

**From:** [Murano, Taro@Waterboards](mailto:Murano_Taro@Waterboards)  
**To:** [Petruzzelli, Kenneth@Waterboards](mailto:Petruzzelli_Kenneth@Waterboards); [Henriouille, Diana@Waterboards](mailto:Henriouille_Diana@Waterboards); [Feiler, Stormer@Waterboards](mailto:Feiler_Stormer@Waterboards); [Anderson, Skyler@Waterboards](mailto:Anderson_Skyler@Waterboards)  
**Subject:** FW: Revised Scope of Work and Budget for 15 NFWF Stanshaw II Part B - NFWF Grant # 040710  
**Date:** Friday, April 15, 2016 1:55:12 PM  
**Attachments:** [40710 NFWF Stanshaw II Revised Budget - Final.xlsx](#)  
[Stanshaw Creek Water Conservation Assessment - Phase II - Revised Scope of Work - part B - 40710 - Final.docx](#)

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Just spoke with Will and he sent this over. Let me know if you have already seen these. I don't think I have.

**From:** Will Harling [mailto:will@mkwc.org]  
**Sent:** Friday, April 15, 2016 1:54 PM  
**To:** Murano, Taro@Waterboards  
**Subject:** Fwd: Revised Scope of Work and Budget for 15 NFWF Stanshaw II Part B - NFWF Grant # 040710

Here you go Taro. I think this budget had some errors that I fixed later...

W

----- Forwarded message -----

**From:** **Will Harling** <[will@mkwc.org](mailto:will@mkwc.org)>  
**Date:** Wed, Mar 16, 2016 at 12:13 PM  
**Subject:** Revised Scope of Work and Budget for 15 NFWF Stanshaw II Part B - NFWF Grant # 040710  
**To:** Anne Butterfield <[Anne.Butterfield@nfwf.org](mailto:Anne.Butterfield@nfwf.org)>

Hi Anne,

I have worked with our engineer HJoey Howard and the landowners at Marble Mountain Ranch (MMR) to revise our request for Part B of the Stanshaw Creek Water Conservation Assessment – Phase II project. Please have the review committee check this out and let me know if this is acceptable. I have provided a little background for the review committee on this project below.

The SWRCB has required extensive work to be done in the short term to prevent MMR owners Doug and Heidi Cole from being sent a Cleanup and Abatement Order, which would make this a mitigation project that would be ineligible for most grant funding. This includes modifying the outflow of the ditch to Irving Creek to prevent further erosion, conducting extensive maintenance on the ditch line, creating a revegetation plan for erosion caused by the ditch, installing pipe in the ditch by May 15th to convey water for domestic and agricultural needs May 15 - Oct 31 (currently no funding for this!), and engineering a larger fix to the system including piping the entire diversion, designing and installing an engineered headgate, and piping return flows back to Stanshaw Creek, as well as applying for funding to cover implementation of these long term fixes.

The scope of work to be accomplished is beyond our original funding for this project (with just the planning alone). If there are any reserve funds in NFWF Coho Enhancement Fund that might cover some or all of the costs of the pipe needed for the immediate project, or other potential funding sources please let me know as soon as possible.

Sincerely,

Will Harling

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Will Harling, Director  
Mid Klamath Watershed Council  
Orleans/Somes Bar Fire Safe Council  
PO Box 409  
Orleans, CA 95556  
Phone: 530.627.3202  
Email: [will@mkwc.org](mailto:will@mkwc.org)

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## Stanshaw Creek Water Conservation Assessment – Phase II - Revised Budget

NFWF Grant #: 8008.15.040710 / 2010-0500-025							
Part B							
				Amount Requested	Soft Cost Share	Hard Cost Share	Total Project Cost
<b>PERSONNEL SERVICES</b>							
<b>Level of Staff</b>	<b>Number of Hours</b>	<b>Hourly Rate</b>					
<b>Regular Staff: Teaching, Inventory, Monitoring, Design &amp; Layout</b>				\$ -	\$ -	\$ -	\$ -
Program Director	100	35.79		\$ 3,579	\$ -	\$ -	\$ 3,579
Senior Fisheries Technician	32	23.96		\$ 767	\$ -	\$ -	\$ 767
Fisheries Monitoring Program Coordinator	50	20.36		\$ 1,018	\$ -	\$ -	\$ 1,018
Fisheries Field Technician 1	32	16.95		\$ 542			\$ 542
Staff Benefits & Payroll Taxes (with PTO & Retirement) 36%				\$ 2,126	\$ -	\$ -	\$ 2,126
<b>TOTAL Gross wages</b>				<b>\$ 5,906</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 5,906</b>
<b>TOTAL Benefits &amp; Taxes</b>				<b>\$ 2,126</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 2,126</b>
<b>TOTAL PERSONNEL SERVICES</b>				<b>\$ 8,032</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 8,032</b>
<b>Description</b>	<b>Number of Units</b>	<b>Units</b>	<b>Unit Price</b>				
<b>Subcontractors</b>							
Cascade Stream Solutions, Inc (Engineer)	180	hours	100	\$ 18,000	\$ -	\$ -	\$ 18,000
Marble Mountain Ranch	300	hours	36	\$ -	\$ 10,800	\$ -	\$ 10,800
The Electrician, Inc.	40	hours	50	\$ 500	\$ 1,500	\$ -	\$ 2,000
<b>Subtotal Subcontractors</b>				<b>\$ 18,500</b>	<b>\$ 12,300</b>	<b>\$ -</b>	<b>\$ 30,800</b>
<b>Materials and Supplies</b>							
6" PVC Irrigation Pipe	3700	lf	6.2	\$ -	\$ -	\$ 22,940	\$ 22,940
6" PVC Fittings	50	ea	27	\$ -	\$ -	\$ 1,350	\$ 1,350
Temporary Headgate Materials	1	ls	800	\$ -	\$ -	\$ 800	\$ 800
Culvert for Irving Creek erosion mitigation	1	ls	2000	\$ -	\$ -	\$ 2,000	\$ 2,000
Swoffer Meter Propeller Assembly	1	assembly	90	\$ 90	\$ -	\$ -	\$ 90
<b>Subtotal Materials and Supplies</b>				<b>\$ 90</b>	<b>\$ -</b>	<b>\$ 27,090</b>	<b>\$ 27,180</b>
<b>Operating Expenses</b>							
Mileage	1574	Miles	0.54	\$ 850	\$ -	\$ -	\$ 850
<b>Subtotal Operating Expenses</b>				<b>\$ 850</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 850</b>
<b>SUBTOTAL</b>				<b>\$ 27,382</b>	<b>\$ 12,300</b>	<b>\$ 27,090</b>	<b>\$ 66,862</b>
ADMINISTRATIVE OVERHEAD @ 19.85				\$ 5,435		\$ 5,377	\$ 10,813
<b>GRAND TOTAL</b>				<b>\$ 32,818</b>	<b>\$ 12,300</b>	<b>\$ 32,467</b>	<b>\$ 77,675</b>
SOFT COST SHARE %							
HARD COST SHARE %							
SOURCE AND AMOUNT OF COST SHARE :				The Electrician, Inc	\$ 1,500	soft	
				Marble Mtn Ranch	\$ 10,800	soft	
				Irrigation Pipe (Not Determined)	\$ 32,467	pending	
				<b>TOTAL</b>	<b>\$ 44,767</b>		

**Revised Scope of Work for Stanshaw Creek Water Conservation Assessment – Phase II**  
**NFWF Grant #: 8008.15.040710 / 2010-0500-025**

**Summary**

MKWC has completed Part A of this contract (see attachment #1 for recent Annual Report, we will be submitting a final invoice for Part A soon), and is submitting a revised Scope of Work and Budget to allow for implementation of Part B, which would include the tasks outlined below. Please note that due to specific requirements from the State Water Resources Control Board outlined in their summary opinion documents on the Marble Mountain Ranch (12-3-15), we have revised the scope of work to address their requirements in Part B of this contract.

**Tasks 1 and 2. Completed. See Attachment #1 for details.**

**Task 3. Follow-Up Site Surveys and Assessment**

This task will include additional field surveys, survey data processing, and base map production. The project team will survey the general alignment of the water distribution network. The survey will begin at the water diversion on Stanshaw Creek. Follow-up surveys will be conducted to further develop identified potential alignments and locations for alternative configurations of the water system, hydropower plant, points of diversion, and conveyance routes. Elevations and distances collected by the survey will be used in subsequent tasks for hydraulic and energy production calculations as well as for developing quantities for cost estimates.

**Task 4. Energy Audit**

A qualified energy professional will conduct a facility investigation to identify current energy use and identify opportunities to improve energy transmission and consumption efficiency. A brief letter report will:

1. Estimate current energy use by season;
2. Identify site-specific recommendations for energy production alternatives and costs for efficiency upgrade options;

**Task 5. Water Efficiency Study and Concept Alternatives**

This task will study existing water use and identify methods to reduce consumption, identify water diversion conveyance improvements that protect aquatic organisms and reduce transmission losses. The project team will develop concept alternatives consistent with recent SWRCB and NMFS specifications that identify operation methods and infrastructure that reduce diversion flows.

The project team will document water availability, existing use, and demand for irrigation, fire protection, domestic consumption, and power generation. The water use and demand will be assessed on a seasonal basis. Information from the energy audit will be used to identify potential reductions to power needs. System modifications and upgrades will be assessed to identify means to reduce stream diversion,

particularly during critical periods. Alternative power generation facilities will be evaluated to identify improvements to water use.

#### **Task 6 (NEW). Short Term MMR System Modifications to Meet SWRCB/NMFS Requirements**

The Regional Water Quality Control Board has issued an opinion on Marble Mountain Ranch's (MMR) water right (12-3-15), which includes adherence to NMFS instream flow requirements for Stanshaw Creek. MKWC and Cascade Stream Solutions, Inc. (CSS), will work with MMR, the SWRCB, and other stakeholders to identify actions to comply with the opinions and directives issued by the SRWCB. These actions include designing a water distribution system to convey water to MMR that meets NMFS instream flow requirements in the short term (2016-2017) and long term (2017 on).

In order to meet the short term conditions of the SWRCB and NMFS, we are requesting a portion of the funds be used to install a 6" diameter pipe in the existing ditch with a temporary headgate before May 15, 2016. This pipe is sized to convey consumptive flows (0.31cfs), or 10% of Stanshaw Creek flow at the Point of Diversion (POD), (whichever is less), to MMR between May 15 and October 31. Estimated costs of these expenses will be covered by cost savings on the energy efficiency analysis. Additionally, a short term modification to the MMR water system will be an engineered design for the outflow to Irving Creek from the MMR ditch where a head cut is causing active erosion into Irving Creek.

#### **Task 7 (NEW). Water Quality Protection**

The SWRCB brought up new concerns regarding the potential for ongoing erosion associated with the operation of the MMR ditch, and erosional features from past overtopping/diversion events. MKWC and CSS will work with stakeholders to address these concerns through this proposal.

**Erosion Assessment** - Assess slopes between the upper ditch and Stanshaw Creek and the streambed of Stanshaw Creek and Irving Creek and the unnamed tributary to Irving Creek for stored sediment deposits, and erosional sources associated with the past and current failures of the ditch. Identify all erosional issues and those that should be corrected, propose corrective designs and provide a schedule for implementing corrective measures.

**Develop Water Quality Sampling Plan** - Ensure that water used onsite and carried in the ditch is treated/protected as necessary to minimize inputs of pollutants in the flow through process. Develop a sampling plan to assess the quality of water in the ditch as it passes through the ranch property for potential sources of fecal coliform, total coliform, total petroleum hydrocarbons, temperature, and nutrients. The sampling plan will assess water quality above the diversion and ranch complex, and below the ranch complex to evaluate if there are any potential contaminants entering the surface waters of the ditch or pond.

### **Ditch Assessment**

- a. Evaluate the entire ditch system, identify all features and locations susceptible to failure by any of the physical processes and mechanisms described herein, (including but not limited to ditch seepage, berm fill saturation, upslope cutbank stability), identify locations where there is potential for sediment delivery to receiving waters in the event of a failure, develop mitigations including design and construction standards and an implementation schedule as necessary to complete the defined scope of work.
- b. Develop and submit for approval a ditch operation and maintenance plan that includes an inspection and maintenance schedule, specifying those measures to be incorporated/ constructed and steps to be taken to ensure that the slopes above the ditch do not fail into and block the ditch, that water seepage from the ditch does not saturate underlying materials and result in failure, that the ditch does not overtop the berm, that the berm does not fail, and that sediment does not deliver from the ditch to waters of the state.

### **Progress Reports to SWRCB**

Progress reports will be submitted quarterly by MKWC to update the SWRCB, NFWF, and other stakeholders on compliance actions. Progress reports will include an update on project development and permitting, a description of steps taken to develop and implement the required plans, and any unforeseen circumstances that may affect progress on meeting the deadlines and requirements of this Order.

### **Restoration and Monitoring Implementation**

MKWC will work with the owners of MMR to oversee implementation of restoration and monitoring actions.

### **Restoration and Monitoring Plan Reporting**

MCWC with assistance from CSS and other stakeholders, will collect information and begin preparation of a restoration and monitoring plan to submit to the SWRCB when restoration actions are completed. This will likely happen after this project has ended, but data for this report will be collected through this project.

## **Task 9 (New). Ditch Piping and Temporary Headgate**

Prepare construction plans and details for a headgate, piping, and sediment traps to supply water to meet domestic, irrigation, and power needs. Preliminary engineering calculations to meet NMFS instream flow requirements suggest that the installation of a six inch pipe to convey consumptive use water to Marble Mountain Ranch for the period from May 15 – October 31 is appropriate. This option is supported by all stakeholders. A temporary headgate will be constructed to prevent entrainment into the pipe, which will be laid directly into the ditch bed.

**Task 10 (NEW). Flow Monitoring**

Monitor flows every two weeks between May 15 – October 31<sup>st</sup>, and work with MMR owners to partition flows into the MMR water system consistent with the NMFS instream flow recommendations. Flows will be taken with a swoffer meter in Stanshaw Creek above and below the POD, and in the ditch just before the head gate. Instream flow measurements will be done by the Mid Klamath Watershed Council and shared with stakeholders within a week of flow measurements.

ATTACHMENT #1:

**Annual Report Summarizing Fulfillment of Part A of Stanshaw Creek Water Conservation  
Assessment - Phase II# : 8008.15.040710/2010-0500-025**

**National Fish and Wildlife Foundation  
Klamath Fund 2015 Annual Programmatic Report**

*\*Fill in all shaded areas*

<b>1. Summary of Accompli shments for External Reportin g.</b> Please provide a brief descriptio n (four to six sentence s totaling no more than 200 words) for use by the public, governm ental agencies and/or other external partners. This summary should include the following:	<b>Project Name and Number:</b>	Stanshaw Creek Water Conservation Assessment - Phase II# : 8008.15.040710/2010-0500-025
	<b>Recipient Organization:</b>	Mid Klamath Watershed Council
	<b>Date Submitted:</b>	1/15/16



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Preliminary analysis of physical conditions at Marble Mountain Ranch and the existing water system was completed by Cascade Stream Solutions and maps were provided to project partners. A legal review of the draft alternatives to be analyzed under the next phase of this project, as well as of the SWRCB documents released December 3, 2015, was completed by Lennihan Law. MKWC director Will Harling

worked with stakeholders to further define potential project alternatives, clarify stakeholder issues and concerns, and set up a stakeholder meeting in early January 2016, to develop a plan for developing physical solutions through Phase III of this project.

## **2. Full Summary of Project Activities**

. Please describe and quantify (using the approved metrics if referenced in your Project Proposal) progress made on

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the primary activities conducted during this reporting period. Briefly explain how the activities completed during this reporting period accomplished or exceeded the original project objectives specified in the Project Proposal. Provide any further information (such as unexpected outcomes) important for understanding the project

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activities  
and  
outcomes

When this project was initially funded early in 2015, we were expecting a final decision by February 2015 by the State Water Resources Control Board (SWRCB) on their opinion on the validity and amount of the Marble Mtn Ranch water right, and possible physical solutions to meet the needs

of threatened coho salmon in lower Stanshaw Creek, as well as water users on Stanshaw Creek. Unfortunately, the SWRCB did not release their report until December 3, 2016. Some portions of this project were completed in anticipation of an earlier release date of the SWRCB reports, while other portions, including



the energy audit, were postponed until these reports were released. The following tasks have been completed or partially completed in 2015.

**Task 1.  
Preliminary  
Survey,  
Site  
Assessment and  
Power  
Generation  
Capacities to  
Inform  
Stakeholder  
Negotiations**

An initial field survey and preliminary survey data processing

was completed by Cascade Stream Solutions. This included a survey of the general alignment of the water distribution network and initial proposed alternative alignment using the existing point of diversion. The surveys were used to develop a base map that shows the schematic layout of the existing network. Initial elevations and distances collected by the survey will be used in subsequent tasks for hydraulic and energy production calculations as well

as for developin  
g quantities  
for cost estimates,  
but the primary  
use was to inform  
stakeholde  
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ns over agreed  
upon diversion  
amounts to  
balance needs of  
the landowner  
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coho salmon  
rearing in Stanshaw  
Creek.

**Task 2.**  
**Legal support  
for Physical  
Solutions  
Process  
and Developin  
g Agreemen  
ts and Assuranc  
es**  
The services of

Martha Lennihan and Lennihan Law were retained to interrelate water rights with physical solutions, and to advise regarding regulatory approaches best suited to achieve physical solutions. She also advised on the implications of the SWRCB documents released Dec. 3, 2016.

Tasks 3-5 will be initiated through funding from this grant in the next few months,

and finalized with funding from Phase III of this project.

**3. Project Timeline/  
Budget.**

Please describe whether the activities were completed on schedule and within budget, and provide details with respect to any variances in the schedule and/or budget (per the Annual Financial Report).

Our timeline was delayed due to

delayed release of the SWRCB reports, however tasks 1-2 have been completed. We expect to complete the remaining task by the new project end date of July 15, 2016.

#### **4. The Future.**

Briefly describe the activities that are expected to be completed during the next reporting period.

Tasks 3-5 will be completed during the next reporting period.

**5. Project Documents.** Please include in your annual programmatic report, the following:

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The  
project  
base map  
create by  
Cascade  
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report.