Appendix B-8

LAKE TAHOE RESTORATION PROJECTS
ESTIMATED DIRECT COSTS & KEY MILESTONE DATES

Project Name: Meeks Creek Watershed Ecosystem Restoration Project
Agency: USFS - LTBMU
Prepared by: Stephanie Heller
Phone: 530-543-2838
EIP #: 700
SNPLMA Project #_____

Identify estimated costs of eligible reimbursement expenses:

1. **Planning, Environmental Assessment and Research Costs** (specialist surveys, reports, monitoring, data collection, analysis, NEPA, etc.)	$ 25,000	6	%
2. **Direct Labor (Payroll) to Perform the Project**	$ 105,000	27	%
3. **Project Equipment** (tools, software, specialized equipment, etc.)	$ 50,000	13	%
4. **Travel** (including per diem where official travel status required to carry out project, such as serve as COR, experts to review reports, etc.)	$ 6,000	2	%
5. **Official Vehicle Use** (pro rata cost for use of Official Vehicles when required to carry out project)	$ 3,800	1	%
6. **Cost of Contracts, Grants and/or Agreements to Perform the Project**	$ 130,000	33	%
7. **Other Direct Costs** (direct labor for agency personnel to do project procurements; COR; PI; personnel assigned as NEPA lead; personnel assigned to review contracted surveys, designs/drawings, reports, etc.; project manager and/or project supervisor; and contracted costs for project manager and/or project supervisor if contracted separately, public awareness and environmental education)	$ 30,200	8	%
8. **Indirect Costs**	$ 35,000	9	%
TOTAL*:	$ 385,000	100	%

Estimated Key Milestone Dates:

Milestones/Deliverables:	Date:
Ecosystem Assessment complete	December 2005
Ecosystem Restoration Plan complete	December 2006
NEPA for Meeks Creek complete	May 2007
Consturction plans and specifications for Meeks Creek complete	December 2007
Meeks Creek Project construction begins	July 2008
Meeks Creek Project construction complete	October 2010
Final Completion Date: (including monitoring)	2020

APPENDIX I

LAKE TAHOE CAPITAL PROJECT PROPOSAL

Project Name: **Meeks Creek Watershed Ecosystem Restoration Project**	**Capital Focus Area: Watershed Restoration and Habitat Improvement**	**EIP #: 700**
Lead Agency: **USFS - LTBMU**	**Contact:**	Stephanie Heller
Threshold: **F, WL, WQ, SR, V, SC**	**Phone Number:**	530-543-2838
Threshold Standard: **F-2, F-4, W-1, W-2, WQ-1, WQ-2, WQ-5, SR-2, V-1, V-2, V-3, SC-1, SC-2**	**Email Address:**	sheller@fs.fed.us
Is this a multi-year Project? Yes **(If "Yes", describe in the Detailed Project Description below number of years or phases and which year the requested funding will cover)**	**Total Project Cost:**	$5,440,000
	Funding Request in this Round:	$385,000

Project Summary (maximum 200 words):

Continue scooping of possible projects, to provide the FLT with adequate information to provide direction for the project. A contract is in place for the completion of the assessment and potential restoration options. As part of the assessment the LTBMU will determine past, present, and desired ecosystem conditions and develop conceptual restoration solutions. Upon completion of the Ecosystem Assessment, the LTBMU will conduct the NEPA planning process, develop an Ecosystem Restoration Plan, that includes 100% construction plans and specifications for the Project Focus Area, and implement selected projects to restore natural physical and biological processes that sustain healthy ecosystem function in the Meeks Creek watershed.

Detailed Project Description:

The USDA Forest Service, Lake Tahoe Basin Management Unit (LTBMU) requests funding from the Southern Nevada Public Lands Management Act to develop and implement a comprehensive Restoration Plan for the Meeks Creek Watershed Ecosystem.

In August of 2003 the LTBMU initiated a contract with Swanson Hydrology and Geomorphology (SH&G) to conduct a comprehensive assessment of the Meeks Creek Watershed Ecosystem. A draft assessment was completed in July of 2005 with a complete assessment expected December 2005. The purpose of this assessment is to:

1) understand how the ecosystem functioned prior to Euro-American settlement
2) identify human activities that have altered or currently impair ecosystem function
3) compare current ecosystem function to pre-disturbance conditions, and to reference sites around the Lake Tahoe Basin
4) describe future desired conditions for the watershed ecosystem
5) propose management actions to restore the natural physical and biological processes that sustain healthy ecosystem function in the Meeks Creek watershed

In January of 2006 the LTBMU will begin developing a set of proposed actions for the restoration of the Meeks Creek Watershed Ecosystem. These proposed actions will initiate the NEPA planning process and eventually become projects that will be the foundation of the Restoration Plan. Included in this set of proposed actions will be a single proposed action for the Project Focus Area (from the Hwy 89 bridge to the mouth of Meeks Creek at Lake Tahoe). Under their existing contract SH&G will assist the LTBMU with the NEPA process by providing conceptual project designs, technical presentations, and alternatives analyses. Upon completion of the NEPA process, the LTBMU and SH&G will produce a comprehensive Restoration Plan for the entire Meeks Creek watershed, including 100% construction plans and specifications for the selected project in the Project Focus Area. The Restoration Plan will also include monitoring, adaptive management, and maintenance plans for all of its restoration projects.

Upon completion of NEPA and the Restoration Plan, the LTBMU will begin implementing projects. These restoration projects, though not yet developed, will likely involve technically complex, multi-year construction phasing, based on the character of ecological impairment related to the Hwy 89 bridge and the Meeks Bay Marina. It is anticipated that construction will be complete in 2010.

The LTBMU requests Round 7 funding to conduct the NEPA planning process, administer the existing contract, develop project designs and complete the Ecosystem Restoration Plan, and continue ongoing collaboration with project partners such as the TRPA and the Washoe Tribe. Additional funding for this project will be requested through 2008.

Describe the goals and objectives of the project:

The goal of the project is to take the knowledge gained in the Ecosystem Assessment and work cooperatively with watershed stakeholders to restore the natural physical and biological processes that support healthy ecosystem function in the Meeks Creek watershed.

The objectives are to:

- complete the NEPA planning process for the Project Focus Area by summer 2006
- complete an Ecosystem Restoration Plan by late fall 2006
- work with CalTrans and SH&G to design a new Hwy 89 bridge by summer 2006
- complete construction plans and specifications for the Project Focus Area by winter 2006
- obtain regulatory permits and retain contractual services from a qualified construction firm by fall 2007
- implement a restoration project in the Project Focus Area beginning in summer 2008.

work with the Washoe Tribe to develop and implement small ecosystem and cultural restoration projects throughout the watershed (implementation beginning in summer 2006)

Describe the anticipated project accomplishments:

The LTBMU, in cooperation with its partners in the Meeks Creek watershed, will:

- restore two acres of historic Stream Environment Zone (SEZ) and associated fluvial geomorphic function from Hwy 89 to Lake Tahoe
- restore thirty two acres of historic forest/meadow/SEZ plant and animal community complexes in the watershed
- facilitate an active management role for the Washoe Tribe in the watershed, including re introduction of historic Washoe cultural practices such as management of plant communities for pharmoecological purposes
- restore fish passage to 4 miles of stream from Lake Tahoe to the upper watershed
- re introduce Lahontan cutthroat trout to the watershed

- enhance aesthetic values to thirty two acres in the watershed including the Hwy 89 corridor, the Meeks Meadow and the mouth of Meeks Creek
- reduce chronic turbidity of water discharged from Meeks Bay Marina to Lake Tahoe

Describe the "readiness" of this project to move forward (Environmental documentation, etc.):

The LTBMU is operating under an existing contract with SH&G to complete a comprehensive Ecosystem Assessment (complete December 2005) and a long-term Restoration Plan (complete late fall 2006). The nearly complete Ecosystem Assessment has given the LTBMU and the project Technical Advisory Committee (TAC) a thorough understanding of ecosystem function and its current state of impairment. The LTBMU can use this knowledge to proceed with the NEPA planning process from a solid foundation of scientific and sociopolitical data. The LTBMU has fully involved and gained buy-in from its partners on the TAC over the past year.

The LTBMU is also currently under contract with Dr. Michael L. Morrison, a recognized expert in the field of Wildlife Restoration. Dr. Morrison is developing a Wildlife Restoration Plan for the Meeks Creek watershed in coordination with Watershed Restoration Planning. For the past year Dr. Morrison has conducted surveys for vertebrate and invertebrate species (including small and mid-sized mammals, birds, bats, butterflies, and reptiles and amphibians) in the project area and at reference points around the Lake Tahoe Basin. His work will provide an empirical assessment of wildlife conditions in the watershed and become a key component to the Ecosystem Restoration, Monitoring and Adaptive Management Plans.

Describe partnerships for this project. (Include documentation):

The LTBMU has conducted the Meeks Creek Ecosystem Assessment in full cooperation with the TRPA, the Washoe Tribe, the Lahontan Regional Water Quality Control Board, the California Tahoe Conservancy, the California Department of Parks and Recreation, and CalTrans. The LTBMU will continue to work cooperatively with these partners in the development of a comprehensive Restoration Plan.

The LTBMU initiated a Special Agreement with the Washoe Tribe in September 2004, that provides funding which allows the Tribe to continue working collaboratively with the LTBMU to plan and implement projects to achieve mutual benefits to both parties in the restoration of the Meeks Creek watershed (see Appendix 1, Wyden Agreement).

Describe the project monitoring that will implemented as part of this project including:

(1) The questions the monitoring program is designed to answer (This is a preliminary list to be refined and expanded once a proposed action has been finalized.)

What is the current ecological condition of the meadow in the Lake Tahoe basin according to the Wexelmann protocol?

What are the existing hydrological, geomorphic, and biological conditions of stream segments/floodplains targeted for restoration?

To what degree have restoration efforts been successful in improving terrestrial wildlife habitat and populations?

To what degree have restoration efforts been successful in restoring floodplain connectivity,

stabilizing stream banks, and sediment transport regimes?

To what degree have channel restoration efforts been successful in improving fish habitat?

(2) The monitoring approach

An adaptive management monitoring approach will be used to monitor implementation and effectiveness of this project. This monitoring will involve data collection before, during and after the project. The existing contracts with SH&G and Dr. Michael Morrison include development of a monitoring plan that will track project effectiveness relative to trends of target physical and biological processes. The results of this continuous long-term monitoring will trigger project maintenance actions when predetermined goals are not met. Some of the key ecological parameters that will be monitored are:

- dynamic stability of fluvial geomorphic processes under a full range of discharges (stream channel dimension, pattern, and profile, stream channel and floodplain connectivity, etc.)
- expansion and self-perpetuation of riparian plant communities
- species composition, number and diversity of benthic macroinvertebrates, small and mid-sized mammals, birds, bats, butterflies, reptiles, and amphibians
- survival and reproduction of species of special concern such as Tahoe Yellow Cress, Lahontan cutthroat trout, and willow flycatcher

Implementation monitoring will focus on the use of BMPs during construction and determiningg if the project was constructed according to design.

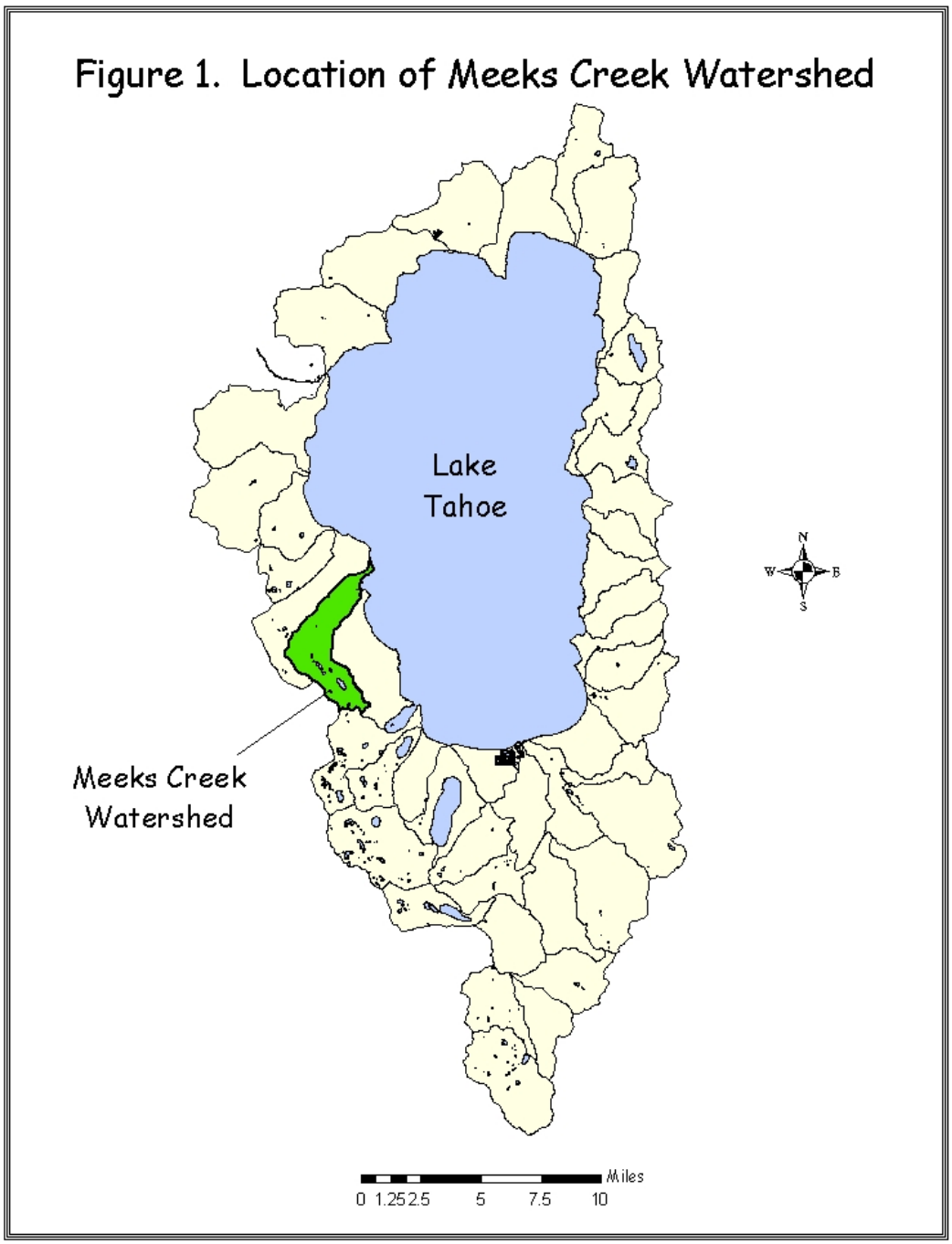
(3) Whether this project monitoring fits in to a larger monitoring or research program?

This project monitoring is part of the LTBMU Adaptive Management Programs effort to monitoring aquatic, riparian and meadow restoration. The overriding purpose of this program is to determine the success of restoration project in order to improve upon future projects.

Describe how the project results will be communicated and made-available to the public.

Information regarding this project will be disseminated to the public, other resource agencies and the broader scientific community. The audiences will be informed respectively through the USFS website, public/interagency meetings, and peer-reviewed publication. Additionally, because Meeks Bay is a high profile location the use of interpretive signs around the project area will also be considered.

Include an 8 ½ X 11 map depicting the project.



Appendix 1. Wyden Agreement between LTBMU and Washoe Tribe of NV and CA

USDA Forest Service FS-1580-1 (11/02)

COST SHARE AGREEMENT
COST REIMBURSABLE AGREEMENT
(Reference FSH 1509.11)

1. Federal Identifier No.	2. Amend. #	3. Authority	4. Exp. Date
04-PA-11051900-027		Wyden, Pub.L.105-277, as amended	09/30/2008

5. Agency			6. Cooperator		
Name USDA Forest Service, LTBMU, Ecosystems Restoration			Name Washoe Tribe of Nevada and California		Taxpayer ID # 88-0120754
1st Line Address 35 College Drive			1st Line Address 919 Highway 395 South		
2nd Line Address			2nd Line Address		
City South Lake Tahoe	State CA	Zip Code 96150	City Gardnerville	State NV	Zip Code 89410

7. Agency Principal Contact	8. Cooperator Principal Contact
Name Jim Howard	Name Marie Barry
Phone: 530.543.2657	Phone: 775.265.8682
Email: jmhoward@fs.fed.us	Email: marie.barry@washoetribe.us
1st Line Address (enter address if different than above):	1st Line Address (enter address if different than above):
2nd Line Address	2nd Line Address
City / State / Zip Code	City / State / Zip Code

9. Purpose - give brief explanation of what parties going to do (attach extra sheets as needed)

USDA Forest Service, LTBMU, Ecosystems Restoration (ER) will conduct ecosystem assessments and restoration plans in the Meeks, Tallac, Taylor, and Spring Creek watersheds. As part of these comprehensive assessments and long-range restoration plans, Washoe Tribe Environmental Protection staff will contribute time equal to .5 pft per year to assist ER in asessing historic conditions, determining future desired conditions, and planning projects.

10. Statement of Mutual Benefits and Interest (attach extra sheets as needed)

Under the Sierra Nevada Forest Plan Amendment the LTBMU is directed to restore ecosystem function and manage its lands to maximize multiple resource benefits in the Lake Tahoe Basin. Because the Meeks, Tallac, Taylor, and Spring Creek watersheds contain Washoe ancestral lands, and because the Washoe Tribe manages the Meeks Bay Resort and Campground under Special Use Permit with LTBMU, the Tribe also has a vested interest in restoring ecosystem function and managing these lands to maximize multiple resource benefits. Through coordinated and cooperative planning between LTBMU and the Washoe Tribe, an effective and mutually beneficial plan can be developed for the future management of these lands.

11. Funding Summary (attach detailed financial plan to support summary)

Federal	Non-Cash	Inkind	Reimb. Coop.
Sub-Total Funding	125,160	0	30,000
Total Federal Funding	$155,160.00		

Non-Federal	Non-cash	Inkind	Cash
Sub-Total Funding	0	0	0
Total Non-Federal Funding	$0.00		

12. Job Code (for payment to cooperator): NFVW0904

13. Agency Administrative Contact	14. Cooperator Administrative Contact
Name: Karine Wagner, Grants & Agreements Coordinator	Name: Marie Barry
Phone: 530/587-3558	Phone: 775/265-8682
Email: karinewagner@fs.fed.us	Email: marie.barry@washoetribe.us

15. Approval Section (this agreement is effective as of the last date written below)

Agency Approval	Cooperator Approval
Signature: [signature] Date: 9-20-04	Signature: [signature] Date: 9/16/04
Title: Forest Supervisor	Title: Chairman For Chairman Wallace