

REQUEST FOR CONCEPT PROPOSALS FOR
NORTH COAST RESOURCE PARTNERSHIP
Demonstration Projects and Processes
Round 2
Scott River Watershed Council

"Klamath Meadow Restoration Planning Demonstration Project"



**EXHIBIT A
PROPOSAL COVER PAGE**

Proposal Type

- Concept Proposal for Demonstration Projects and Processes

Organization Name (Lead Applicant)

Scott River Watershed Council

Organization Type

- Federally recognized Indian Tribe
- California State Indian Tribe
- Public agency
- Local or state agency/special district
- Resource Conservation District
- Non-profit organization
- Public utility
- Other: _____

REQUEST FOR CONCEPT PROPOSALS FOR
NORTH COAST RESOURCE PARTNERSHIP
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Scott River Watershed Council

"Klamath Meadow Restoration Planning Demonstration Project"

Contact Name/Title

Betsy Stapleton

Name: Board Chair

Title: Betsy@scottriverwatershedcouncil.com

Email: 707-499-7082

Phone Number (include area code): _____

Organization Address (City, County, State, Zip Code):
PO Box 355, Etna, Ca. 96027

Authorized Representative (if different from the contact name)

Charrna Gilmore

Name: Executive Director

Title: Charrna@scottriverwatershed council.com


Email: 530-5982733

Phone Number (include area code): _____

Certification of Authority

By signing below, the person executing the certificate on behalf of the proposer affirmatively represents that s/he has the requisite legal authority to do so on behalf of the proposer. Both the person executing this proposal on behalf of the proposer and proposer understand that the NCRP is relying on this representation in receiving and considering this proposal. The person signing below hereby acknowledges that s/he has read the entire Request for Proposals document and has complied with all requirements listed therein.

Official Authorized to Sign for Proposal


Signature

5/20/2020
Date

Scott River Watershed Council
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Scott River Watershed Council Statement of Qualifications

Originally established in 1992, the Scott River Watershed Council (SRWC) became an independent nonprofit in 2011. Its mission is to seek solutions to enhance local resources and facilitate community collaboration on watershed issues. SRWC provides leadership to support science-based restoration in Scott Valley. SRWC brings research, education and discussion on natural resource issues to the community and implements restoration projects based on identified community and ecosystem needs.

In 2014, SRWC expanded its original focus of community outreach and education to scientific research and implementation of on-the-ground projects with the installation of the State’s first Beaver Dam Analogues (BDAs). As an innovative restoration technique, BDAs required extensive scientific research as to their effects and the piloting of new permitting pathways, placing SRWC into a leading position in the cutting edge of restoration theory and practice. SRWC’s 2017 BDA Monitoring report- [BDA Coho Salmon Monitoring Report | sr-watershed-council](#)- has become a seminal document on the effects of BDAs in California.

SRWC has expanded its portfolio of restoration projects to include the augmentation of large wood in streams, creation of off-channel habitats, prescribed burning, meadow restoration, fuels reduction and upland road improvements. Reports on several of the projects can be found here: [Council, Projects & Reports](#).

In addition to physical projects, SRWC has performed extensive restoration planning and monitoring. The “Westside Planning Project” [Scott River Westside Planning Project | sr-watershed-council](#) summarized the key findings from a conceptual analysis of the Scott Watershed used to identify and prioritize high value restoration sites within key cold water reaches for Coho salmon rearing. The processes developed during the planning effort are similar to those proposed to be undertaken in this project and are described here to give context to SRWC’s skills to undertake a comprehensive evaluation and planning project.

The long-term objective of the Westside Project was to provide a guiding document to assist practitioners in optimizing restoration funding opportunities to restore both quantity and quality of the target habitat. Planning is the fundamental step to outlining comprehensive restoration treatments which will have the greatest likelihood of addressing the goals, objectives, and targets for the desired recovery targets. The planning project identified locations where the most beneficial and cost- effective restoration actions could be deployed with limited available restoration resources. A suite of complementary techniques were deployed to determine favorable locations where surface and ground-water conditions could be augmented, restored or created to provide cold water drought refuge for aquatic and terrestrial organisms. An identified restoration goal was the increasing summer baseflows from improved groundwater management, which when combined with water conservation efforts, could assist in meeting the goal of providing suitable flow and surface interconnection through reaches prone to subsurface flow. Tasks included clipping the existing LiDAR Digital Elevation Models (DEM) and running an inundation model to identify areas where side channels and floodplain features inundate frequently. The inundation model was utilized to identify discrete sites with relatively frequent floodplain inundation. The identified potential sites were assessed to direct the prioritization of project development. The process undertaken provided a scientifically based road map for prioritizing high value restoration sites, stream reaches and activities to provide cold water refugia in the near term and move towards achieving the watershed scale improvement in geofluvial conditions necessary for climate resilience over the long-term. During the course of the project, SRWC conducted various outreach efforts aimed at landowner and stakeholder engagement. It was important for the success of the Project that a clear and articulate set of objectives were

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communicated to both Scott Valley landowners and stakeholders alike. Meetings, written material, newsletter articles and individual tours and meetings were utilized to achieve this goal. Five on the ground restoration projects have resulted from the planning efforts and have been implemented are in funding and permitting phases.

Additionally, SRWC has initiated and participated in meadow restoration projects and collaboratives. Expanding its stream focused BDA work to meadows, SRWC served as a technical consultant for the installation of BDAs at Childs Meadow, a University of California Davis research project Beavers, Meadows and Climate Change. SRWC worked with the Klamath National Forest to restore Tiger Meadows, and is collaborating with Eco Forest Management (EFM- a private resource management company), Cal Trout, US Fish and Wildlife Service, and Klamath Bird Observatory to plan and implement meadow restoration on the private lands portion of Big Meadows, which will integrate with the proposed project’s planning efforts on the public lands portion of the meadows.

While increasing its skill and capacity for restoration planning and implementation, SRWC has retained its commitment to community engagement and education. For a review of all SRWC programs please see: [Year in Review 2019 | sr-watershed-council](#)

For references please see letters of support.

SRWC Key Personnel Qualifications:

Charnna Gilmore, Scott River Watershed Council Executive Director: Charnna completed a Bachelor of Science degree in Environmental Science in June 2019. She has been the Executive Director of the Scott River Watershed Council since 2014, responsible for budget management, personnel supervision, project management, project monitoring and reporting. Under her direction, the Watershed Council has experienced a 400% growth and completed large wood augmentation, beaver dam analogue, off-channel pond, oak habitat improvement and mountain meadow restoration projects. She has been project manager for on-the-ground and monitoring and planning projects. She is known for her ability to bring together diverse stakeholders for complex discussions on controversial subjects. Prior to becoming the Watershed Council Executive Director, she served on its Board for 7 years. She has extensive business and community leadership experience, having been a real estate broker, owning and managing her own agency, as well as serving on the Scott Valley School Board and coaching high school basketball. She currently exhibits her commitment to community service by being on the Etna City Council and initiating the City’s drought water management planning. Billable rate: \$70.20

Erich Yokel, Scott River Watershed Council Monitoring Supervisor: Erich completed a Bachelor of Sciences Degree from the University of Wisconsin and a Certificate in Geographic Information Systems from the Penn State World Campus. Erich has lived in Western Siskiyou County and worked in the Natural Resource profession since 1998. Erich has successfully performed field work, data collection and analysis and report writing in fisheries, stream habitat assessment, water quality and quantity, topographic surveying and stream restoration. Erich has developed and successfully completed grants for stream and riparian habitat assessment, juvenile and adult Coho Salmon population monitoring, surface water and groundwater quality and quantity monitoring and stream and riparian restoration projects. Erich has extensive training and experience in fish handling, adult and juvenile salmon (Chinook, coho and steelhead) population monitoring, habitat assessment, water quality and quantity monitoring, surveying, geographic analysis and cartography, planning,

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project prioritization and development, restoration implementation and monitoring, data management and analysis and technical report writing. Erich has worked for and with many stakeholders including private landowners, State and Federal agencies, the local Resource Conservation District and Watershed Councils and private consultants. Erich strives to utilize the principles of conservation to protect, enhance, restore and study the natural resources of the Scott River Watershed. Billable rate: \$61.43

Project Team Qualifications:

United States Forest Service, Klamath National Forest: Sam Commarto. Sam is the Recreation, Trails and Wilderness program manager on the Salmon-Scott District. He has spent much of the last eight years becoming familiar with the District - from counting fish in the river, to cutting logs out of trail corridors, to walking ridges on wildfires, Sam has seen a variety of meadows in various conditions throughout the Marble Mountain, Russian, and Trinity Alps Wilderness areas. Sam brings knowledge of wilderness law, regulation, and policy as well as recreation use and impacts in and around Klamath meadow systems. He also has experience with implementation of wilderness restoration projects focused on watershed health, fire suppression repair, and recreation management. Sam will serve as the KNF project team lead and will provide overall project guidance to ensure that the project deliverables meet the goals and objectives for the Forest. Cost share rate: \$800/day for two people

Karen Pope, Ph.D. USDA Forest Service, Pacific Southwest Research Station. Karen is a Research Aquatic Ecologist who collaborates with resource managers and scientists to develop and execute programs of study relevant to the conservation of aquatic biodiversity and restoration of landscapes in the mountains of California. She is a technical expert on ecological effectiveness of stream and meadow restoration, montane amphibian conservation, and restoration of freshwater communities through targeted forest management. She conducts research to improve ecological restoration design to reduce the “restoration debt” in which restoration projects recover 30% lower species diversity than nature. She received her Ph.D. in Ecology from UC Davis studying mountain lake communities in the Trinity Alps Wilderness. She has conducted focused research projects on aquatic habitats in the Klamath Mountains since 2001. Cost share rate \$500/d.

Eco Forest Management: Darin Stringer, Senior Forester. EFM manages over 100,000 acres of forestland in three states including a wide range of habitat types. On our 13k acre Desolation and 26k acre Fort Rock Property we have fenced dozens of springs and meadows to protect them for livestock and removed conifers to release and maintain meadow plant communities. Mr. Stringer, the Senior Forester for EFM has over twenty years working to restore degraded forests including aspen, riparian and meadows. He is the co-author of the Land Managers Guide to Aspen Management in Oregon. <https://catalog.extension.oregonstate.edu/em9005> <http://pacificstewardship.com/silvicultural-implementation/> Coast share rate: \$60/hr

NOAA: Don Flickinger PhD. Don is a member of the Klamath Branch of NOAA Fisheries, located in Yreka, CA. Since 2001, he has participated in salmonid population and habitat monitoring work throughout the Interior Klamath Basin. Since 2003, he has been involved in salmonid habitat restoration projects, including: fish passage/dam barrier removal; side/off-channel habitat restoration; beaver dam analogue projects; upland meadow assessment and monitoring; large/complex wood loading in stream channels; bioengineered instream structures; prescribed fire/TREX training; fish exclusion screen design/testing/dissemination; and roads decommissioning/storm proofing. Cost share rate: \$70.83

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Eli Scott, North Coast Regional Water Quality Control Board. Eli is an environmental scientist with the North Coast Regional Water Quality Control Board. As the Scott and Shasta Watershed Steward, he focuses on watershed-scale TMDL implementation and adaptive management. His technical training in Environmental Science was focused on hydrology and biogeochemistry and his professional career has encompassed biogeochemical research, hydrogeologic consulting, and community organizing. His current position with the Regional Water Board combines these three elements through watershed stewardship, supporting science-driven regulatory and non-regulatory strategies to achieve improvements in water quality and landscape-scale ecological uplift.

Dave Johnson, U.S. Fish and Wildlife Service Partners Program. Dave is a biologist at the Yreka California field office where he has been stationed since 2001. Since joining the Partners Program he has managed over thirty projects focusing on aquatic habitat restoration and forest health. While at the Yreka office, Dave has also worked extensively on Endangered Species Act compliance for federally listed species. Prior to joining the Yreka staff, he worked for the University of Idaho studying methods to control invasive weeds in wetlands of the Columbia River Basin. Dave has a B.S. and M.S. in Fish and Wildlife Management from Montana State University. Cost Share rate: \$116/hr.

Rebecca Reeves, U.S. Fish and Wildlife Service Partners Program. Becca is a Biologist with the US Fish and Wildlife Service’s Partners Program in Yreka, CA. She completed her M.S. in Wildlife Ecology at Iowa State University studying amphibian populations in restored agricultural wetlands. She worked as a restoration biologist at Edwin B. Forsythe National Wildlife Refuge in coastal New Jersey and an Endangered Species biologist in Southern California before coming to Yreka. Her specialties are stream and meadow restoration, and amphibian biology. Cost Share rate: \$116/hr.

Sheeri Hagwood, United States Fish and Wildlife Service, Botanist:

Cost Share rate: \$116/hr.

Crystal Robinson, Quartz Valley Indian Tribe: Crystal is the Environmental Program Director for the Quartz Valley Indian Reservation. She has been monitoring water quality and fisheries habitats since 2001 in the Scott and surrounding mid-Klamath region. Her experience includes 5 years of field work for various nonprofits, state, county and federal agencies. Since 2006, she has been employed with tribal entities managing water, fish, forestry, education and outreach projects. She sits as the Tribal representative on multiple natural resource committees both locally and regionally

California Department of Fish and Wildlife. Specific individuals have not identified at time of submission, but a commitment to participate has been made by the region manager.

NCRP DEMONSTRATION PROJECT AND PROCESSES CONCEPT PROPOSAL BUDGET AND SCHEDULE

Project Name: _____ Klamath Meadow Restoration Planning Demonstration Project

Major Tasks	Task Description	NCRP Task Budget	Funding Match *	Total Task Budget	Scaled NCRP Budget **	Start Date	End Date
Task 1: Project Administration	In cooperation with the County of Humboldt sign a sub-grantee agreement for work to be completed on this project. Develop invoices with support documentation.	\$9,126.88	\$0.00	\$9,126.88	\$7,500.00	7/1/20	7/1/21
Task 2: Project Reporting	Data collection, performance measures, and project reporting of outcomes/lessons learned	\$4,828.80	\$0.00	\$4,828.80	\$3,800.00	5/1/21	7/1/2021
Task 3: Field Studies	SRWC and collaborators will perform field studies including installation of groundwater wells, soil sampling, biology resource surveys (see section 12 of proposal)	\$40,618.60	\$20,240.00	\$60,858.60	\$32,494.88	7/1/20	5/1/21
Task 4; Field Studies	Water Quality and Forest Plots (QVIR Subcontract)	\$53,345.00	\$0.00	\$53,345.00	\$45,676.00	7/1/20	5/1/21
Task 5: Implement restoration actions on private lands	In Big Meadows private lands, fence aspen groves, removing competing vegetation and assess impacts.	\$0.00	\$66,529.00	\$66,529.00	\$0.00	7/1/20	7/1/21
Task 6: Project team support	Once a month bring team members together to plan and evaluate meadow monitoring plans, actions and results and develop conceptual plans. Adaptive management principles will be applied to evaluation, planning and monitoring processes.	\$34,400.80	\$15,908.00	\$50,308.80	\$34,400.00	7/1/20	7/1/21
Task 7: Mileage	SRWC travel to and from remote locations @ \$0.57/mile	\$2,280.00	\$0.00	\$2,280.00	\$1,924.00	7/1/20	7/1/21
Task 8; Office Data analysis	GIS analysis, field data analysis and synthesis, monitoring reporting. See section 12 for detail.	\$20,000.00	\$16,000.00	\$36,000.00	\$18,000.00	9/1/20	5/1/21
Task 9; Aquire Lidar Immagery	Subcontract for Lidar for mapping and GIS	\$25,000.00	\$0.00	\$25,000.00	\$25,000.00		
Project Closeout		\$5,000.00	\$0.00	\$5,000.00	\$4,000.00		
Total NCRP 2020 Demonstration Project Request		\$194,600.08	\$118,677.00	\$313,277.08	\$172,794.88		
<p>* List the sources and status of matching funds: USFS- KNF 2 people, sam Cammarto and others) 8 hrs @ \$800/d x 12 days= \$9,600 Particiapte in fields studies, team meetings and data analysis, committed. Eco Forest Trust, Darin Stringer 24 hrs @ \$60/hr= \$1,440, supervise restoration at Big Meadows plan actions on private meadows, committed. NOAA, Don Flickinger, 24 hrs= \$1700, particiapte team meetings and field activites, committed. USFWS 3 people, David Johnson, Rebecca Reeves, Sheri Hagwood, particiapte team meetings and field activites 8 hrs each/mo @ \$116/hr x 12 months total= \$33,408, committed. USFS, Southwest Research Center, Karen Pope 12 days @ \$500/d= \$6000, Committed. USFWS grant funds to SRWC to implement Big Meadow restoraton, \$56,529 recieved. Rocky Mountian Elk Foundation, grant funds to SRWC to implement Big Meadow restoration, \$10,000 recieved.</p>							
<p>** Is Requested Budget scalable? If yes, indicate scaled totals; if no leave as \$0. Scaled budget represnts a reduction of 2-3 meadows.</p>							

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Exhibit C

Project Name: “Klamath Meadow Restoration Planning Demonstration Project”

1. Abstract: A pilot project in the Scott-Salmon Mountains will evaluate a range of meadow types encompassing approximately 214 acres, to plan restoration actions to improve forest health, fire resilience, and water storage. The project will serve as a template for restoring meadows across the Klamath Region, offering employment and training to disadvantaged residents. A coalition of scientists, agency staff, landowners, watershed groups, Tribal entities and Forest Service staff has formed to support meadow restoration in the region, serving as a technical advisory group. Baseline conditions will be evaluated, and conceptual restoration plans developed, preparing restoration to move forward rapidly in a second, implementation, phase of the project.

2. Project Location: The project will take place in the Scott-Salmon Ranger District of the Klamath National Forest (KNF) and adjacent private lands in Siskiyou County, California. Ongoing evaluations by KNF staff and private landowners have identified 214 acres of meadows that warrant more detailed planning for restoration. These consist of Big Meadows, Meeks Meadows and Hayes Meadows in the Marble Mountains, East Boulder Meadow in the Trinity Wilderness, unnamed meadows in East Fork Scott Project Environmental Assessment area, all of which are within the Klamath National Forest, and 12 acres of unnamed private meadows in the Marble Mountains owned by Eco Forest Trust (held in a permanent conservation easement), a private timber and resource management company. All of these locations lie in the Scott River watershed, an economically disadvantaged community.

3. Project Description: Purpose: Develop conceptual restoration plans and analyze baseline environmental conditions on 214 acres of degraded meadows in the Klamath Mountains of Northern California to support wildlife and plant biodiversity, attenuate floods, store, filter and release water, sequester carbon, reduce fuel loads, thereby improving forest health. Restoration will provide employment in the economically disadvantaged region.

Problem: Meadows are disappearing due to poor grazing management, climate change, and long-term fire suppression, converting productive wet meadows to less valuable habitat types. Environmental services such as carbon storage, groundwater storage, flow metering, habitat for fish and amphibians, natural wildfire barriers and refugia have been lost. Restoring meadows to greater hydrologic and ecological function will offer a greater range and yield of such environmental services.

Project Components: 1) Assessment of meadows for baseline conditions and to plan restoration; 2) Conceptual restoration designs; 3) Monitoring plan and pre-implementation monitoring; 4) Serve as a pilot for the Coastal Klamath Mountain Meadows Partnership, including evaluation of current meadow restoration actions in the private lands portion of Big Meadows.

Building on the successful work of the Sierra Meadow Partnership, their meadow restoration evaluation processes will be followed, however they will be adapted to our region. The project team will meet regularly and engage with experts to receive additional technical input.

Benefits: 1) Improved forest health by reduction of fuel loads in meadow habitats, 2) Fire and climate change refugia due to improved ecological function in the meadows, 3) Storage and metering of precipitation acting as water storage infrastructure in critical salmonid stream headwaters, 4) Improved carbon sequestration by the long term accumulation of organic matter, and 5) Economic vitality from employment increases 6) Development of processes that will allow scaling up of meadow restoration across the region.

4. The goal of the project is to increase the regional capacity to prioritize, develop and implement projects in high ecological value meadow sites in the Coastal-Klamath Mountains in order to improve forest health, fire resilience, and carbon storage. The project will serve as a pilot for development of effective meadow restoration across the region and serve as a building block for the nascent Coastal-Klamath Meadows Partnership. Lessons learned from the pilot will be utilized for regional planning to prioritize and implement landscape level forest health projects focused on meadow restoration. Over the one-year time frame of the project the following objectives will be achieved:

Objective 1: Baseline evaluation of at least 214 acres of diverse meadow types in the Klamath Mountains, with the intention of building template methodologies for meadow evaluation across the region. Baseline studies will include geomorphic, hydrologic, biological, and fisheries resource evaluations in preparation for environmental document development in a future phase.

Objective 2: Completion of conceptual restoration plans and monitoring plans, goals and objectives for 214 acres of meadows. For Big Meadows, the project will build on and expand the on-going planning and

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implementation actions on the private meadow portion of the complex owned by EFM., The goals and objectives for restoration of the meadows will be placed within a formal adaptive management framework with the objective of achieving desired conditions as defined by KNF staff for the public lands and by EFM for the private lands.

Objective 3: A cohesive meadow restoration team with diverse participants will meet regularly (minimum 8 times) and will tailor known meadow restoration evaluation and planning techniques to the Coastal-Klamath Region

Objective 4: The project will serve as a pilot project for disseminating the processes across the region by interacting regularly with the newly formed Coastal Klamath Meadow Partnership and doing a presentation to the Partnership at the conclusion of the project.

Objective 6: Planned restoration in the private portion of Big Meadows will serve as a testing ground for proposed restoration actions.

5. This project will address the following NCRP Goals and Objectives: 1) “*Improve forest health to promote growth in forest stands with enhanced resistance to impacts of wildfire and infestation*” This project will result in mixed age stands associated with open meadows which will create the diversity of habitat and species that fosters disease resistance. The resulting open wet meadows will result in structure forced resilience to fire (Low Tech Process Based Restoration Manual, figure 2.6); 2) “*Grassland and meadow restoration, Reduction of competing vegetation to sustain natural meadows and pastures (grasslands)*” The project will design site-specific meadow restoration that includes the reduction of competing vegetation; 3) “*GHG removals from carbon sequestration*” The healthy meadows resulting from the project will restore net carbon sinks in comparison to degraded meadows, which are net carbon emitters (Sierra Meadow Partnership: <https://www.sierrameadows.org/meadows-matter>) 4) “*Improve Economic Vitality, Create Jobs*” In the short term, a total of 5 people will be employed part time during this pilot phase of the project. In the long term, having a comprehensive, region wide meadow restoration strategy will improve funding and resources to support expanding employment in meadow restoration; 5) “*Protect Salmonid Habitat, Forest management practices that lead to enhanced resilience in watersheds that support anadromous fisheries*” Improving the ecological services of the identified meadows, all of which lie within the Scott Watershed, home to a significant population of SONCC Coho salmon, will improve water storage and enhance base flow resilience downstream; 6) “*Protect and Improve Water Supply, Forest management practices that lead to enhanced water supply, quality, capture, infiltration, and storage*” Restored meadows capture, store and release water, as well as filtering contaminants, resulting in improved water quality and the ability to contribute to late season stream flow.

In addition, the project addresses many of the State Wildlife Action Plan for the Coastal Klamath Province for Wet Mountain Meadow; Fen (Wet Meadow); Mountain Riparian Scrub and Wet Meadow; Subalpine Aspen Forests and Pine Woodlands (Meadows); Western Upland Grasslands habitat type (<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109207&inline> pp. 57-63).

6. Outcomes: The project is a pilot designed to develop scalable, replicable, adaptable, and innovative meadow restoration methodologies and processes that can be disseminated across the region, increasing the pace, scale and scope of meadow restoration. Team members are also part of the evolving Coastal Klamath Meadow Restoration Partnership, and there will be a rich exchange between the project and the Partnership, providing technical and scientific guidance to the project from the Partnership. Until the very recent coalescence of interested parties into the Partnership, there has not been a focus on meadow restoration across the region. This pilot, in association with the Partnership, will significantly accelerate meadow restoration efforts. Healthy meadows add many benefits to forests, in addition to those previously mentioned, meadows are popular recreation locations.

7. The Coastal-Klamath region needs a region wide organization to plan regionally adapted restoration actions, planning, and monitoring, and advocate for the needs of the region. This group is now coming together. Having the “hands on learning” opportunity that this project provides will allow adaptive learning which will accelerate the Partnership’s ability to achieve its larger and broader aims. A diversity of habitats, with the ecological diversity offered by healthy meadows has been shown to improve forest health, offering fire and climate change resiliency. Water retention capacity in upland meadows is an important hydrologic reserve that may help buffer the impacts of climate change by augmenting water supply in late spring and early summer and support the development and preservation of cold-water refugial areas near the mountain front of the valley. SRWC has identified public and private forest lands that offer unique opportunities to investigate the capacity of upland areas in the Scott River Watershed to support these outcomes and seeks to prioritize process-based restoration approaches to reduce fuel loading, conifer encroachment, and loss/simplification of meadow habitat. This approach aims to increase water quality and

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storage in meadows identified for the pilot investigation. The information produced from this approach can then be applied to the wider Klamath Basin and North Coast Region of California.

8. Size and Communities: The project will encompass 214 acres of meadows, all of which lie with the Scott Watershed, however the lessons learned from the project will inform meadow restoration across the Coastal and Klamath Mountains. The immediate community served is the Scott River Watershed which consists of Siskiyou County Census Tracts 6 & 8, both of which are economically disadvantaged communities per the “Disadvantaged Communities Mapping Tool” <https://gis.water.ca.gov/app/dacs/>. The Quartz Valley Indian Reservation (QVIR) lies within the Scott River Watershed and is a member of the project team.

9. In addition to SRWC, **Project partners** include: 1) Klamath National Forest. Multiple KNF staff from the Fisheries, Wildlife, Botany, and Grazing programs will participate on the project team; 2) QVIR's Environmental Program staff; 3) NOAA Fisheries Klamath Branch staff; 4) Eco Forest Management will allow restoration planning on 12 acres of meadows on their property, and Darin Stringer, Senior Forester, will contribute to project planning; 5) US Fish and Wildlife Service staff will participate on the project team, 6) California Department of Fish and Wildlife, and 7) US Forest Service Southwest Research Center. The larger Partnership collaborative group involves United States Forest Service Researchers, US Fish and Wildlife Service staff from across the region, California Department of Fish and Wildlife, and Watershed Groups.

10. Quantifiable, measurable benefits: 1) Baseline environmental studies completed on ~214 acres of meadow habitat; 2) Conceptual restoration designs completed for ~214 acres meadow; 3) A report on the project processes with lessons learned in order to inform future meadow restoration processes and methodologies; 4) A presentation of the project to the Coastal Klamath Meadow Partnership (and others) with lessons learned and recommendations for future regional efforts.

11. Scientific studies, plans, designs or reports: In addition to the utilization of standardized meadow/forest evaluation techniques, including those for groundwater, vegetation, hydrology, biological resources and water quality, the project is designed to test and adapt a variety of GIS tools and national available data sets to the region so that the developed processes can be replicated on a cost effective basis across at a large geographic scale. Monitoring protocols will be reviewed, evaluated, and selected by the project team in the first 6 weeks of the project. For anticipated methods see Section 12.

Standard Tools: 1) Groundwater: 2) Water Quality; 3) Vegetation: 4) Soils 5) Topography 7) Biological Resources 8) Aquatic Resources 9) Hydrology. **More innovative approaches:** May include 1) A tool to look at the change in plant life forms over time in order to look at trends in vegetation cover and potentially identify encroachment <https://rangelands.app/rap/?ll=41.3788,-122.9622&z=16&lc=tree&year=2019&mask=apply&basemap=hybrid&o=0.47> 2) A collection and analysis of historical photos 3) Standardized evaluation and planning methods for Coastal-Sierra Meadows will be reviewed and adapted for the region. 4) Lidar acquisition will provide the basis for both standard and innovative evaluation techniques.

12. Data collection, performance measures, and project reporting of outcomes and lessons learned. The project intends to use a formal Environmental Adaptive Management Process in order to ensure that lessons learned are identified and captured for dissemination. It is anticipated that the first three steps of the process will be achieved.

1) Groundwater/hydrology (Budget Task 3): Groundwater well water surface elevation and water temperature data are uploaded two to three times each year and added to the running record, which is demonstrating the sinusoidal oscillation of both parameters through time. This information has confirmed the warming influence of stored meadow groundwater during winters and its cooling effect during summers. While descending in summers, and then ascending in winters, groundwater surface elevation appears to be mediated in large part by soil type and texture, with large variations in elevation occurring within individual meadows. Such groundwater surface elevation information will be instrumental in evaluating/approximating the water detention and storage capacity of meadows, prior to undertaking restoration actions.

2) Soils (Budget Task 3 & 8): We will GIS map the topography and soils to look for evidence of hydrological connection. As appropriate at individual sites, we would then profile soils for evidence of hydric soils based on these maps to ground truth our determinations. Profiling consists of augering to ~ 20 inches and determine the presence or absence of hydric conditions. This would include, thickness of organic matter horizons, color and fiber analysis, evidence of saturation, depth to water table, and redoximorphic features. We would use these field classifications to determine where meadow restoration historically was and where restoration would be most successful.

Scott River Watershed Council
“Klamath Meadow Restoration Planning Demonstration Project”

3) Meadows Water Quality Monitoring: (Budget Task 4 QVIR): All water quality monitoring will be performed by the Quartz Valley Indian Reservation and will follow the EPA approved 2016 Quality Assurance Project Plan for Water Quality Monitoring (2016 QAPP). The 2016 QAPP identifies the following: 1. the precision and accuracy of selected monitoring equipment, 2. protocols for collection and calibration, 3. certified laboratories, 4. the frequency of duplicate, blank and split samples Total Suspended Sediment, Nutrients, Bacteria and Flow – 2 sites per meadow, 8 meadows Total suspended sediment, nutrients and bacteria will be collected at the most upstream location in each meadow on the most prominent stream feature. A second sample will be collected on the most prominent feature downstream of the meadow. Flow measurements will be collected along with the grab samples to allow sediment, nutrient and bacteria loads to be calculated. Flow measurements will be collected using a Flowtracker. Suspended sediment and nutrient samples will be collected and sent to IEH Analytical Laboratories. Nutrients will be analyzed for the following: total nitrogen, total phosphorus, nitrate+nitrite and soluble reactive phosphorus. Bacteria will be analyzed for E. coli and total coliform by the Quartz Valley Indian Reservation Microbiology Lab (ELAP Cert # 2677). 4) Forestry Monitoring Plots (Budget Task 5 QVIR) – 1 site per meadow. Two protocols are being blended in other National Forests to assess the stand condition of wetlands: The Effectiveness Monitoring of Aspen Regeneration on Managed Lands (Jones et al 2005) and Ecological Effectiveness Monitoring of Conifer Removal in Meadows (USFS, 2017). The plan for this project will be to implement one (up to three - time permitting) forestry monitoring plots on each meadow for implementation of the blended version of these protocols. The summer of 2020 data collection will provide the pre-stand condition that can be later compared to post restoration conditions. Forestry plots of 8m radius will collect the following: conifer species, age, density; vegetative cover data and wetland vegetation. 5) GIS Evaluations (Budget Task 8 & 9) Based on acquired Lidar data, evaluations of historical fire regimes, topography, and hydrology and vegetation change over time will be evaluated.

A comprehensive report for each meadow will be developed that includes the results of all studies and a conceptual restoration plan for each meadow. In addition, a report and presentation on the successes and challenges of the project, as well as recommendations for future meadow assessments and planning in the Coastal Klamath Meadows will be completed.

North Coast Regional Water Quality Control Board

May 20, 2020

North Coast Regional Partnership
c/o Katharine Gledhill
West Coast Partnership
kgledhill@westcoastwatershed.com
(707)795-1235

Dear Ms. Gledhill:

Subject: Letter of Support for Scott River Watershed Council's
Klamath Meadow Restoration Planning Demonstration Project Concept
Proposal for North Coast Resource Partnership Demonstration Projects
and Processes, Round 2, Program Application

The Scott River Watershed Council (SRWC) is submitting a concept proposal for the North Coast Resource Partnership's (NCRP) Demonstration Projects and Processes, Round 2. The SRWC has been an active community-based watershed restoration coordination group since 1992. The North Coast Regional Water Quality Control Board (NCRWQCB) recognizes SRWC as an important partner in promoting watershed restoration and forest health in the Scott River Basin.

The Scott River Watershed is host to some of the most significant spawning and rearing habitat for the Southern Oregon Northern California Coastal (SONCC) Coho Salmon in the Klamath Basin and supports other cold-water dependent species including Chinook Salmon, Steelhead Trout, and Pacific Lamprey. The Scott River has also been listed on the Clean Water Act Section 303d list of impaired waters by the United States Environmental Protection Agency as impaired for elevated instream temperature, fine sediment, and biostimulatory conditions resulting in depressed dissolved oxygen levels. A key driver of these impairments is low summer flow volumes due to groundwater pumping and hydromodification for agricultural production and flood control. The Scott River Watershed's annual water budget also depends heavily on spring snow melt. As the impacts from climate change continue, it is expected that this vital snowpack will decrease.

VALERIE L. QUINTO, CHAIR | MATTHIAS ST. JOHN, EXECUTIVE OFFICER

Water retention capacity in upland meadows is an important hydrologic reserve that may help buffer the impacts of climate change by augmenting water supply in late spring and early summer and support the development and preservation of cold-water refugial areas near the mountain front of the valley. SRWC has identified public and private forest lands that offer unique opportunities to investigate the capacity of upland areas in the Scott River Watershed to support these outcomes and seeks to prioritize process-based restoration approaches to reduce fuel loading, conifer encroachment, and the loss/simplification of meadow habitat. The information produced from this approach can then be applied to the wider Klamath Basin and North Coast Region of California.

As Scott and Shasta Watershed Steward, I am familiar with the project area, the proposed methods for assessment and monitoring, and enthusiastically support SRWC's application. I have committed to participating in the Project Team due to the expected benefits from the project including ecological uplift and water quality. If you have any questions, feel free to contact me at (707)576-2610 or Elias.Scott@waterboards.ca.gov.

Sincerely,

Elias
Scott
Water Boards

Digitally signed
by Elias Scott
Date: 2020.05.20
11:27:03 -07'00'

Eli Scott
Scott and Shasta Watershed Steward

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
1655 Heindon Road
Arcata, California 95521-4573

AR No. 10000WCR2020ARLtrOfSpt

May 13, 2020

North Coast Regional Partnership
C/o Katharine Gledhill
West Coast Partnership
kgledhill@westcoastwatershed.com
707.795.1235

Re: Letter of Support for Scott River Watershed Council's "Klamath Meadow Restoration Planning Demonstration Project" Concept Proposal for the North Coast Resource Partnership Demonstration Projects and Processes, Round 2, Program Application

Dear Ms. Gledhill,

In collaboration with the nascent Klamath/Coastal Wetlands Partnership, the Scott River Watershed Council (SRWC) is submitting a concept proposal for the North Coast Resource Partnership's (NCRP) Demonstration Projects and Processes, Round 2. The SRWC has been an active community-based watershed restoration coordination group since 1992. NOAA recognizes the SRWC as a premier cooperator promoting watershed restoration and forest health in the Scott River Basin. The Scott River is an important tributary to the Klamath River that supports one of the largest populations of coho salmon in California: the core, functionally independent Scott River population of Southern Oregon Northern California Coasts (SONCC) coho salmon.

The National Marine Fisheries Service (NMFS) is aware that this Demonstration Projects and Processes, Round 2 proposal is to develop and implement an assessment, monitoring, and restoration prioritization effort for upland meadows and wetlands located on both public and private forestlands in the Scott River Watershed. NMFS expects the proposed project will benefit the watershed through meadow/wetland assessment techniques that lead to prioritized upland meadow and wetlands restoration benefitting not only meadow-dependent species, but also aquatic and riparian species downslope and downstream, including SONCC coho salmon.

The proposed assessment and monitoring approaches are to work in tandem with natural forest and wetland processes, to better understand and then address excessive fuel loading, conifer encroachment, loss/simplification of meadow habitat, and water quality/storage impairments in meadows selected for this pilot investigation. What is learned during the pilot phase can then serve as a basis for a broader, comprehensive assessment and prioritization of meadow habitat restoration across the Klamath and Coastal Regions of far northern California.

I am familiar with project area, the proposed methods for assessment and monitoring, and enthusiastically support this SRWC application. If you have any questions, please contact me.

Regards,

Jim Simondet, Supervisor
NOAA Fisheries, WCR, Arcata





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
1655 Heindon Road
Arcata, California 95521-4573

AR No. 10000WCR2020ARLtrOfSpt

May 13, 2020

North Coast Regional Partnership
C/o Katharine Gledhill
West Coast Partnership
kgledhill@westcoastwatershed.com
707.795.1235

Re: Letter of Support for Scott River Watershed Council's "Klamath Meadow Restoration Planning Demonstration Project" Concept Proposal for the North Coast Resource Partnership Demonstration Projects and Processes, Round 2, Program Application

Dear Ms. Gledhill,

In collaboration with the nascent Klamath/Coastal Wetlands Partnership, the Scott River Watershed Council (SRWC) is submitting a concept proposal for the North Coast Resource Partnership's (NCRP) Demonstration Projects and Processes, Round 2. The SRWC has been an active community-based watershed restoration coordination group since 1992. NOAA recognizes the SRWC as a premier cooperator promoting watershed restoration and forest health in the Scott River Basin. The Scott River is an important tributary to the Klamath River that supports one of the largest populations of coho salmon in California: the core, functionally independent Scott River population of Southern Oregon Northern California Coasts (SONCC) coho salmon.

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The proposed assessment and monitoring approaches are to work in tandem with natural forest and wetland processes, to better understand and then address excessive fuel loading, conifer encroachment, loss/simplification of meadow habitat, and water quality/storage impairments in meadows selected for this pilot investigation. What is learned during the pilot phase can then serve as a basis for a broader, comprehensive assessment and prioritization of meadow habitat restoration across the Klamath and Coastal Regions of far northern California.

I am familiar with project area, the proposed methods for assessment and monitoring, and enthusiastically support this SRWC application. If you have any questions, please contact me.

Regards,

Jim Simondet, Supervisor
NOAA Fisheries, WCR, Arcata





Quartz Valley Indian Reservation
13601 Quartz Valley Road
Fort Jones, CA 96032

Date: May 14, 2020

North Coast Regional Partnership
C/o Katharine Gledhill
West Coast Partnership
kgledhill@westcoastwatershed.com

Re: Letter of Support for Scott River Watershed Council's "*Klamath Meadow Restoration Planning Demonstration Project*" Concept Proposal for North Coast Resource Partnership Demonstration Projects and Processes, Round 2, Program Application

Dear Ms. Gledhill,

The Scott River Watershed Council (SRWC) is submitting a concept proposal for the North Coast Resource Partnership's (NCRP) Demonstration Projects and Processes, Round 2. The SRWC has been an active community-based watershed restoration coordination group since 1992. The North Coast Regional Water Quality Control Board (NCRWQCB) recognizes SRWC as an important cooperator promoting watershed restoration and forest health in the Scott River Basin. The Scott River is an important tributary to the Klamath River that supports one of the largest populations of coho salmon in California: the core, functionally independent Scott River population of Southern Oregon Northern California Coasts (SONCC) coho salmon.

NCRWQCB is aware that this Demonstration Projects and Processes, Round 2 proposal is to develop and implement an assessment, monitoring, and restoration prioritization effort for upland meadows and wetlands located on both public and private forestlands in the Scott River Watershed. We expect the proposed project will benefit the watershed through meadow/wetland assessment techniques that lead to prioritized upland meadow and wetlands restoration that will benefit not only meadow-dependent species, but also aquatic and riparian species downslope and downstream, including SONCC coho salmon. We also expect significant positive impacts on water quality and supply, which are central to our organization's mission.

The proposed assessment and monitoring approaches are to work in tandem with natural forest and wetland processes, to better understand and then address excessive fuel loading, conifer encroachment, loss/simplification of meadow habitat, and water quality/storage impairments in meadows selected for this pilot investigation. What is learned during the pilot phase can then serve as a basis for a broader, comprehensive assessment and prioritization of meadow habitat

restoration across the Klamath and Coastal Regions of far northern California.

I am familiar with project area, the proposed methods for assessment and monitoring, and enthusiastically support this SRWC application. I have committed to participating on the Project team due to the expected benefits from the project, which include ecological, water quality and economic improvements. If you have any questions, please contact me.

Sincerely,

Crystal Robinson

Crystal Robinson, Environmental Director
Quartz Valley Indian Reservation

North Coast Regional Partnership
C/o Katharine Gledhill
West Coast Partnership
kgledhill@westcoastwatershed.com

19 May 2020

Re: Letter of Support for Scott River Watershed Council's "*Klamath Meadow Restoration Planning Demonstration Project*" Concept Proposal for North Coast Resource Partnership Demonstration Projects and Processes, Round 2, Program Application

Dear Ms. Gledhill,

I enthusiastically support The Scott River Watershed Council's (SRWC) concept proposal for the North Coast Resource Partnership's (NCRP) Demonstration Projects and Processes, Round 2. The SRWC has been an active community-based watershed restoration coordination group since 1992. The Scott River is an important tributary to the Klamath River that supports one of the largest populations of coho salmon in California.

The Round 2 proposal is to develop and implement an assessment, monitoring, and restoration prioritization effort for upland meadows and wetlands located on both public and private forestlands in the Scott River Watershed. The proposed project will use both field and computer-based meadow/wetland assessment techniques to prioritize meadow and wetland restoration projects to maximize benefits for meadow-dependent species and aquatic and riparian species downstream, including coho salmon. The project also aims to provide significant positive impacts on water quality and supply, which are central to the organization's mission.

For the restoration program, the team plans to work in tandem with natural forest and wetland processes to target excessive fuel loading, conifer encroachment, loss/simplification of meadow habitat, and water quality/storage impairments in meadows. The team plans to use a process-based approach to (1) increase floodplain connectivity lost due to human alterations, (2) capitalize on energy within the natural system to do the work of restoration, (3) where possible, use natural materials for restoration that do not over-stabilize project elements, and (4) design projects that allow for learning and adaptive management by step-wise placing the system on a recovery trajectory to meet habitat objectives over time. This approach maximizes habitat recovery gains for minimal costs, because costly construction-based efforts are avoided whenever possible. It also encourages land and project stewardship, another priority of the Scott River Watershed Council for which they have proven successes.

The goal of developing a comprehensive assessment and prioritization of meadow habitat restoration across the Klamath and Coastal Regions of far northern California is ambitious. It is also a great opportunity to use what we've learned over the past decade as restoration practitioners and scientists to create a model restoration program for the state. I am familiar with project area, the proposed methods for assessment and monitoring, and enthusiastically support this SRWC application. If you have any questions, please contact me.

Sincerely,
Karen Pope, Ph.D.
Research Aquatic Ecologist
USDA Forest Service, Pacific Southwest Research Station