

submitted to  
Linda Hansen

**Sierra Nevada Conservancy-Progress Report**

**Sierra Nevada Conservancy Grant Program  
Safe Drinking Water, Water Quality and Supply, Flood Control  
River and Coastal Protection Act of 2008 (Proposition 84)**

**Grantee Name:** Truckee River Watershed Council

**Project title:** Lower Squaw Creek Restoration Project

**SNC Reference Number:** SNC 070136      **Submission Date:** June 1, 2010

**Report Preparer:** Lisa Wallace      **Phone #:** 530-550-8760

**Check one:**

**6-Month Progress Report**  
 **Final Report**

**6-Month Progress Reports** should reflect the previous six months. **Final Reports** should reflect the entire grant period.

**A. Progress Report Summary:**

The Friends of Squaw Creek (FOSC) in conjunction with the Truckee River Watershed Council completed the following scope of work:

- (1) Establish a common stakeholder vision through facilitation of up to three workshops to outline timing, cost, benefit, and resulting configuration of the restoration plan:
  - public workshop (5/15/08) reviewing the conceptual restoration design
  - a landowners' meeting confirming agreement (3/19/09)
  - a public review and site visit meeting (6/18/09)
  - a Sierra Nevada Conservancy Board Tour (9/24/09)
  
- (2) Conduct a technical analysis workshop of a small group of groundwater, hydrology and geomorphology experts with knowledge of the Squaw Creek system to provide the scope for the creek/groundwater interaction study.
  - Creek floodplain interaction technical workshop (9/19/08)
  - Creek restoration technical workshop (10/29/08)

The combination of Tasks 1 and 2 developed a broad consensus as to the preferred concept of how best to restore Squaw Creek. The meeting materials and restoration designs along with supporting documents are available here:

[www.soundwatershed.com/squaw-creek-restoration.html](http://www.soundwatershed.com/squaw-creek-restoration.html)

(3) Conduct technical study as determined and scoped by the technical experts for the interaction study

In late 2008, the Squaw Valley Public Service District (SVPSD), a stakeholder in the restoration project, received a \$220,000 grant from the Department of Water Resources (DWR) to study the creek/groundwater interaction. The SVPSD has a consultant conducting test pumping of groundwater wells in Squaw Valley and is studying the effect on the aquifer and creek. The data from this study will further develop restoration design and implementation.

Additionally, Lawrence Livermore National Laboratories (with University of Nevada at Reno) is conducting creek and groundwater interaction studies. The results will be shared with SVPSD and FOSC.

The fact that these two studies are being conducted by other agencies allowed the SNC grant funding to be focused on other water sources for the restoration of Squaw Creek. Five potential sources were identified by the Floodplain Workshop. Feasibility studies for these sources are partially completed. They will be completed in full with funding from Placer County (See D. Unanticipated Successes).

**B. Deliverables or Outcomes completed during this Reporting Period or Milestones Achieved:**

Public Meetings and Technical Workshops

- public workshop (5/15/08) reviewing the conceptual restoration design
- a landowners' meeting confirming agreement (3/19/09)
- a public review and site visit meeting (6/18/09)
- a Sierra Nevada Conservancy Board Tour (9/24/09)
- Creek floodplain interaction technical workshop (9/19/08)
- Creek restoration technical workshop (10/29/08)

The meeting materials are available here:

[www.soundwatershed.com/squaw-creek-restoration](http://www.soundwatershed.com/squaw-creek-restoration)

Conceptual Design Plans for Lower Squaw Creek Restoration:

The documents are available here:

[www.soundwatershed.com/squaw-creek-restoration](http://www.soundwatershed.com/squaw-creek-restoration)

- [project\\_status\\_update\\_oct09.pdf](#)
- [4\\_squaw\\_ck\\_presentation\\_alternatives.pdf](#)

### **C. Challenges or Opportunities Encountered:**

The grant suspension in December 2008 delayed the start of the technical studies. The studies were able to launch when the grant funding was re-instated.

The Resort at Squaw Creek and the Squaw Valley USA, two of the land owners, had staff turnover during the project. It took additional discussion and meetings to get the replacement staff up to speed and to agree to the "alternative 2 restoration design."

While the restoration design and technical studies were proceeding, the Friends of Squaw Creek has been attempting to form as a 501c3 organization to fully manage the implementation of the restoration. The landowner staff changes and the economic downturn slowed this process down considerably. Recently, the informal/unofficial board of directors has been meeting again and appears they will solidify as a 501c3 within the next year.

### **D. Unanticipated Successes Achieved:**

1. The funding by DWR and SVPSD of the \$220,000 for a Phase 1 creek/groundwater interaction study. This data is critical to the final restoration design. Funding for a Phase 2 study is being pursued.
2. Placer County (\$25,000), the Lahontan Water Board (\$20,000) and Friends of Squaw Creek (\$10,000) funding of the project to:
  - Assess Searchlight Pond/Olympic Channel and Water Detention Basin as creek waters sources
  - Maintain and analyze data from streamflow monitoring stations
  - Develop stream bank stabilization design
  - Take Alternative 2 from Conceptual Design to 30% designs
3. The original project was limited to the meadow reach of Squaw Creek (i.e., Lower Squaw Creek). In recent months, upstream landowners have offered opportunities to extend our creek restoration planning upstream to include a trapezoidal channel, the confluence of the north and south forks of Squaw Creek, and water storage sites on the ski mountain. We also anticipate additional opportunities to coordinate with sediment management activities occurring in the upper watersheds. With this expanded geography, especially addressing upstream degradation, we are able to develop a comprehensive creek restoration project.

**E. Compare Actual Costs to Budgeted Costs:**

| <b>PROJECT BUDGET CATEGORIES</b>   | <b>Budgeted SNC Dollars</b> | <b>Actual Dollars</b> |
|--|-----------------------------|-----------------------|
| Facilitated Community Workshops  | 7,400                       | <b>7,400</b>          |
| Technical Workshops  | 12,500                      | <b>12,500</b>         |
| Source Water Feasibility Analysis (initially was Initial Aquifer and Well study) | 30,000                      | <b>30,000</b>         |
|  |                             |                       |
|  |                             |                       |
| <b>GRAND TOTAL</b>   | <b>\$49,900</b>             | <b>\$49,900</b>       |

**Explanation:** (if needed)

**F. Do you have information to report on the project-specific Performance Measures for your project?** (If so, please list the Performance Measures below and describe your progress.)

Number of Collaboratively Developed Plans and Assessments

- Restoration Technical Assessment and Review: 1014\_creek\_workshop\_report\_draft.pdf
- Restoration Floodplain Technical Assessment and Review: 1014\_floodplain\_workshop\_report\_draft.pdf
- Restoration Alternatives: 4\_squaw\_ck\_presentation\_alternatives.pdf; project\_status\_update\_oct09.pdf

**G. Were there any other relevant materials produced under the terms of this Agreement that are not a part of the budgeted deliverables? If so, please attach copies.**

These are available at: [www.soundwatershed.com/squaw-creek-restoration.html](http://www.soundwatershed.com/squaw-creek-restoration.html)

**H. Next Steps:**

The SNC grant funds and deliverables are completed, but the restoration design and stream flow monitoring continues with funding from:

- Placer County (\$25,000)
- Lahontan Regional Water Quality Control Board (\$20,000)
- Friends of Squaw Creek (\$10,000)
- 319h State Water Resources Control Board (\$125,000)

## **Please Complete this Section for FINAL Report ONLY**

### **Capacity-Building Results and Collaboration and Cooperation with Stakeholders:**

- The Friends of Squaw Creek, starting as an unofficial/informal organization, and with some help from the Truckee River Watershed Council solidified agreement among stakeholders and stream restoration professionals for the Alternative 2 Creek Restoration Design;
- This agreement acted as a catalyst for the Friends of Squaw Creek to become a formal 501c3. They should be completed with the process by the end of 2010;
- The agreement also gave the group credibility to gain additional funding from Placer County (\$25,000), Lahontan Regional Water Quality Control Board (\$20,000), Friends of Squaw Creek (\$10,000) and the State Water Resources Control Board (\$125,000).

### **Description of Project Accomplishments:**

#### **1. Most Significant Accomplishment**

Agreement by landowners, restoration professionals and the local community on Alternative 2 as the preferred restoration design; agreement by landowners to expand the geographic scope of the restoration area to include upstream reaches; agreement by the Squaw Valley Public Service District to conduct a steam/groundwater interaction study.

#### **2. WOW Factor**

Agreement by landowners, restoration professionals and the local community on Alternative 2 as the preferred restoration design. Prior to the Creek Restoration Technical Workshop (10/29/08), there was a general feeling that Squaw Creek could not be meaningfully restored. However, the hydrologists, geomorphologists, geologists and engineers who participated in the workshop developed a strong consensus and rationale for the preferred restoration design. Their recommendations carried significant weight with the landowners and local community.

#### **3. Design and Implementation**

Regarding restoration design: much of hydrology, geomorphology and geology are counter-intuitive to people without that background. Thus, they can resist appropriate restoration techniques. Taking the time to hold multiple, well prepared, meetings can bridge the knowledge gap. It was important that the professionals had significant local experience and a strong consensus on the preferred restoration design.

Periodically, resistance re-emerges, and we go back to the restoration principals, methods and agreements that created the consensus for Alternative 2, and that typically addresses the resistance.

#### **4. Indirect Impact**

The data collected to develop the preferred restoration alternative will be used by the landowners to manage Squaw Creek through their properties and by the SVPSD to manage its groundwater wells and programs.

The restoration of Squaw Creek will also contribute to meeting the Squaw Creek TMDL mandate of the State Water Resources Control Board.

#### **5. Collaboration and Conflict Resolution**

Regarding conflict resolution: much of hydrology, geomorphology and geology are counter-intuitive to people without that background. Thus, they can resist appropriate restoration techniques, perceiving them as too risky or too expensive or too time consuming. Taking the time to hold multiple, well prepared, meetings can bridge the knowledge gap. It was important that the professionals had significant local experience and a strong consensus on the preferred restoration design.

In this case, having high quality information about the restoration design was more important than a structured set of agreements or process for participation.

#### **6. Capacity-Building**

The Friends of Squaw Creek, started as an unofficial/informal organization. With some help from the Truckee River Watershed Council, they solidified agreement among stakeholders and stream restoration professionals for the Alternative 2 Creek Restoration Design.

This agreement acted as a catalyst for the Friends of Squaw Creek to become a formal 501c3. They have had several attempts at formalizing in the past, but without a specific project, the motivation was lacking. They should be completed with the process by the end of 2010.

The agreement also gave the group credibility to gain additional funding from Placer County (\$25,000), Lahontan Regional Water Quality Control Board (\$20,000), Friends of Squaw Creek (\$10,000) and the State Water Resources Control Board (\$125,000).

## **7. Challenges**

At times the landowners resisted the restoration of Squaw Creek. Taking the time to hold multiple, well prepared, meetings addressed their concerns and objections. It was important that the professionals had significant local experience and a strong consensus on the preferred restoration design.

The SVPSD has challenged the hypothesis of an interaction between Squaw Creek and the local aquifer. Their DWR-funded and Lawrence Livermore National Labs studies will go a long way to understanding interaction between the aquifer and the creek.

## **8. Photographs**

Please see this site for photos and images: <http://www.soundwatershed.com/squaw-creek-restoration.html>

## **9. Post Grant Plans**

The restoration design and stream flow monitoring continues with funding from:

- Placer County (\$25,000)
- Lahontan Regional Water Quality Control Board (\$20,000)
- Friends of Squaw Creek (\$10,000)
- 319h State Water Resources Control Board (\$125,000)

The Friends of Squaw Creek should become a formal 501c3 by the end of 2010.

When the economy recovers and the landowners can fund the restoration project though the Squaw Valley Community Benefit Fund and other funds the restoration project will be implemented.

## **10. Post Grant Contact**

Ed Heneveld, Friends of Squaw Creek, (530) 583-1817

Lisa Wallace, Truckee River Watershed Council, (530) 550-8760

## **SNC-approved Performance Measures:**

### Number of Collaboratively Developed Plans and Assessments

- **Restoration Technical Assessment and Review:**  
1014\_creek\_workshop\_report\_draft.pdf
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- **Restoration Alternatives: 4\_squaw\_ck\_presentation\_alternatives.pdf;**  
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