and 5C personnel policies, over the term of the grant agreement. This is the first sediment treatment project for restoration purposes undertaken by the SDPW with the 5C. Siskiyou County was the last to conduct DIRT inventories; so this is expected to be the start of multiple sediment projects.

Readiness to Proceed

The DIRT inventory for the Scott River watershed contains the basis for the volumes and treatments proposed here. Treatments were refined in coordination with SDPW staff. The only remaining work needed to proceed to construction is a brief site review as described in Task 2 (given that the effects of the current winter and the 2018-2019 winter are yet unknown), on the ground staking of treatments, completion of permits and environmental review, pre-project photo monitoring, and preparation of any bid documentation. Permits will largely consist of CDFW LSA Agreements for stream crossing upgrades. Environmental review will consist of CEQA analysis and documents, which is expected to consist of a Notice of Exemption under the small restoration project and minor

alteration of existing facilities categorical exemptions. A Notice of Intent will be filed under the 5C Waiver. This project falls under the coverage of the NOAA Incidental Take Coverage for the 5C Roads Manual. As construction is anticipated to be completed over the course of two years, permitting will be in place by June 30th of each year and will likely be in place by June 30th 2020.

Climate Change Resiliency

The project area has seen a significant increase in both drought and extreme precipitation events, which has led to dramatic increases in wildfire acres burned. The average acres burned per year has rapidly increased each of the past 3 decades. The July Complex of fires (2014) and the Salmon August Complex (2017) each burned >50,000 acres in the Scott and Salmon watersheds. These fires were lightning fire start and research suggests that with each degree of annual average temperature increase, there is a significant increase in lightning activity. These large scale fire complexes have increased in frequency and scale each decade and once burned these watersheds become prone to repeated fire starts. The roads networks within and downstream of the fires are at high risk of failure from increased runoff and debris from the upstream burning. The 2014 Log Fire (July Complex) combined with extreme precipitation in the winter of 2016-17 resulted in significant number of road failures downstream of the fire. This project will reduce the potential of more road failures by prioritizing treatments previously identified.

Adaptability/ Transferability

This project is solidly founded in tried and tested techniques that have been vetted by numerous stakeholders and partners. Given that this is the first restoration driven sediment treatment project that the SDPW has undertaken with the 5C, it will be regarded as a model of how DIRT-based treatments function over the long term. Local watershed groups will be invited to the training conducted in the Outreach task. Therefore, it will serve as accessible to groups beyond the SDPW.

Environmental Justice and Human Right to Water

Siskiyou County is not particularly diverse, but is an economically disadvantaged, rural area with several underserved communities, including some in the Scott River watershed. The County lacks the resources to upgrade roads to any significant degree without assistance from grants and other sources. The sparse populations cannot shoulder the economic burden of road upgrades, particularly for low residential use roads like Sugar Creek Rd – despite it being one of the most erosive public roads in this TMDL listed watershed. Although this does not address traditional Environmental Justice issues within the community, grant assistance to treat road related sediment sources helps the County take proactive steps to address sediment sources on its road system, helps achieve the overall objectives of the Scott River TMDL, and helps to enhance water quality in anadromous coho streams. The project will benefit salmon and Pacific lamprey populations in the Klamath River system, which play an important role in the traditional diet and cultural heritage of local Native American Tribes including the Karuk, Quartz Valley, and Yurok Tribal members.

Attachment B: Scope of Work
Sugar Creek Road Sediment Treatment Project # 41792

Purpose: This project will prevent sand and smaller sized silt and clay soil particles from delivering to Sugar and French Creeks from Sugar Creek Road. These sediments can fill pools and spawning gravels in these important coho streams within the Scott River watershed. The project will result in both short & long term ecological and economic benefits within the watersheds as well as the Scott River. Ecologically, the project will prevent and/or reduce more than 3,705 tons of road related sediment (derived largely from decomposed granite soils) from reaching French and Sugar Creeks and the Scott River. The following tasks will occur each year for work done within each construction season.

Task 1. Project Agreement Management: Complete quarterly progress reports on behalf of Siskiyou Dept. of Public Works (SDPW) staff. 5C Program staff will also coordinate with grantors and any subcontractors on project developments and efforts and grant compliance on a regular basis.

Task 2. Design, Site Review, and Layout:

2.1 Conduct site review after execution of award to verify treatments with SDPW staff given that a few winter seasons will have occurred prior to receipt of award. This project will utilize typical designs for construction of rolling dips, critical dips, ditch relief culverts, and outsloping.

2.2 Complete initial site staking.

Task 3. Permitting: This will be done by SDPW permitting staff with assistance from 5C Program staff.

3.1 Prepare CEQA in coordination with regional water board staff.

3.2 Obtain a CDFW Lake and Streambed Alteration Agreement prior to stream crossing work.

3.3 File a notice of intent under the 5C Roads Manual's Waiver of Waste Discharge and General Water Quality Certification.

Task 4. Final Site Staking and Photo Point Establishment: Establish, monument, and obtain GPS coordinates for permanent photo points at a representative number of treatment sites (at least 20% of each treatment type).

Task 5. Mobilization: SDPW will:

5.1 Move rock, rock slope protection (RSP) and other materials to the project site.

5.2 Order remaining CMP culverts, bands, erosion control materials, rock, etc. and deliver to the work sites.

5.3 Move equipment on-site and perform any brushing or other preparatory maintenance work.

Task 6. Construction:

6.1 Construct Treatment: SDPW will implement projects within 18 segments of Sugar Creek Road, over approximately 4.7 miles. Treatment quantities included in the construction

tasks are approximate and may be revised based on a review of sites and treatments described in Task 2:

a) Photograph construction to facilitate narrative in final report
b) Upgrade ~14 stream crossing corrugated metal pipe (CMP) culverts
c) Install ~15 Critical Dips
d) Install ~7 Ditch Relief Culverts (DRCs)
e) Install ~ 6 Rolling Dips
f) Outslope 250' of road
g) Rock 14,400 ft^2 of road surface
h) Install ~45 yd^3 of inlet/outlet energy dissipaters and slope protection
i) Install erosion control and revegetation of disturbed sites and spoils areas
j) Utilize road manual BMPs for construction, spoils disposal, erosion control and revegetation.

6.2 Implement the necessary final erosion controls upon construction of treatments at the project sites as applicable (e.g., re-vegetation with native seed species/plantings, mulching with certified weed-free material, stabilization of newly excavated streambanks, disposal of any excess spoils material).

Task 7. Post Construction Photo Monitoring: Complete post photo monitoring upon construction of the project. This will consist of:

7.1 Evaluating the effectiveness of the proposed work by quantifying each type of treatment implemented and verifying whether treatments were installed within design parameters.

7.2 Resurvey about 20% of treated road segments using the Direct Inventory of Roads and Treatments (DIRT) methodology used to identify project sites, estimate potential sediment delivery volumes, and develop initial treatments.

7.3 Pre and post project photo point monitoring will be done for representative stream crossing and road drainage upgrade sites. Storm flow monitoring including photo monitoring and visual observations will be done by SPWD road maintenance crews during or following storm events.

Task 8. Outreach:

8.1 Coordinate with the Klamath Basin Monitoring Program to supply project data. This may include adding the project description and location to the Klamath Tracking and Accounting Program (KTAP).

8.2 Utilize the proposed sites and treatments as part of a training for SDPW staff to demonstrate how various sediment treatments and construction Best Management Practices are implemented. Local watershed groups such as the Scott River Watershed Council and Siskiyou and Shasta Valley RCDs will be invited to attend.

Task 9. Final Report:

9.1 Prepare a draft report after completion of construction summarizing project activities and progress.

9.2 Complete a final report that will be submitted prior to final monitoring. It will summarize all work completed under the project, including monitoring. Once complete, it will be posted to the 5C website: www.5counties.org

Task	Deliverable(s)	Start Date	End Date*
Grant Agreement Executed		6/30/2019	n/a
1. Project Agreement Management	Quarterly progress reports	6/30/2019	5/31/2022 (~ 3 years after start date)
2. Design, Site Review, & Layout	Summary of final treatments	7/31/2019	10/1/2020
3. Permitting	Copies of permits obtained/environmental analysis documents prepared	9/1/2019	6/30/2021 (by early summer of last construction season)
4. Final Staking & Photo Point Establishment	Evident via photo points in resulting logs	5/1/2020	5/31/2021 (by late spring of last construction season)
5. Mobilization	N/A (Facilitation of construction)	7/1/2020	7/15/2021 (by start of last construction season)
6. Construction	Summary of treatments implemented	7/15/2020	10/15/2021 (end of last construction season)
7. Post Construction Photo Monitoring	Monitoring results and photo log	10/15/2020	4/1/2022 [1]
8. Outreach	Training agenda & sign-in sheets	6/30/2019	5/31/2022 (by end of contract)
9. Final Report	Final report	4/1/2022	5/31/2020
Grant Agreement End Date		n/a	5/31/2022

* End date refers to date all work under this task will be completed. However, many tasks will be done each construction season for the treatments to be implemented that year.

[1]: Photos will be taken upon completion of construction but will be assembled into a photo log by the specified date.

Attachment C: Nine Element Verification Table

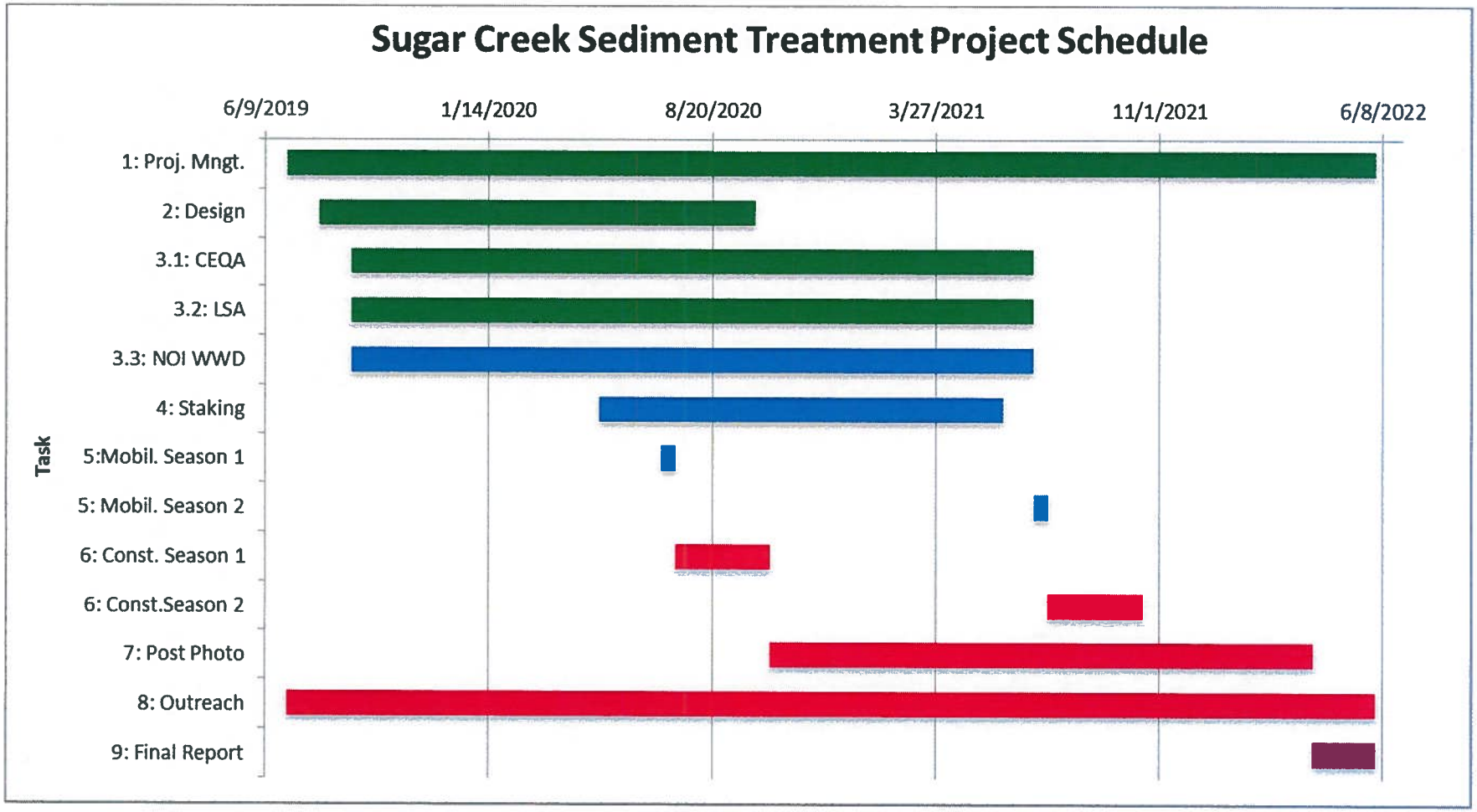
Per the Full Proposal instructions and Solicitation Notice page 27, only applicants applying to the 319(h) program are required to submit this. This proposal is being applied to the Timber Funds program. However, FAAST would not allow submission of the application without something being uploaded for Attachment C.

Attachment D: Project Schedule
Sugar Creek Road Sediment Treatment Project # 41792

Task	Frequency (if applicable)	Start Date	End Date*
Grant Agreement Executed		6/30/2019	n/a
1. Project Agreement Management	Ongoing, with quarterly progress reports	6/30/2019	5/31/2022 (~ 3 years after start date)
2. Design, Site Review, & Layout	Annually, unless construction completed within one season	7/31/2019	10/1/2020
3. Permitting	Annually, unless construction completed within one season	9/1/2019	6/30/2021 (by early summer of last construction season)
4. Final Staking & Photo Point Establishment	Annually, unless construction completed within one season	5/1/2020	5/31/2021 (by late spring of last construction season)
5. Mobilization	Annually, unless construction completed within one season	7/1/2020	7/15/2021 (by start of last construction season)
6. Construction	Annually, unless construction completed within one season	7/15/2020	10/15/2021 (end of last construction season)
7. Post Construction Photo Monitoring	Annually, unless construction completed within one season	10/15/2020	4/1/2022 [1]
8. Outreach	Ongoing with one time training	6/30/2019	5/31/2022 (by end of contract)
9. Final Report		4/1/2022	5/31/2022
Grant Agreement End Date		n/a	5/31/2022

* End date refers to date all work under this task will be completed. However, many tasks will be done each construction season for the treatments to be implemented that year.

[1]: Photos will be taken upon project completion but will be assembled into a photo log by the specified date.


Sugar Creek Sediment Treatment Project Schedule
6/9/2019
1/14/2020
8/20/2020
3/27/2021
11/1/2021
6/8/2022
Task
1: Proj. Mngt.
2: Design
3.1: CEQA
3.2: LSA
3.3: NOI WWD
4: Staking
5:Mobil. Season 1
5: Mobil. Season 2
6: Const. Season 1
6: Const.Season 2
7: Post Photo
8: Outreach
9: Final Report

319(h) & Timber Program - BUDGET DETAIL

Applicant: Northwest CA Resource Conservation & Development Council
Project: Sugar Creek Road Sediment Treatment Project # 41792

FAAST PIN: 41792

Budget Category/Tasks	Discipline/ Description	Labor Costs (Grant & Match Funds)			Materials/Equipment Costs (Grant & Match Funds)				Budget Details Total (Grant & Match Combined)	Percentage of Grant
		Rate	# of Hours	Total Labor Cost	Unit Cost	Unit Measurement (yd, ft, item, etc)	# of Units	Total Material / Equipment Cost		
1. Personnel Services				**$57,479.00**				**$0.00**	**$57,479.00**	**13.67%**
Project Agreement Management	Director	65	34	$2,210.00				$0.00	$2,210.00	0.53%
Project Agreement Management	Program Manager	60	155	$9,300.00				$0.00	$9,300.00	2.21%
Project Agreement Management	Accountant	41	179	$7,339.00				$0.00	$7,339.00	1.75%
Design, Site Review, & Layout	Director	65	2	$130.00				$0.00	$130.00	0.03%
Design, Site Review, & Layout	Program Manager	60	6	$360.00				$0.00	$360.00	0.09%
Permitting	Program Manager	60	2	$120.00				$0.00	$120.00	0.03%
Final Staking & Photo Point Establishment	Resources Specialist	45	12	$540.00				$0.00	$540.00	0.13%
Construction	Director	65	54	$3,510.00				$0.00	$3,510.00	0.83%
Construction	Program Manager	60	54	$3,240.00				$0.00	$3,240.00	0.77%
Construction	Resources Specialist	45	240	$10,800.00				$0.00	$10,800.00	2.57%
Construction	Resources Technician	40	80	$3,200.00				$0.00	$3,200.00	0.76%
Post Construction Photo Monitoring	Program Manager	60	16	$960.00				$0.00	$960.00	0.23%
Post Construction Photo Monitoring	Resources Specialist	45	48	$2,160.00				$0.00	$2,160.00	0.51%
Post Construction Photo Monitoring	Resources Technician	40	40	$1,600.00				$0.00	$1,600.00	0.38%
Outreach	Director	65	60	$3,900.00				$0.00	$3,900.00	0.93%
Outreach	Program Manager	60	80	$4,800.00				$0.00	$4,800.00	1.14%
Outreach	Resources Specialist	45	30	$1,350.00				$0.00	$1,350.00	0.32%
Final Report	Director	65	8	$520.00				$0.00	$520.00	0.12%
Final Report	Program Manager	60	24	$1,440.00				$0.00	$1,440.00	0.34%
				$0.00				$0.00	$0.00	0.00%
2. Operating Expenses				**$0.00**				**$14,842.47**	**$14,842.47**	**3.53%**
Permitting	Other Costs ($) Permits LSA			$0.00	$10,386.50	batch	1	$10,386.50	$10,386.50	2.47%
Design, Site Review, & Layout	Travel to from project sites			$0.00	$0.545	Miles	274	$149.33	$149.33	0.04%
Design, Site Review, & Layout	Travel to from project sites			$0.00	$46.00	Days	4	$184.00	$184.00	0.04%
Final Staking & Photo Point Establishment	Travel to from project sites			$0.00	$0.545	Miles	137	$74.67	$74.67	0.02%
Construction	Travel to from project sites			$0.00	$0.545	Miles	1,644	$895.98	$895.98	0.21%
Construction	Travel to from project sites			$0.00	$46.00	Days	40	$1,840.00	$1,840.00	0.44%
Construction	Travel to from project sites			$0.00	$90.00	Nights	8	$720.00	$720.00	0.17%
Post Construction Photo Monitoring	Travel to from project sites			$0.00	$0.545	Miles	137	$74.67	$74.67	0.02%
Post Construction Photo Monitoring	Travel to from project sites			$0.00	$46.00	Days	4	$184.00	$184.00	0.04%
Outreach	Travel to from project sites			$0.00	$0.545	Miles	274	$149.33	$149.33	0.04%
Outreach	Travel to from project sites			$0.00	$46.00	Days	4	$184.00	$184.00	0.04%
				$0.00				$0.00	$0.00	0.00%
3. Professional/Consulting Services				**$226,959.37**				**$8,338.94**	**$235,298.31**	**55.96%**
Project Agreement Management	Director, Dept Public Works	118.18	41	$4,845.38				$0.00	$4,845.38	1.15%
Project Agreement Management	Deputy Director (Roads/Bridges)	85.28	82	$6,992.96				$0.00	$6,992.96	1.66%
Project Agreement Management	Road Maintenance Supervisor	58.81	50	$2,940.50				$0.00	$2,940.50	0.70%
Project Agreement Management	Fiscal Officer	56.66	135	$7,649.10				$0.00	$7,649.10	1.82%
Design, Site Review, & Layout	Director, Dept Public Works	118.18	12	$1,418.16				$0.00	$1,418.16	0.34%
Design, Site Review, & Layout	Deputy Director (Roads/Bridges)	85.28	84	$7,163.52				$0.00	$7,163.52	1.70%
Design, Site Review, & Layout	Road Maintenance Supervisor	58.81	40	$2,352.40				$0.00	$2,352.40	0.56%
Permitting	Environmental Compliance Specialist	59.18	40	$2,367.20				$0.00	$2,367.20	0.56%
Final Staking & Photo Point Establishment	Road Maintenance Supervisor	58.81	20	$1,176.20				$0.00	$1,176.20	0.28%
Mobilization	Road Maintenance Supervisor	58.81	40	$2,352.40				$0.00	$2,352.40	0.56%
Construction	Director, Dept Public Works	118.18	180	$21,272.40				$0.00	$21,272.40	5.06%

Budget Category/Tasks	Discipline/ Description	Labor Costs (Grant & Match Funds)			Materials/Equipment Costs (Grant & Match Funds)				Budget Details Total (Grant & Match Combined)	Percentage of Grant
		Rate	# of Hours	Total Labor Cost	Unit Cost	Unit Measurement (yd, ft, item, etc)	# of Units	Total Material / Equipment Cost		
Construction	Deputy Director (Roads/Bridges)	85.28	48	$4,093.44				$0.00	$4,093.44	0.97%
Construction	Road Maintenance Supervisor	58.81	650	$38,226.50				$0.00	$38,226.50	9.09%
Post Construction Photo Monitoring	Director, Dept Public Works	118.18	24	$2,836.32				$0.00	$2,836.32	0.67%
Post Construction Photo Monitoring	Deputy Director (Roads/Bridges)	85.28	24	$2,046.72				$0.00	$2,046.72	0.49%
Post Construction Photo Monitoring	Road Maintenance Supervisor	58.81	70	$4,116.70				$0.00	$4,116.70	0.98%
Outreach	Director, Dept Public Works	118.18	14	$1,654.52				$0.00	$1,654.52	0.39%
Outreach	Deputy Director (Roads/Bridges)	85.28	38	$3,240.64				$0.00	$3,240.64	0.77%
Outreach	Road Maintenance Supervisor	58.81	70	$4,116.70				$0.00	$4,116.70	0.98%
Final Report	Director, Dept Public Works	118.18	4	$472.72				$0.00	$472.72	0.11%
Final Report	Deputy Director (Roads/Bridges)	85.28	2	$170.56				$0.00	$170.56	0.04%
Final Report	Road Maintenance Supervisor	58.81	6	$352.86				$0.00	$352.86	0.08%
Construction: Install new pipe	SDPW Road Crews or General Contractor	varies	batch	$95,801.47				$0.00	$95,801.47	22.78%
Construction: Install road drainage improvements (dips, armoring, outsloping)	SDPW Road Crews or General Contractor	varies	batch	$9,300.00				$0.00	$9,300.00	2.21%
Mobilization	SDPW Road Crews or General Contractor			$0.00	$5,760	batch	1	$5,760.00	$5,760.00	1.37%
Design, Site Review, & Layout	Travel to from project sites			$0.00	$0.545	Miles	676	$368.42	$368.42	0.09%
Final Staking & Photo Point Establishment	Travel to from project sites			$0.00	$0.545	Miles	169	$92.11	$92.11	0.02%
Mobilization	Travel to from project sites			$0.00	$0.545	Miles	338	$184.21	$184.21	0.04%
Construction	Travel to from project sites			$0.00	$0.545	Miles	3,042	$1,657.89	$1,657.89	0.39%
Post Construction Photo Monitoring	Travel to from project sites			$0.00	$0.545	Miles	338	$184.21	$184.21	0.04%
Outreach	Travel to from project sites			$0.00	$0.545	Miles	169	$92.11	$92.11	0.02%
				$0.00				$0.00	$0.00	0.00%
4. Construction				**$0.00**				**$93,734.83**	**$93,734.83**	**22.29%**
Construction: Cost New Pipe	Vendor			$0.00	$31,934	batch	1	$31,933.83	$31,933.83	7.59%
Construction: Rock material for road	Vendor			$0.00	$61,201	batch	1	$61,201.00	$61,201.00	14.56%
Construction: Straw/seed materials	Vendor			$0.00	$600	batch	1	$600.00	$600.00	0.14%
				$0.00				$0.00	$0.00	0.00%
5. Indirect Costs				**$8,247.90**				**$10,857.73**	**$19,105.63**	**4.54%**
Indirect on MTDC Personnel & 25k Subcontractor		10%	$82,479	$8,247.90				$0.00	$8,247.90	1.96%
Indirect on MTDC Operating		10%		$0.00	$108,577			$10,857.73	$10,857.73	2.58%
				$0.00				$0.00	$0.00	0.00%
				$0.00				$0.00	$0.00	0.00%
6. Equipment Over $5,000 (if applicable)				**$0.00**				**$0.00**	**$0.00**	**0.00%**
				$0.00				$0.00	$0.00	0.00%
				$0.00				$0.00	$0.00	0.00%
				$0.00				$0.00	$0.00	0.00%
Grand Totals =				**$292,686**				**$127,774**	**$420,460**	**100.00%**

Note: CHECK YOUR NUMBERS! Do NOT assume this Excel spreadsheet is correct. Please refer to the READ ME tab.

Does the Budget Summary Total match the Budget Details Total? YES

Attachment F: Request for Reduction of Funding Match for Disadvantaged Communities
Sugar Creek Road Sediment Treatment Project # 41792

It is difficult to identify a census geography that encompasses the entire area that will benefit from the project as the benefits are to the entire watershed downstream of the project. Census geographies do not follow watershed boundaries. However, the Tract chosen, #8 within Siskiyou County, encompasses the majority of the watershed and is illustrated below in Figure 1. Using Block Groups, the next smallest division, was not practical as the boundaries of those resulted in splitting the Sugar and French Creek watersheds from the immediate downstream Scott River watershed areas. Population and income data described here was obtained from 2016 estimates of the American Fact Finder database of the US Census Bureau. Tract 8 has a total population estimated at 3,405. The Median Household Income (MHI) for Tract 8 within Siskiyou County is $45,193. The entire population for the Tract is considered a disadvantaged community (DAC).

The MHI for the entire state of California for 2014 is $63,783. The target DAC MHI is 70.9% of the state MHI. The state defines a DAC as one with an annual MHI that is less than 80 percent of the Statewide annual MHI. The targeted community far exceeds that DAC definition. It is mid-way between a disadvantaged community and a severely disadvantaged community, which is defined as one with less than 60% of the State's median household income.

This project will provide multiple benefits to the targeted DAC. It will treat road related sediment sources on ~4.7 miles of Sugar Creek Rd prevent and/or reduce more than 3,705 tons (2,850 yd^3) of road related sediment (derived largely from decomposed granite soils) from reaching French and Sugar Creeks and the Scott River. The Scott River contains some of the most significant anadromous salmonid habitat in California, including threatened Coho salmon. It also supports populations of Pacific Lamprey and many native resident fish species. The Scott River has no major dams, which makes it valuable for the opportunity to maintain and restore fisheries habitat and water quality. The economies of rural areas such as these tend to heavily rely on natural resources based tourism and industries, including fisheries and other recreational activities. The treatment of these road related sediment sources will benefit downstream water quality and multiple beneficial uses as described in the TMDL Action Plan including: contact (REC-1) and non-contact water recreation (REC-2); commercial and sport fishing (COMM); cold freshwater habitat (COLD); rare, threatened, and endangered species (RARE); migration of aquatic organisms (MIGR); and spawning, reproduction, and/or early development of fish (SPWN). The Scott River Sediment TMDL Implementation Work Plan (2007) encourages roads and sediment waste discharge site managers to take actions to prevent, minimize, and control road-caused sediment waste discharges. That is the focus of the project treatments as described in "Attachment B_Pin41792_SugarCkRd SedTx Proj_SOW".

Sugar Creek Road Sediment Treatment Project - DAC Map

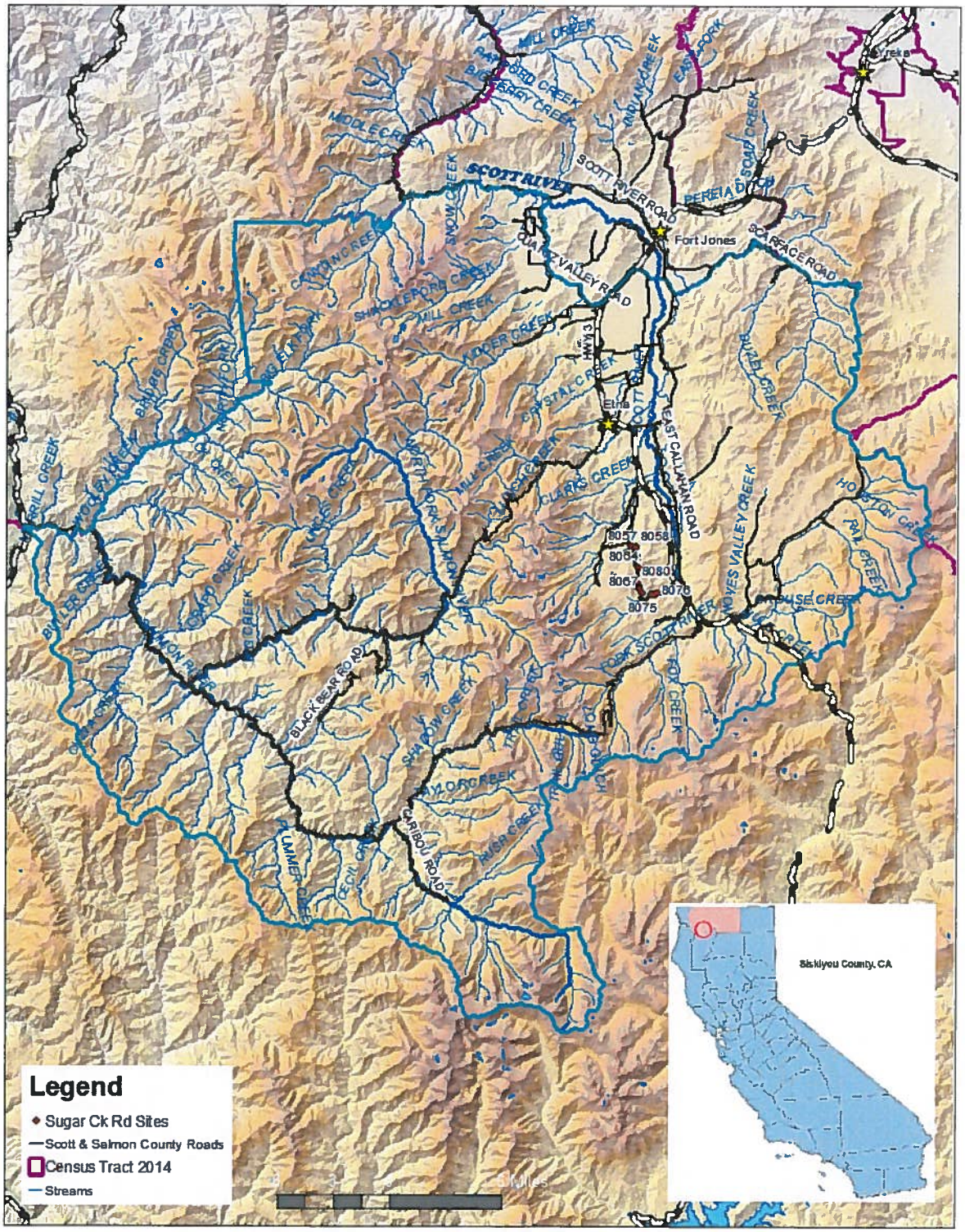


Figure 1: Sugar Creek Road Sediment Treatment Project - DAC Map
Tract 8 is highlighted in a bright aqua color to distinguish from adjacent census tracts.

Due to the nature of county policies and requirements to adhere to driving standards for public roads, residents, watershed groups and other stakeholders don't tend to have much direct involvement in County infrastructure improvement ore restoration projects such as this one. However, the applicant, Northwest CA Resource Conservation & Development Council's 5C Program, has been working closely with Siskiyou County staff (who represent the owners of Sugar Creek Road and the proposed treatment sites) since the planning and completion of the county road sediment source inventories conducted in the Scott River watershed between June 2006 and June 2008. The field inventory crew coordinated with County staff on a weekly basis. The results of that inventory are the foundation upon which this project is based. More information on that effort is available online: http://www.5counties.org/docs/dirt_final_scottsalmon.pdf The inventory was a grant funded effort that was supported by the Siskiyou County Board of Supervisors, which consist of local government representatives for the project area and DAC. A letter of support from the Board of Supervisors and request for funding match waiver is included in Attachment J.

The 5C Program has also worked closely with local stakeholders within the Scott River watershed. Sari Sommarstrom, member of the Scott River Water Trust and former Executive Director, worked with the 5C Program as a consultant extensively between 2001 and 2008. She provided invaluable advice and outreach assistance from a local landowner and stakeholder to the field crew during the inventory.

<to be printed on Northwest CA RC&D Council letterhead>

EXHIBIT A:

CERTIFICATION OF UNDERSTANDING

The undersigned certifies that:

The application submitted by Northwest California Resource Conservation & Development Council for the Sugar Creek Road Sediment Treatment Project # 41792 for a 2018 Timber Regulation and Forest Restoration Fund grant contains a request for reduction of funding match based on the presence of a disadvantaged community.

The above named applicant understands:

- The reduction of the funding match presented in the application is a request that will not be automatically granted.
- The State Water Resources Control Board will review the disadvantaged community information submitted in the application prior to making a decision to accept, modify, or deny such a reduction.
- Should the proposal be chosen for funding, but the requested reduction in funding match be rejected or modified, the grantee is responsible for costs exceeding the grant funding amount to complete the project.
- The granting agency will rescind the grant award if the grantee cannot cover increased costs due to rejection or modification of the request for a reduction of the funding match or adequately restructure the grant proposal so that it can meet the intent of the original proposal.

Authorized Signatory's Signature: _____

Printed Name: _____

Title: _____

Agency: Northwest CA Resource Conservation & Development Council

Date: _____

Attachment G: Project Assessment and Evaluation Plan (PAEP) Outline
Sugar Creek Road Sediment Treatment Project # 41792

I. Project Summary

A. Funding Program:

The Project is supported by the 2018 Timber Regulation and Forest Restoration Fund and local matching funds.

B. Project Description:

This project will prevent sand and smaller sized silt and clay soil particles from filling pools and spawning gravels in Sugar and French Creeks, important Coho streams within the Scott River watershed. The project will result in both short & long term ecological and economic benefits within the watersheds as well as the Scott River. Ecologically, the project will prevent and/or reduce more than 3,705 tons (2,850 yd^3) of road related sediment (derived largely from decomposed granite soils) from reaching French and Sugar Creeks and the Scott River. This volume estimate does not include stream channel downcutting below, or upstream, of the road crossing or fill failures where streams divert down roads and fail over the outboard road slope in places that cannot be predicted. In 1997 and 2005 these types of failures did occur as a result of large storm flows. This project is a stand-alone restoration project, but also contributes to the larger 5C Program effort to restore priority watersheds for the benefit of anadromous salmonid populations.

C. Problem Statement:

i. *Identify or characterize baseline data:* The county roads in the Sugar, Miner and French Gulch watersheds were inventoried using the Direct Inventory of Roads and Treatment survey methods in 2007 and high priority sites were determined based on their potential to fail and deliver sediment to a watercourse. The sites included in this project are estimated to yield reduce more than 3,705 tons of road related sediment (derived largely from decomposed granite soils).

ii. *Identify pollution source categories:* Excessive sediment loads and elevated water temperatures have resulted in degraded water quality conditions that impair designated beneficial uses. This project focuses on sediment. The Scott River watershed has been listed as impaired with relation to sediment since 1992, pursuant to Section 303(d) of the Clean Water Act.

iii. *Identify and describe current restoration activities; BMPs; load reduction activities; prevention activities:* Throughout the Scott River watershed, many individuals, groups, and agencies have been working to enhance and restore fish habitat and water quality. These groups include, but are not limited to, the Siskiyou Resource Conservation District, the Scott River Watershed Council, the Scott River Water Trust, the French Creek Watershed Advisory Group, private timber companies, Siskiyou County and the Five Counties Salmonid Conservation Program, the California Department of Fish and Wildlife, the California Department of Water Resources, the United States Forest Service, and the Klamath River Basin Fisheries Task Force. The past and present proactive efforts of these stakeholders have improved, and will continue to improve, water quality conditions in the Scott River and its tributaries.

Specific BMPs, load reduction activities, and prevention activities undertaken by the Siskiyou County Department of Public Works include:

- Adoption of "A Water Quality And Stream Habitat Protection Manual For County Road Maintenance In Northwestern California Watersheds" (referred to as Roads Manual) ;
- Completion of a County Road Direct Inventory of Roads and Treatment (DIRT) sediment source inventory;
- Periodic training of road crews in water quality BMPs and objectives;
- Annual monitoring and reporting of water quality related road practices.

iv. *Describe the manner in which the proposed best management practices or management measures will be implemented*: All work will be done in compliance with the Roads Manual BMPs. The manual BMPs were approved for General Certification and Waiver of Waste Discharge under North Coast Region Water Quality Control Board Order No. R1-2013-0004. Specifications for outsloping and rolling dips described in the "Road Design Guidelines for Low Impact to Hydrology" (5C Program 2004).

v. *Summarize how the effectiveness of the proposed practices or measures in preventing or reducing pollution will be determined*: The effectiveness of the proposed work will be evaluated by quantifying each type of treatment implemented and verifying whether treatments were installed within design parameters. Additionally, about 20% of treated road segments will be re-surveyed using the Direct Inventory of Roads and Treatments (DIRT) methodology used to identify project sites, estimate potential sediment delivery volumes, and develop initial treatments. Pre and post project photo point monitoring will be done for representative stream crossing and road drainage upgrade sites. Storm flow monitoring including photo monitoring will be done by SPWD road maintenance crews during storm periods.

vi. *Determine "changes in flow pattern" in affected water bodies.* N/A

vii. *Determine economic benefits of implementing the project.* A reduction in road maintenance needs is anticipated as a result of this project. This will have an unquantified economic benefit to the Siskiyou County Department of Public Works in terms of fewer materials, equipment, and time spent on the treated roads, making resources available for use on other roads. An unquantified economic benefit will result for landowners that rely on the road to access property, notably those that manage timber production on their property.

D. Project Activities or Tasks:

All tasks are listed below briefly. Detail is provided for the treatments that will result in the most significant project goals or issues addressed. More detail on all goals is found in Attachment B "Scope of Work" found in the full project proposal.

Task 1. Project Agreement Management

Task 2. Design, Site Review, and Layout

Task 3. Permitting: CEQA

Task 4. Final Site Staking and Photo Point Establishment

Task 5. Mobilization

Task 6. Construction:

6.1 Construct Treatment: SDPW will implement projects within 18 segments of Sugar Creek Road, over approximately 4.7 miles. Treatments quantities included in the construction tasks are approximate and may be revised based on a review of sites and treatments described in Task 2:

a) Photograph construction to facilitate narrative in final report
b) Upgrade ~14 stream crossing corrugated metal pipe (CMP) culverts
c) Install ~15 Critical Dips
d) Install ~7 Ditch Relief Culverts (DRCs)
e) Install ~ 6 Rolling Dips
f) Outslope 250' of road
g) Rock 14,400 ft2 of road surface
h) Install ~45 yd3 of inlet/outlet energy dissipators and slope protection
i) Install erosion control and revegetation of disturbed sites and spoils areas
j) Utilize road manual BMPs for construction, spoils disposal, erosion control and revegetation.

6.2 Implement the necessary final erosion controls upon construction of treatments at the project sites as applicable (e.g., re-vegetation with native seed species/plantings, mulching with certified weed-free material, stabilization of newly excavated streambanks, disposal of any excess spoils material).

Task 7. Post Construction Photo Monitoring

7.1 Evaluating the effectiveness of the proposed work by quantifying each type of treatment implemented and verifying whether treatments were installed within design parameters.

7.2 Resurvey about 20% of treated road segments using the Direct Inventory of Roads and Treatments (DIRT) methodology used to identify project sites, estimate potential sediment delivery volumes, and develop initial treatments.

7.3 Pre and post project photo point monitoring will be done for representative stream crossing and road drainage upgrade sites. Storm flow monitoring including photo monitoring and visual observations will be done by SPWD road maintenance crews during or following storm events.

Task 8. Outreach

8.1 Coordinate with the Klamath Basin Monitoring Program to supply project data. This may include adding the project description and location to the Klamath Tracking and Accounting Program (KTAP).

8.2 Utilize the proposed sites and treatments as part of a training for Siskiyou DPW staff to demonstrate how various sediment treatments and construction Best Management Practices are implemented. Local watershed groups such as the Scott River Watershed Council and Siskiyou and Shasta Valley RCDs will be invited to attend.

Task 9. Final Report

E. Category of Project Activities or Tasks*: Indicate which of the following categories your activities correspond to.*

The overall project activities and goals fall into the Pollutant Load Reduction Category. However, individual Tasks fall into different categories. Tasks 1, 2, 3, 4, 7, & 9 by themselves fall into the Planning, Research, Monitoring and Assessment category. However, these are not stand-alone tasks since all of these Tasks are expressly designed to facilitate

construction of the proposed physical treatments. The bulk of the expenditures are encompassed in Tasks 5 & 6, which both fall within the Pollutant Load Reduction category. Task 8 falls into the Education, Outreach, and Capacity building category. Therefore, the two categories targeted by this project are Pollutant Load Reduction and Education, Outreach, and Capacity categories.

II. Project Goals & Desired Outcomes

The Goals of this Project are to:

1) Prevent and/or reduce more than 3,705 tons of road related sediment (derived largely from decomposed granite soils) from reaching French and Sugar Creeks and the Scott River.
2) Provide approximately 8 Siskiyou County Department of Public Works (SDPW) staff hands-on, educational training on how these types of sediment treatments and construction BMPs are implemented. This will expose newer SDPW staff to these concepts in a more meaningful way than simply reading Road Manual and LITH written BMPs could achieve.

The Desired Outcomes of the project are:

1) Upgrade approximately 14 road stream crossings to ensure they may pass 100 year stormflows
2) Improve road surface drainage through the:
    a. Installation of approximately 15 critical dips at stream crossings
    b. Installation of approximately 6 rolling dips
    c. Installation of approximately 7 ditch relief culverts
    d. Outsloping of approximately 250' of road
    e. Rocking of approximately 14,400 ft^2 of road surface
    f. Installation of approximately 45 yd^3 of inlet/outlet energy dissipaters
3) Install erosion control and revegetation of disturbed sites and spoils areas and utilize road manual BMPs for construction, spoils disposal, erosion control, revegetation, and slope protection
4) Provide training to approximately 8 SDPW staff on sediment treatment work and construction BMPs

III. Project Performance Measures Tables: (see next page)

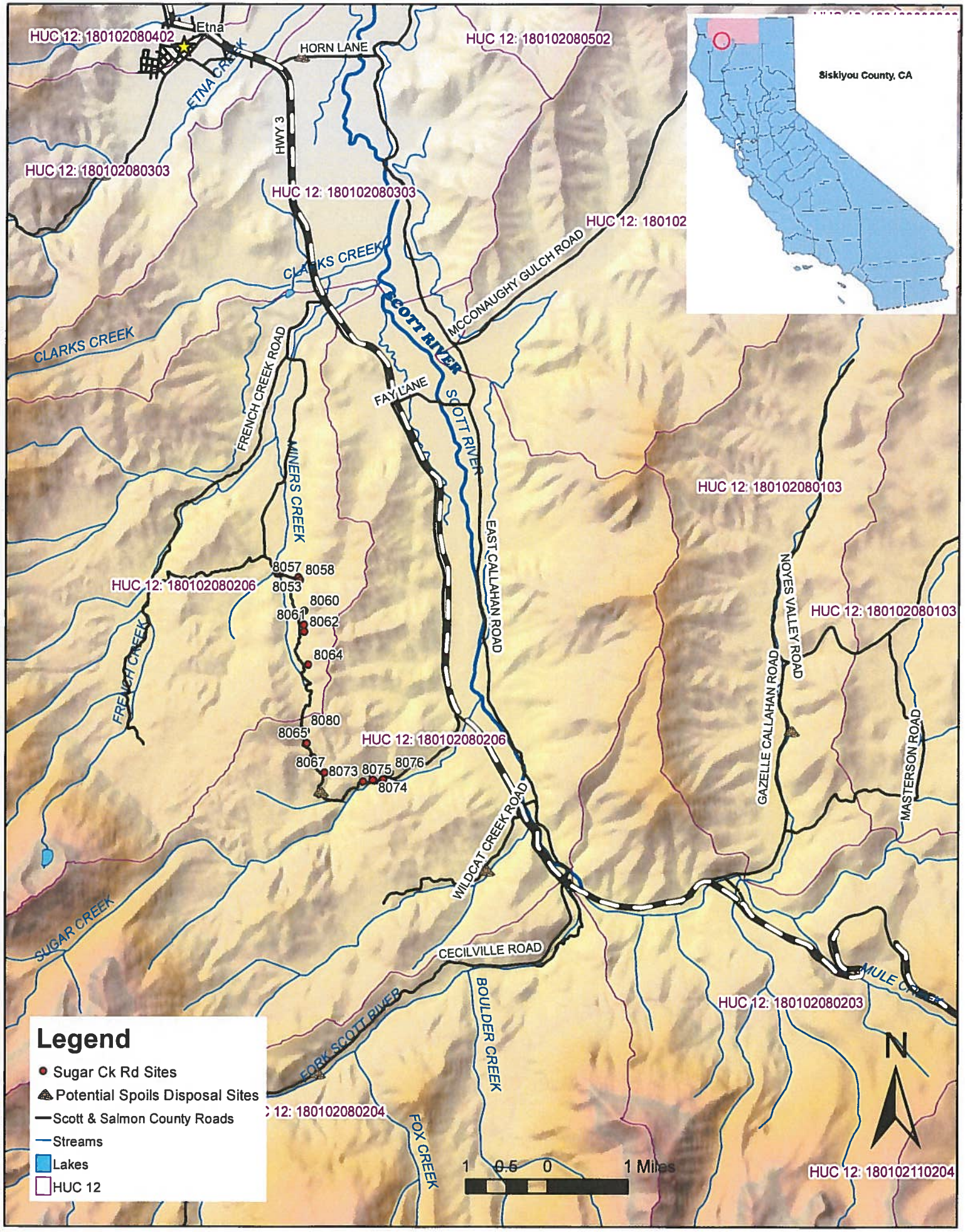
Table 1
Type Category: Pollutant Load Reduction
Sugar Creek Road Sediment Treatment Project #32686

Project Goals	Desired Outcomes	Output Indicators	Outcome Indicators	Measurement Tools and Methods	Targets
1. Prevent and/or reduce more than 2,850 yd^3 of road related sediment (derived largely from decomposed granite soils) from reaching French and Sugar Creeks and the Scott River.	1. Upgrade ~ 14 road stream crossings to ensure they may pass 100 year stormflows 2. Improve road surface drainage through the: a. Installation of ~ 15 critical dips at stream crossings b. Installation of ~ 6 rolling dips c. Installation of ~ 7 ditch relief culverts d. Outsloping of ~ 250' of road e. Rocking of ~ 14,400 ft2 of road surface f. Installation of ~ 45 yd3 of inlet/outlet energy dissipaters 3. Install erosion control and revegetation of disturbed sites and spoils areas and utilize road manual BMPs for construction, spoils disposal, erosion control, revegetation, and slope protection	1. Quantification of stream crossing treatments implemented: a. number of stream crossings upgraded 2. Quantification of road drainage treatments implemented: b. number of critical dips installed c. number of rolling dips installed d. number of ditch relief culverts installed e. length of road outsloped f. surface area of road rocked g. volume of energy dissipaters installed 3. Survey the project area to ensure proper site closure to identify any areas needing additional BMPs	1. Increase in the amount of culvert crossings that are now upgraded as designed (i.e., capable of conveying the Q_{100} peak flows) 2. Verification that road drainage treatments were built according to design specifications. 3. Lack of bare, exposed areas that would result in erosion and sediment delivery to nearby streams.	1. Conduct a re-survey of 20% of treated sites to determine how many sites are still considered to have the potential to deliver >=20yd^3 over a ten year period. a. For stream crossings: If the crossing can pass the 100 year flow, as designed, then the crossing is not considered a treatable site. b. For road segments treated for improved drainage, a survey of the length of ditches and insloped roads, condition of the road surface, as well as a an identification of overall points of sediment delivery with the potential to deliver >= 20yd3 over a ten year period. 2. Conduct an inspection of construction project area to determine if Manual BMPs indicated for each type of site was properly implemented, per specifications.	1. Reduction in the number of treated stream crossing sites estimated to have the potential to deliver at least 20 cyd of road-related sediment to a stream(s). 100% of the crossings re-surveyed are expected to not qualify as a treatable site per DIRT methodology. 2. By the end of the project, a reduction in at least 75% of total yd^3 of sediment that the treated road drainage segments were estimated to have the potential to deliver to a stream(s) at the start of the project. 3. Reduction of delivery sites identified in the DIRT re-inventory by at least 75%. 4. No construction areas identified as improperly treated for erosion and sediment control.

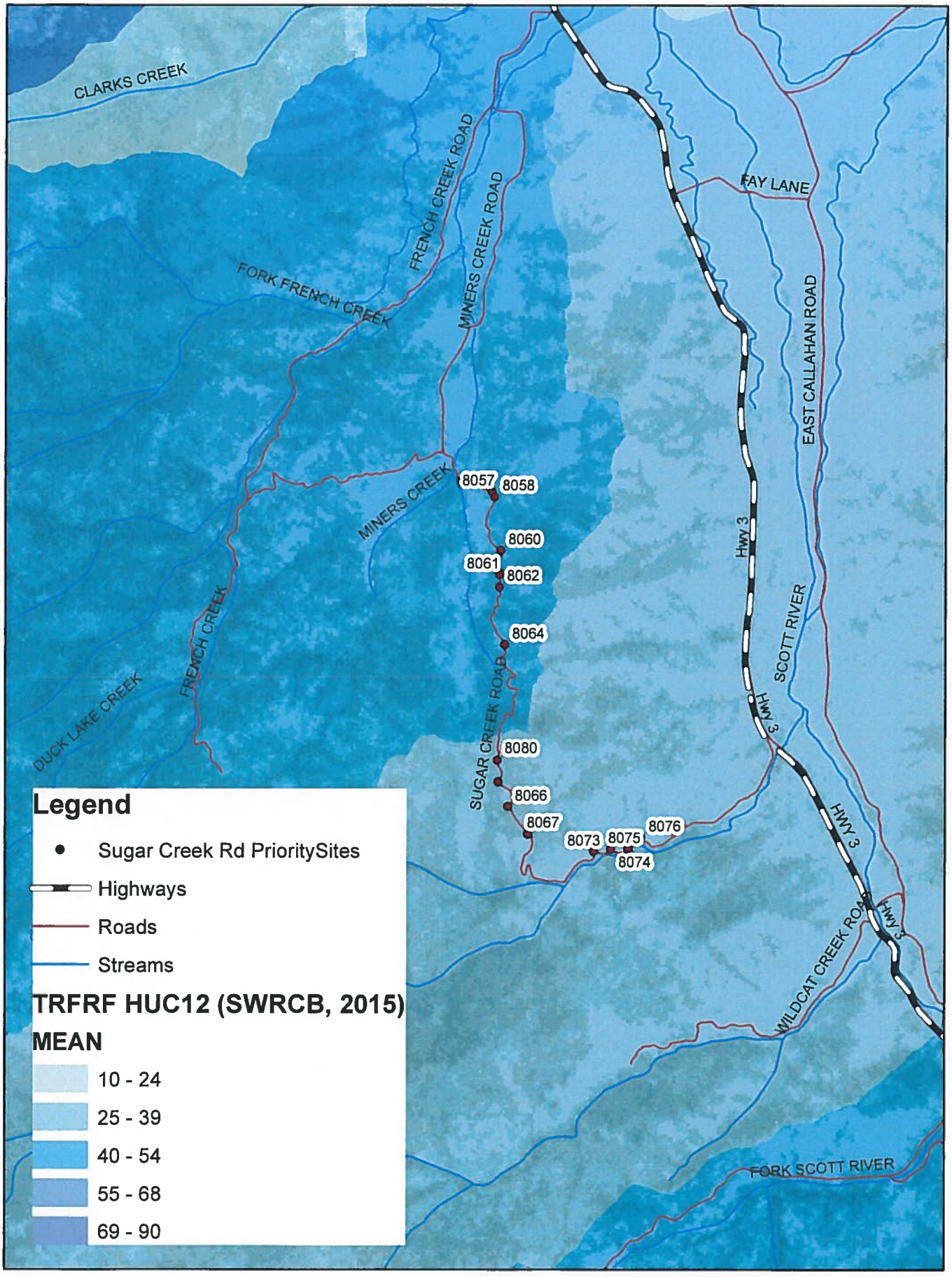
Table 2
Type Category: Education, Outreach, and Capacity
Sugar Creek Road Sediment Treatment Project #32686

Project Goals	Desired Outcomes	Output Indicators	Outcome Indicators	Measurement Tools and Methods	Targets
2. Provide approximately 8 Siskiyou County Department of Public Works (SDPW) staff hands-on, educational training on how these types of sediment treatments and construction BMPs are implemented. This will expose newer SDPW staff to these concepts in a more meaningful way than simply reading Road Manual and LITH written BMPs could achieve.	1. Increase SDPW staff's knowledge and awareness of sediment and construction BMPs. 2. Increase likelihood that SDPW staff will consider use of the treatments and techniques demonstrated as part of their standard BMPs in their capital improvement projects.	1. Number of SDPW staff participating in the training. 2. Time SDPW staff spend in training.	1. Stated knowledge of BMPs featured in training by SDPW staff. 2. Feedback from training participants on likelihood to incorporate training knowledge in daily work.	1. Document the number of SDPW participating in training via sign-in sheets. 2. Track the amount of time spent in training by recording the duration of the training. 3. Gauge the information conveyed to participants by distributing a survey about the training.	1. A minimum of 7 SDPW staff participating in at least 1 full day of training. Other staff may participate in portions of training as schedules allow. 2. At least 80% of SDPW staff conveying that they understood the techniques being presented. 2. A minimum of 50% staff conveying that they would consider using the information featured in the training.

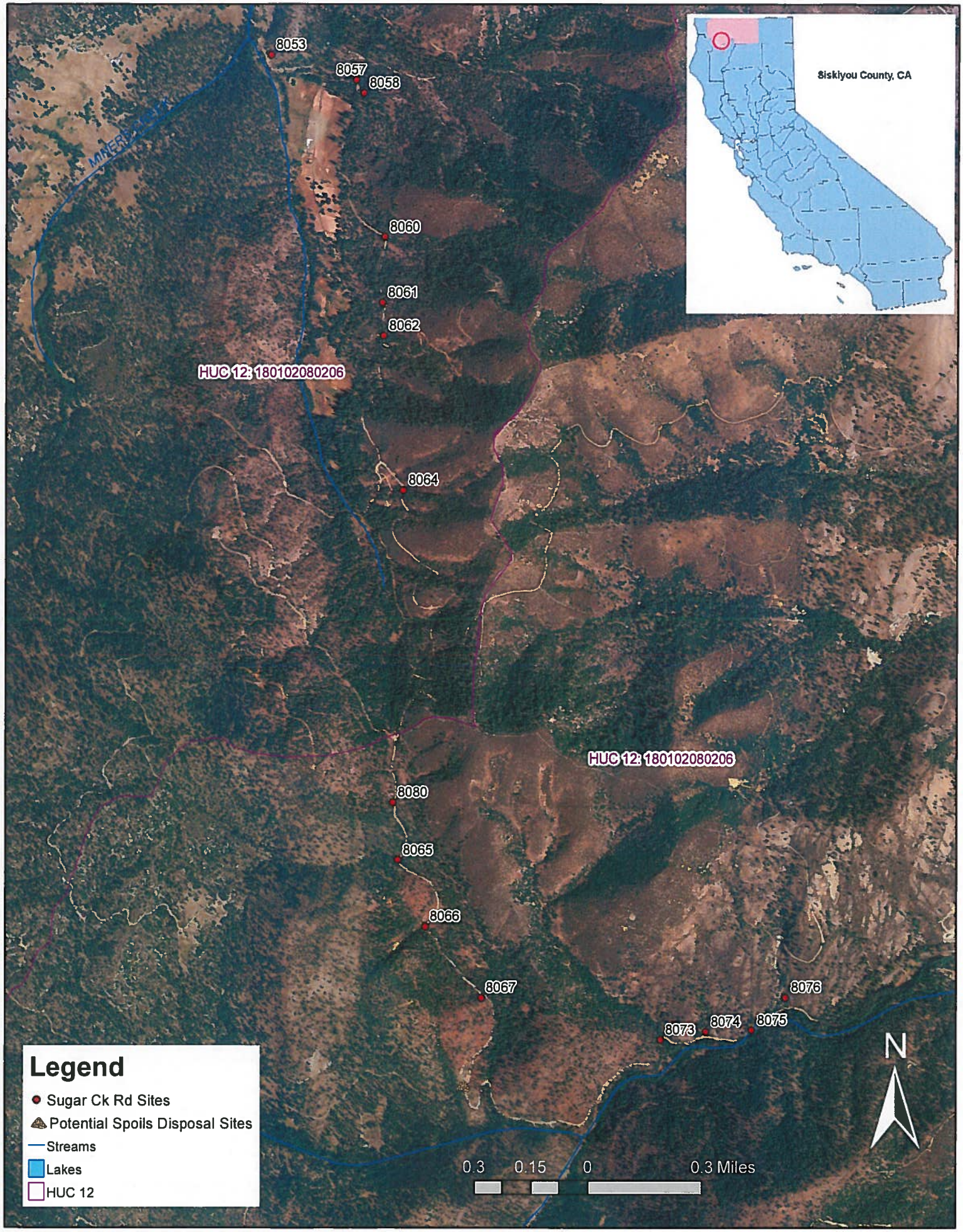
Sugar Creek Road Sediment Treatment Project - Map1



Sugar Creek Road Sediment Treatment Project - Map2



Sugar Creek Road Sediment Treatment Project - Map3



Attachment I: Environmental Clearing Checklist
Sugar Creek Road Sediment Treatment Project # 41792

ENVIRONMENTAL CLEARING

1. Lead Agency (or agencies if compliance needed for both CEQA and NEPA) List on line below

   County of Siskiyou

IMPORTANT: Please note that the complete CEQA checklist was not included given that the project qualifies for a CEQA Exemption.

2. CEQA/NEPA Compliance:

   ☑ Yes (if project has either a CEQA or NEPA document)
   - No (If no, explain why the work is not a "project" as defined by CEQA and identify the section that supports this)
   - Both (if project has both a CEQA and a NEPA document)

3. Environmental Document: Mark which type of document will be submitted for the project
   - Initial Study/Negative Declaration (or Environmental Assessment/Finding of No Significant Impact for NEPA compliance)
   - Environmental Impact Report (EIR) (or Environmental Impact Statement for NEPA compliance)

   ☑ Exemption (if categorical exclusions are used by a federal agency for NEPA compliance, include the list of that agency's exclusions)

   Categorical: CEQA Class 1 Section 15301(c) and (i); and Class 33 Section 1533(d.6)

   Class: 1 and 33

A detailed Project Description will be included as described in Attachment A, Project Narrative.

Reasons why project is exempt: The project is a minor alteration of existing private facilities with no alteration or expansion of use, which will not increase the current capacity of the road or stimulate growth in this area. Many measures designed to protect the area's natural resources will be implemented as indicated in the nature and purpose of the project above. Additionally, the project's setting and resource considerations, as described below, help to illustrate the reasons for the project's exemption.

The project is not within any designated wilderness area, research natural area, or wild and scenic corridors. Some sites are adjacent to known spotted owl habitat or nesting areas. However, all work is

proposed to occur outside of the breeding period for this species, between July 15 and October 15th of each year. No portion of the project site contains mapped fault lines, jurisdictional wetlands, or established floodways. The project is located away from houses and residential areas as well as state scenic highways. The project is not located within a toxic site listed by the California Environmental Protection Agency as provided under Section 65962.5 of the Govt. Code.

Because it will only modify the shape and drainage features of an existing road (primarily upgrading stream crossings to pass the 100 year storm flow and reduce sediment delivery potential and modifying drainage on an existing road) without creating or facilitating a change in use of the land, this project will not alter the setting, aesthetics, land use, or planning of the project areas and community nor will it affect any agricultural, cultural, or mineral resources, housing, public services, recreation, or utilities and service systems. No trees will have to be removed in the course of implementing proposed treatments nor will wildlife habitat be disturbed. No unstable areas will be disturbed. Further, the project will not involve the use or disturbance of any hazardous materials. Project BMPs will protect water and air quality. No adverse noise impacts are anticipated from project construction activities as they will occur during daylight hours and are being coordinated with landowners in the area. Overall, the project will not have a significant adverse impact on the environment, or contribute to a cumulatively significant adverse impact.