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DRAFT – APRIL 2014  
Tahoe-Sierra  
Integrated Regional Water  
Management Plan

Section 8:  
Implementation  
Framework

Prepared for  
South Tahoe Public Utility District  
1275 Meadow Crest Drive  
South Lake Tahoe, California 96150-7401

K/J Project No. 1270036\*00

# Table of Contents

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<i>List of Tables</i> .....	<i>ii</i>
<i>List of Figures</i> .....	<i>ii</i>
<i>List of Appendices</i> .....	<i>ii</i>
Section 8: Implementation Framework .....	1
8.1 Introduction .....	1
8.2 Recommended Governance Structure .....	2
8.2.1 Organizational Structure and Function.....	2
8.2.2 Roles and Responsibilities .....	3
8.2.2.1 Regional Water Management Group/Partnership .....	7
8.2.2.2 MOU Signatories.....	7
8.2.2.3 IRWM Stakeholders/Participants .....	7
8.2.2.4 Project Proponents .....	8
8.2.2.5 As-Needed Subcommittee .....	8
8.2.3 Access and Opportunity for Participation .....	9
8.2.3.1 Internal and External Communication.....	9
8.2.3.2 Public Involvement Processes .....	10
8.2.4 Decision Making.....	10
8.3 Plan Financing .....	10
8.3.1 Funding Needs.....	11
8.3.1.1 Implementation Administration Funding.....	11
8.3.1.2 Project Implementation Funding .....	11
8.3.2 Potential Funding Sources .....	11
8.3.2.1 Stakeholder Funding.....	11
8.3.2.2 Grants and Other Sources .....	15
8.4 Plan Performance and Monitoring.....	15
8.4.1 Project-Focused Performance Monitoring.....	16
8.4.2 Objectives Focused Performance Monitoring .....	17
8.4.3 Data Management.....	17
8.4.3.1 Data Management System .....	18
8.4.3.2 Potential Long-Term Data Management Options .....	19
8.5 Suggested Initial Steps for Plan Implementation.....	20
8.6 Plan Updates and Changes .....	20
8.6.1 Making Changes to the IRWM Plan .....	20
8.6.2 Updating and Amending the IRWM Plan .....	21

## Table of Contents (cont'd)

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### List of Tables

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Table 8-2:	Activities, Participants, and Roles for Implementing the Tahoe-Sierra IRWM Plan
Table 8-3:	Project Financing Summary
Table 8-4:	Project Specific Monitoring Plans
Table 8-5:	IRWM Plan Near-Term Implementation Activities and Schedule

### List of Figures

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None

### List of Appendices

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A	Memorandum of Understanding Regarding the Tahoe Sierra IRWM Plan Revised January 30, 2014
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## Section 8: Implementation Framework

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### 8.1 Introduction

This section documents the relationships and decision-making structure recommended for use during the continued development and implementation of the Tahoe-Sierra Integrated Regional Water Management Plan (IRWM Plan or Plan) over the next 20 years. It also sets forward a proposed framework for Plan implementation and guidelines for performance monitoring to track progress, and it offers suggested initial Plan implementation activities. This section is intended to define the entity (or entities) that will implement the Plan, the responsibilities for Plan implementation and therefore serve as the cornerstone of actions the Region must take to continue the IRWM program into the future.

The governance structure recommendations included in this section are intended to be consistent with the Integrated Regional Water Management Guidelines for Proposition 84 and Proposition 1E (Guidelines) published by the California Department of Water Resources (DWR) in November 2012. The Guidelines require that the governance structure address the following:

- Public outreach and involvement processes\*
- Effective decision making
- Balanced access and opportunity for participation in the IRWM process\*
- Effective communication – both internal and external to the IRWM Region\*
- Long-term implementation of the IRWM Plan\*
- Coordination with neighboring IRWM efforts and state and federal agencies\*
- The collaborative process(es) used to establish plan objectives (discussed in Section 4)
- How interim changes and formal changes to the IRWM Plan will be performed
- Updating or amending the IRWM Plan\*

The individual IRWM governance topics bulleted above are discussed in the sections that follow with items that are asterisked the focus of the activities discussed in Section 8.2.

The Guidelines also describe that the IRWM Plan must also include:

“The name of the Regional Water Management Group (RWMG) responsible for development and implementation of the Plan.” A RWMG must meet the definition of the California Water Code (CWC) §10539, which states:

“RWMG means a group in which three or more local agencies, at least two of which have statutory authority over water supply or water management, as well as those persons who may be necessary for the development and implementation of a plan that meets the requirements of CWC §10540 and §10541, participates by means of a joint powers agreement, Memorandum of Understanding (MOU), or other written agreement, as appropriate, that is approved by the governing bodies of those local agencies”

As described in the 2007 IRWM, the Tahoe-Sierra IRWM defines the RWMG as follows:

“The Tahoe Sierra Regional Water Management Group (Tahoe Sierra Group) is comprised of 16 public agencies, special districts, non-profit environmental organizations, and educational institutions. The lead agency role is shared by all partners by MOU agreement and implementation of the Plan is the responsibility of each partner agency’s designated representative. As the Tahoe Sierra Group designed the IRWM Plan as a “living” document with the ability to respond to regional water management changes as appropriate, the agencies that comprise the Tahoe Sierra Group will designate lead agency roles as necessary.”

Both in spirit and in practice, the Tahoe-Sierra IRWM operates functionally using the concept of a Partnership by having worked together to write, on a volunteer basis, the first IRWM Plan. Therefore the Tahoe-Sierra Partnership is used to describe the RWMG. Both the Tahoe Resource Conservation District and the South Tahoe Public Utility District have provided leadership to the Partnership and acted as the lead agency, designated applicant for, and executing grant agreements as grantee for the Proposition 50 IRWMP Funding Round 1 Application and Proposition 50 IRWMP Funding Round 2, respectively.

## 8.2 Recommended Governance Structure

Once the Tahoe-Sierra IRWM Plan has been adopted, the focus of the Regional Water Management Group (RWMG) or Partnership who are the signatories to the MOU and stakeholders will change significantly. Some of the activities conducted during Plan development will continue, but the emphasis will shift from planning toward implementation and tracking of progress. Implementation of the Tahoe-Sierra IRWM Plan will rely on actions taken by existing agencies and organizations within the Region. In order to implement the Plan in an open and definitive way, each Region is required to develop a governance structure consistent with the Propositions 84 and 1E IRWM Guidelines. The guidelines state:

“The IRWM Plan must document a governance structure that ensures the IRWM Plan will be updated and implemented beyond existing State grant programs.”

The proposed governance structure was developed to reflect the discussions of the partnership and stakeholders to provide a means for the Region to maintain functionality, encourage open participation in the Plan, and help assure Plan longevity and stability.

### 8.2.1 Organizational Structure and Function

The following provides the proposed governance model for consideration to include in the Tahoe-Sierra IRWM Implementation Framework section. The recommendations in this section

are not binding but are intended to provide guidance to the RWMG or Partnership and other Plan participants.

### 8.2.2 Roles and Responsibilities

The stakeholders and RWMG need to work together to ensure successful Plan implementation and each of the following groups will have varying roles and responsibilities:

- Tahoe-Sierra RWMG/Partnership who are also MOU Signatories
  - Partnership Leadership Team – a group of up to 5 volunteer individuals from the Partnership who rotate every 2 years through the responsibilities of IRWM implementation
- Stakeholders or IRWM Participants (non MOU signatories)
- Project Proponents (must sign the MOU to be included in a grant application and participate on Partnership Leadership Team)
- As-needed Subcommittee(s)

It should be noted that individuals may participate in more than one group fulfilling different roles as needed.

While individual agencies within the Tahoe-Sierra Region are responsible for implementing the projects that accomplish the objectives of the IRWM Plan, individuals within the RWMG/Partnership will provide leadership for fostering cooperation, continuing coordination, tracking of Plan performance, and updating of the IRWM Plan through the development of a Partnership Leadership Team (PLT). The PLT will be comprised 3 to 5 volunteers from the Partnership who will serve in overlapping 2-year terms to implement the IRWM activities found in Table 8-2. The terms will overlap to ensure continuity between the members by always having an experienced PLT member finishing his/her second year that can orient the new first year members as conceptualized in the Table 8-1.

Table 8-1: PLT Role and Term Summary

PLT Member Role	Year 1	Year 2	Year 3	Year 4	Year t
Communications 1 (PLT Comm 1)	Organization A (Lead)	Organization A (Support)	Organization F (Lead)	Organization F (Support)	Etc
Communications 2 (PLT Comm 2)		Organization B (Lead)	Organization B (Support)	Organization G (Lead)	Organization G (Support)
Implementation 1 (PLT Imp 1)	Organization C (Lead)	Organization C (Support)	Organization H (Lead)	Organization H (Support)	Etc
Implementation 2 (PLT Imp 2)		Organization D (Lead)	Organization D (Support)	Organization I (Lead)	Organization I (Support)
At large (PLT At Large)	Organization E (Support)	Organization E (Support)	Organization J (Support)	Organization J (Support)	Etc

On an as-needed basis, Subcommittees may be formed to help focus collaboration and progress on specific topics or objectives such as preparation of a specific grant application, integration of projects, or coordination of related activities. Some of the Subcommittees may be “ad hoc” and only exist for a few meetings to accomplish a specific task, while others may be long lasting with regular reporting responsibilities to the broader RWMG/Partnership.

The narrative that follows describes some of the specific roles and responsibilities of various participants involved in Plan implementation. Table 8-2 that follows summarizes the overall activities of IRWM Plan implementation with the identification of the PLT member that would lead the activity. IRWM Plan implementation is not intended to interfere with or supersede actions taken by local agencies to fulfill the local agencies’ authorized duties.

Table 8-2: Activities, Participants, and Roles for Implementing the Tahoe-Sierra IRWM Plan

Potential Roles: Lead, Coordinate, Support,

IRWM Activities	Partnership Leadership Team Role	Stakeholder/Participant Role	Project Proponents Role	Other/Notes
<b>1. Public outreach and involvement processes -</b>				
a. Establish Point of Contact for IRWM Program	Led by PLT Comm 1, supported by PLT Comm 2 and PLT At Large?			
b. Maintain e-mail list				both internal and external to the Region
c. Schedule and Announce meetings				both internal and external to the Region
d. Prepare agendas and content				
e. Facilitate meetings				
f. Prepare meeting summaries				
g. Administer website, and update content with meeting materials, and other relevant information				
<b>2. Balanced access and opportunity for participation in the IRWM process</b>				
a. Monitor and maintain DAC and Tribal Contacts list through Notification Prior to Partnership Meetings	PLT At Large ?	Proactively Participate in IRWM	Proactively Participate in IRWM	
<b>3. Effective Communications External to The Region</b>				
a. Communication External to the Region –	Led by PLT Comm 1, supported by PLT Comm 2 and PLT At	Lead and Report to PLT (e.g. Truckee River Operating Agreement, Fire, Energy, Sustainability		See also 1



	Large?	Groups)		
b. Coordination with neighboring IRWM efforts - Sierra Water Work Group and Lahontan Region IRWMs,	Led by PLT Comm 1, supported by PLT Comm 2			See also 1
c. Coordination with state and federal agencies (e.g. RWQCB)		Lead and Report to PLT		
<b>4. Long-term implementation of the IRWM Plan</b>				
a. Evaluate Plan Performance and Monitoring for Meeting Objectives	PLT Imp 1 (Lead), PLT Imp 2 (Support)			
b. Review and act on objectives/targets not accounted for in projects				
c. Gather and synthesize data related to Plan projects and report to stakeholders				
d. Manage and share-related data and information (also could be Data Management System)	PLT At Large?			
<b>5. Update Tahoe-Sierra IRWM Plan</b>				
a. Review and update objectives	PLT Imp 1 (Lead), PLT Imp 2 (Support)			Formal Change
b. Solicit new or revised/integrated projects, provide project evaluation/scoring and regularly revise project and update project priorities, as needed or at a minimum of every 2 years	PLT Imp 1 (Lead), PLT Imp 2 (Support)			Interim Change
c. Revise Plan content at least every 5 years	PLT to determine if Sub-committee should be convened and opened to Stakeholder			Formal change

	s/Participant s and Project Proponents			
<b>6. Financing Plan Implementation</b>				
a. Evaluate IRWM Plan Implementation Administration (e.g. Local Staff in-kind contributions, and/or grants, or other financial sources)	PLT At Large			
b. Communicate information on upcoming funding		Lead		See also 1
c. Improve project integration and select projects for inclusion in grant applications		Lead?		
d. Prepare and submit grant applications	Support		Lead	

### 8.2.2.1 Regional Water Management Group/Partnership

The RWMG/Partnership is a group of three or more local agencies, at least two of which have statutory authority over water supply or water management. Within the Tahoe-Sierra RWMG/Partnership, South Tahoe Public Utility District (PUD), Tahoe City PUD, and North Tahoe PUD, all have statutory authority over water supply or water management fulfilling this requirement. The primary function of the RWMG/Partnership will be to act on all matters necessary for IRWM Plan implementation. The Partnership Leadership Team (PLT) which has been described earlier provides the core leadership for IRWM Plan implementation.

### 8.2.2.2 MOU Signatories

The signatories to the MOU are the Partnership and represent a spectrum of public agencies, special districts, non-profit organizations and education institutions throughout the Region. All project proponents who apply for grants through the IRWM process are required to become signatories to the MOU.

### 8.2.2.3 IRWM Stakeholders/Participants

Tahoe-Sierra IRWM Plan participants include the Partnership and any stakeholders interested in water related issues in the Region who choose to participate in the Tahoe-Sierra implementation activities.

#### **8.2.2.4 Project Proponents**

Agencies or organizations who are implementing projects (including feasibility studies, data collection and analysis, etc.) are project proponents of the Plan. Projects included and tracked by the Tahoe-Sierra IRWM Plan may include projects funded (in whole or in part) by IRWM grant funds, as well as projects and programs funded independently. Project proponents will be responsible for implementing the projects contained in the Tahoe-Sierra IRWM Plan, must become MOU signatories if they become IRWM fund applicants, formally adopt the IRWM Plan, and, if funded by IRWM grant funds, will be required to submit project-specific monitoring information to inform progress towards achieving Plan objectives.

It is envisioned that the project proponents will have the following roles and responsibilities:

1. Provide project-specific information for the regional project database maintained by the Partnership Leadership Team, that may aid in advancing the Plan's regional objectives.
2. Seek opportunities to integrate, where possible and practical, develop Plan projects in the database to most efficiently achieve the regional objectives. This process may be initiated and facilitated at stakeholder meetings, but it is expected that project proponents will further develop these opportunities outside of that forum.
3. Provide updated project-specific information for the regional project database as necessary to reflect major project milestones (e.g., CEQA completion, 100% design, construction underway, construction complete, and project completion). This particular role is a critical element of Plan implementation and is in the best interest of the project proponents, since having updated information available will help projects when applying for financial assistance. This can also include adding or removing projects from the database and will occur at least every two-years.
4. Identify a point person for each project who will provide, in a timely manner, requested information for projects for inclusion in a grant application.
5. Identify a point person for each project who will provide, in a timely manner, to the grantee, requested information for projects selected for funding through a funding agency.
6. Comply with grant requirements, as identified by the funding agency, to qualify for grant funding, including and not limited to formally adopting the IRWM Plan.

#### **8.2.2.5 As-Needed Subcommittee**

The Subcommittee; should it be decided one is needed, is a smaller group of stakeholders/participants or project proponents who provide leadership and focus on a more detailed project/program level toward coordination and cooperation on behalf of the RWMG/Partnership. Any member of the RWMG/Partnership is welcome to join a Subcommittee. The primary roles of a Subcommittee could include:

- Coordinate preparation of grant funding applications.

- Conduct meetings to provide opportunities for discussion regarding Plan implementation and future updates or revisions to the Tahoe-Sierra IRWM Plan.
- Improve collaboration efforts to support development of integrated, regionally focused projects.
- Foster continued communication among stakeholders within the Region that support implementation of the Tahoe-Sierra IRWM Plan.
- Assist project proponents in pursuit of grant funds to help implement projects included in the IRWM Plan.
- Promote, track and report on progress toward meeting the Plan objectives.
- Recommend process for updating or amending the Tahoe-Sierra IRWM Plan.

### 8.2.3 Access and Opportunity for Participation

One of the most important aspects of Plan implementation is processes to ensure that the public and interested stakeholders continue to be involved. This will be accomplished through multiple avenues of communication and engagement among the RWMG/Partnership and IRWM participants, including, at minimum, the following:

- The RWMG/Partnership will conduct outreach, create content and facilitate at annual (minimum frequency) Partnership meetings. In addition, the RWMG/Partnership will support any Subcommittees that may be formed on separate topics. During the meetings, all MOU signatories are invited to participate as equals in the interaction to reach consensus on the implementation of the Plan.
- The RWMG/Partnership will continue to foster dialog with Tribes and representatives of the Disadvantaged Communities (DAC) and environmental justice communities within the Region as needed to support meeting the objectives of the Plan. Extra contacts will be made prior to meetings to notify Tribal and DAC representatives of topics of interest.

The RWMG/Partnership will e-mail and will post meeting materials and other relevant information to the project website and invite review and comment from any interested person or organization

#### 8.2.3.1 Internal and External Communication

As summarized in Table 8-2, multiple avenues of internal and external communication will be facilitated by the RWMG/Partnership including:

- Prepare communication materials for distribution, posting on the project website, and for use in meetings with governing boards and other interested parties.
- Conduct meetings at least annually that are announced and open to any stakeholder.

- Ensure that individuals are assigned to meet and coordinate with neighboring IRWM planning efforts, other local, state, and federal agencies as they relate to accomplishing the objectives in the Tahoe-Sierra IRWM Plan.
- Ensure that engagement occurs with neighboring IRWM efforts and other state and federal agencies that have interests or could impact meeting the objectives of the Plan. The RWMG/Partnership will continue to communicate with DWR regional representatives.

### **8.2.3.2 Public Involvement Processes**

All organizations and individuals with an interest in improving water management in the Region are invited to participate in Plan implementation. The RWMG/Partnership recognizes that a committed public outreach and notification process is a necessary task to ensure the public is aware that there are multiple opportunities to become involved in the program. Disadvantaged Communities and Tribes will continue to be an important aspect of outreach in the Region. The public involvement processes to be completed by the RWMG/Partnership include:

- Coordinate Partnership Input meetings at least once per year to discuss relevant topics of progress on implementation of the Tahoe-Sierra IRWM Plan. The Partnership may convene additional meetings as desired to support fulfilling the objectives of the Plan.
- Maintain and update content to the Tahoe-Sierra IRWM Plan website.
- Maintain a contact e-mail and phone number for people to send comments or ask questions about the Tahoe-Sierra IRWM Plan.
- Maintain the Tahoe-Sierra stakeholder e-mail list and send updates and meeting invitations as appropriate.

### **8.2.4 Decision Making**

Decisions during implementation will continue to be made using consensus based agreement, as during Plan development with matters first considered by the PLT for consideration and then by the entire Partnership. If for some reason broad agreement cannot be reached related to specific items within a reasonable amount of time and effort, the Partnership will discuss such items(s) and then decide by majority vote how to proceed.

## **8.3 Plan Financing**

Implementation of an IRWM Plan is an enormous undertaking and requires the financial contributions and attention of local, state, and federal agencies to ensure success. Financing of this Tahoe-Sierra IRWM Plan involves two distinct tracks: funding of IRWM Plan administration through local in-kind staff time and coordination and funding of project implementation. This section highlights the anticipated funding needs for both tracks, identifies potential funding sources, and documents some of the activities that the RWMG/Partnership and others could employ to secure additional funding.

## 8.3.1 Funding Needs

### 8.3.1.1 Implementation Administration Funding

Development of the IRWM Plan was funded by the RWMG/Partnership and an IRWM Planning grant from the DWR. However, these funds cannot be spent on implementation activities, so one of the first steps to implement the IRWM Plan is to establish a mechanism to support implementation coordination. This could include activities undertaken by the RWMG/Partnership to plan and conduct stakeholder input meetings, track plan implementation (including progress towards completing plan objectives and projects), and conduct ongoing public outreach and engagement as described in the governance sections.

Following the update of the IRWM Plan, the Tahoe-Sierra IRWM anticipates continuing as a volunteer-led organization using the PLT as the focus for IRWM Plan implementation.

- Members of the RWMG/Partnership (and potentially other agencies/organizations within the Region) may provide in-kind services to fulfill the roles of the RWMG and administrative support.
- The RWMG/Partnership may seek additional local and/or other funding to fulfill the activities required for Plan implementation.

### 8.3.1.2 Project Implementation Funding

As of March 2014, sixty projects are included in the IRWM Plan. All of the projects provided funding information, with a total estimated funding need of \$94.5 million. Of the sixty projects, several are projects currently at the early planning or feasibility study stage, which is an indicator that the overall funding needs will likely increase as these projects progress and are developed into implementable projects, programs, or actions, and as other projects are added to the IRWM Plan. Table 8-3 summarizes financing needs and the availability of capital and operations and maintenance funding sources based on information provided by project proponents. **The asterisked projects were submitted for an IRWM Round 2 Implementation grant in March 2013.** It is recommended that this table be updated at a minimum every two years or as needed.

## 8.3.2 Potential Funding Sources

### 8.3.2.1 Stakeholder Funding

Funding sources are rarely assured far in advance of project implementation. Additionally, many agencies have encountered challenges to securing project funding as grant programs have become more competitive and agency budgets have become significantly constrained during the recent economic downturn. It is understood that funding is required to implement (that is, to construct) projects, as well as operate and maintain the project after initial construction is completed. In most cases, it will be the responsibility of the project proponents to ensure that initial construction and operations and maintenance funding needs are met for specific projects. Despite limited funds, most agencies do have a variety of funding tools available including:

- Ratepayers,
- Operating funds,
- Water enterprise funds,

Table 8-3 Project Financing Summary

#	Project Title	Agency/Organization	Total Capital Costs	Secured Sources of Funding for Project Costs	Secured Amounts of Funding for Project Costs	Unsecured Funding and Certainty of the Sources for Project Costs	Unsecured Funding Amounts and Certainty of the Sources for Project Costs	Total Annual O&M Costs	How Operation and Maintenance Costs will be Financed	Impacts if the Project is not Funded
1	Aquatic Invasive Species Programs	Town of Truckee	\$1,000,000	Some funding will be generated by the boat inspection and certification fees	\$25,000 annually	General Fund	\$0	\$45,000	Maintenance will continue to be performed by Town of Truckee Public Works/ Street Maintenance Division Staff (funded through local funds) for signs. Continued implementation of the inspection program will be funded by the inspection and permit fees.	The project would not be implemented. Establishment of AIS in the area will degrade the environment and have a detrimental economic impact on the tourist based economy and surface water supply.
2	BMP Implementation on STPUD Operating Sites	South Tahoe Public Utility District	\$496,250	STPUD Capitol Improvement Funding	\$25,000	--	\$0	\$31,760	STPUD General Funds	BMP implementation on the 13 existing sites would be postponed indefinitely without funding. This would impact the contribution of this project to the Lake Tahoe TMDL.
3	Permanant BMP Implementation, Inspection, and Maintenance Programs	Town of Truckee	\$550,000	--	\$0	General Fund	10% minimum will be requested as project match is needed.	\$0	The operations and maintenance will consist of on-going certification classes, maintenance of the database, and inspections every 5 years after the program is established.	The program will be implemented as education and outreach, but would not include retrofitting cost reimbursement, design assistance, or complimentary initial inspection. This is not anticipated to be as effective to implement as the program proposed.
4	Truckee Coldstream Culvert Replacement Program	Town of Truckee	\$2,500,000	--	\$0	Cost share with Teichert	\$0	\$10,000	Will be programmed in Town of Truckee annual operational and Capital Improvement Program budget.	Culvert will be relined instead.
5	Bijou Area Erosion Control Project (Bijou Project)	City of South Lake Tahoe	\$500,000	California Tahoe Conservancy, US Forest Service, Caltrans, Department of Water Resources, SWRCB Prop 84, TRPA mitigation funds	\$15,000,000	uncertain sources: California Tahoe Conservancy, US Forest Service	\$500,000	\$0	O&M maintenance costs will be funded through the City's General Fund	Current outfall remains in place with no water quality treatment on commercial core drainage from City right-of-way flowing directly to Lake Tahoe untreated
6	Ruby Way - Overlook Court	City of South Lake Tahoe	\$150,000	--	\$0	--	\$0	\$500	O&M maintenance costs will be funded through the City's General Fund	Not addressing existing runoff condition will result in a continued erosion of forest upland area located between David Lane and Ruby Way and continued nuisance flooding on properties located along and below Ruby Way.
7	Sierra Tract Erosion Control Project, Phase 3/4	City of South Lake Tahoe	\$3,912,500	CTCUSFS	\$1,330,805	Proposition 84CTC	\$3,022,164	\$5,000	Maintenance responsibilities will be carried out by the City's Street Maintenance Division using General Fund budget allocations.	Sierra Tract ECP, Phase 3/4 water quality improvements are expected to reduce Fine Sediment Particle pollutants by 3% within the City of South Lake Tahoe, which equates to 30% of the City's 2016 MS4 permit requirements. Project plans and permitting are nearly complete; no other City of SLT EIP project is close to being ready to bid. Therefore, Sierra Tract ECP, Phase 3/4 is positioned to provide significant reduction in pollutant production and contribute to the City's MS4 permit requirements for pollutant load reduction. Not constructing the Project will result in the City not meeting the 2016 MS4 required pollutant discharge reduction requirements.
8	Sierra Boulevard	City of South Lake Tahoe	\$2,500,000	City of South Lake Tahoe - Caltrans Settlement	\$210,000	CMAQ - ProbableRSTP - Probable	\$1,750,000	\$4,000	Maintenance responsibilities will be carried out by the City's Street Maintenance Division using General Fund budget allocations.	If the project goes unfunded, citizens will continue to walk on the roadway without sidewalks, cyclists will not have bike lanes, and highly erosive shoulders will continue to impact water quality in the Upper Truckee River and, ultimately, Lake Tahoe. This combination of undesirable conditions will also serve to further repress economic growth and opportunity in the surrounding area.
9	South Lake Tahoe Integrated Roadway Management Strategy	City of South Lake Tahoe	\$1,145,500	--	\$0	Uncertain Mobile BMP Sources: TRPA, CTC	\$532,000	\$172,500	O&M Costs are included within the City's annual budget for roadway maintenance and stormwater management from the City's General Fund.	A failure to fund the project could jeopardize the City's pollutant load reduction strategy.
10	Tahoe Valley Stormwater Improvement Project (SWIP)	City of South Lake Tahoe	\$750,000	US Forest Service (SNPLMA)	\$350,000	uncertain sources: California Tahoe Conservancy, US Forest Service	\$750,000	\$0	O&M maintenance costs will be funded through the City's General Fund	If the project is unfunded, the existing conditions will continue to exist, resulting in high pollutant load urban stormwater runoff discharging to the Upper Truckee River, which discharges to Lake Tahoe.
11	Meyers SEZ and Erosion Control Project	El Dorado County	\$550,000	SNPLMA Erosion Control	\$250,000	--	\$0	\$565,000	Operation and maintenance costs will be provided by the County of El Dorado Maintenance and Operations Division and the County Road Fund.	If not funded the SEZ in this area will remain circumvented via a ditch and the subdivision connected to receiving water. If not funded this area will continue to produce elevated levels of fine sediment to Lake Tahoe reducing the opportunity to meet water quality objectives and compliance with the Tahoe TMDL.
12	Oflyng Erosion Control Project	El Dorado County	\$247,500	--	\$0	--	\$0	\$7,500	Operation and maintenance costs will be provided by the County of El Dorado street maintenance division and the County Road fund	If not funded this area will continue to produce elevated levels of fine sediment to Lake Tahoe reducing the opportunity to meet water quality objectives and compliance with the Tahoe TMDL.
13	Hope Valley Meadow Restoration	American Rivers	\$850,000	Wildlife Conservation Society, National Fish and Wildlife Foundation	\$475,000	--	\$0	\$850,000	--	Without the project, the meander bend the project aims to protect might cutoff creating a loss of 1500 ft of streambank and mobilizing 7500 cubic yards of sediment. Incision and bank instability will propagate upstream through the currently most stable reach of the valley. In addition, Hope Valley will go without important improvements in habitat and water quality.
14	Iroquois Pond SEZ Restorations	South Tahoe Public Utility District	\$266,250	--	\$0	--	\$0	\$0	STPUD General Funds	The restoration of Iroquois Pond through the removal of the water treatment facility and subsequent restoration of the site would not occur without funding. Therefore, the resultant benefits of lessening pollutant loads and contributing to the implementation of the Lake Tahoe TMDL would not occur.
15	Greenway Shared Use Trail	California Tahoe Conservancy	\$8,443,300	Prop 84	\$923,300	Active Transportation, private donations. Uncertain.	\$7,520,000	\$0	Voters in South Lake Tahoe approved a special tax to provide funds for on-going maintenance for bike trail facilities. This measure will sunset in 2021 at which time the local authorities intend to request renewal.	Without project funding for the Greenway, the benefits assumed by Regional land use, transportation and water quality planning efforts will be harder to achieve in South Lake Tahoe. These plans all rely in part on improving the infrastructure available for non-auto travel to facilitate significant watershed improvements. Overall, improved walking and biking facilities will aid concentration of development, sensitive land protection and restoration, and reduction in vehicle miles traveled with related air and water quality improvements. Specifically, project funding for the Greenway will shift transportation away from sole reliance on the private automobile for travel between residential and tourist accommodation areas and highly desirable destinations such as schools, parks, beaches, and shopping in the core of the City. The lost opportunity to create a shared use trail accessible by the widest possible cross section of the population will delay the transportation modal shift central to Regional planning efforts.
16	Grover Hot Springs State Park Meadow Restoration and ADA Access	Alpine Watershed Group	\$627,000	--	\$0	California State Parks ADA	\$276,000	\$0	Grover Hot Springs State Park is operated by California State Parks. After restoration activities California State Parks will continue to maintain and manage the site.	Trails will continue compact, divert water, erode meadow. Social trails will continue to be a vector for weeds.
17	Lower Squaw Creek Restoration Project	Friends of Squaw Creek	\$1,400,000	several in development	\$0	KSL Development, Resort @ Squaw Ck Phase 2, Community Benefit Fund, Placer County In-Kind, Others	\$0	\$0	A community Development Fund has been in discussions that would provide long-term O&M costs. This fund was floated by several landowners pending various improvements that have not yet been implemented. Other sources may include some inkind support from Placer County	continued channel incision and bank instability has been documented generating thousands of tons of sediment annually. The watershed continues to be a major producer of sediment to the Truckee River Watershed. Channel incision is further disconnecting the floodplain and we are beginning to see greater conifer encroachment into the meadow and many meadow wetland areas are becoming more xeric. Fisheries habitat and water quality are continuing to decline. Socially, the limited progress over at least a decade of effort is causing a sense of exhaustion.
18	Upper Truckee River and Marsh Restorations	California Tahoe Conservancy	\$5,880,000	California Tahoe Conservancy US Bureau of ReclamationUS Bureau of Reclamation/SNPLMA	\$1,602,000	State of California Bond FundsUS Bureau of Reclamation Wetland Development Funds	\$2,000,000	\$0	The current operation and maintenance activities in this project area are funded under the California Tahoe Conservancy's annual support budget. Once this project has been completed, the post project operation and maintenance costs will be funded by the same funding source.	If the Project is not funded it would likely not be constructed, and the Upper Truckee River would continue to respond to past disturbances, resulting in continued stream bank erosion and reduced floodplain filtration processes. The progressive geomorphic adjustment along the Upper Truckee River would occur primarily in the form of streambank erosion and widening, followed by streambed deposition in some upstream reaches. Simulations of future channel adjustments performed for the TMDL studies (Simon et al. 2003) estimate channel width and streambed elevation for the Upper Truckee River over a 50-year period (Exhibit 3.9-15). These data suggest that bank erosion and channel widening would progress rapidly over the next decade in some reaches (e.g., 5 kilometers upstream of the river's mouth) and slowly for decades in other areas (e.g., 7 kilometers upstream). The magnitude of channel widening may be substantial, with estimates ranging from several feet in most areas to more than 20 feet in some locations.
19	Meter Conversion	Lukins Brothers Water Company, Inc.	\$2,770,000	--	\$0	--	\$0	\$2,790,000	Operation and maintenance costs will be provided by Lukins Water Company general operation and maintenance budget.	Installation of water meters is required by law. If Lukins does not receive grant funding, the cost of water meters will become the burden of the rate payer.
20	Waterline Replacement Project 2a	Lukins Brothers Water Company, Inc.	\$1,550,000	Remaining funding from Phase 1 Waterline Project	\$100,000	--	\$0	\$1,690,000	Operation and maintenance will be funded through Lukins general fund operation and maintenance account.	Ratepayers will have to pay the cost of Phase 2a if a grant cannot be secured.

Table 8-3 Project Financing Summary

#	Project Title	Agency/Organization	Total Capital Costs	Secured Sources of Funding for Project Costs	Secured Amounts of Funding for Project Costs	Unsecured Funding and Certainty of the Sources for Project Costs	Unsecured Funding Amounts and Certainty of the Sources for Project Costs	Total Annual O&M Costs	How Operation and Maintenance Costs will be Financed	Impacts if the Project is not Funded
21	Waterline Replacement Project 7a	Lukins Brothers Water Company, Inc.	\$700,000	--	\$0	--	\$0	\$707,000	Operation and maintenance will be funded through Lukins general fund operation and maintenance account.	Ratepayers will have to pay the cost of Phase 7a if a grant cannot be secured.
22	Markleeville Creek Floodplain Restoration Project	Alpine County	\$1,600,000	District Attorney	\$27,000	Alpine Watershed Group and County Staff Time	\$23,000	\$0	Covered by additional grant funding and partner match	--
23	Mountain View Well Ground Water Protections	South Tahoe Public Utility District	\$297,500	STPUD Capitol Improvement Funding	\$59,500	--	\$0	\$0	STPUD General Funds	The Mountain View Well supplies 32 Million Gallons annually for distribution to the 18,000 water customers of STPUD. This is a significant water supply source and without the upgrades, this supply could become contaminated and lost to the system.
24	Town of Truckee Stormwater Management and Retrofits	Town of Truckee	\$43,700,000 / 5 years	Measure A, Measure V, AB 1600, Redevelopment Bond Funds, General Fund, Grant funds, and many others	\$30,600,000	--	\$0	\$50,000	General Fund through on-going operations costs for Public Works personnel	Many of the improvements will not be incorporated without funding to improve the drainage/BMPs.
25	Tahoe Keys Force Main Bypass	South Tahoe Public Utility District	\$875,000	STPUD Capitol Improvement Funding	\$175,000	--	\$0	\$0	STPUD General Funds	Although the Tahoe Keys Wastewater Force Main is still very functional, the location allows for the possibility of sanitary sewer overflows into Lake Tahoe. With funding, STPUD could move the wastewater force main to a more reliable elevation and position, minimizing the potential for overflows/spills and the resultant polluting of Lake Tahoe. Without funding to move the wastewater force main, the potential for contamination will remain fairly high.
26	Regional Aquatic Invasive Species Prevention, Control and Monitoring	Tahoe Resource Conservation District	\$3,850,000	User Fees	\$750,000	Lake Tahoe Restoration Act, SB 630, Truckee River Fund, ANS Task Force	\$0	\$0	O&M costs are related to control efforts. The sustainability of control efforts may require annual maintenance removal efforts. These costs will be contributed by the landowner/manager	Negative impacts from the establishment and spread of AIS would effect local economies from decreased recreational revenue, water suppliers from increased cost of delivery and purification, health and viability of native and desired fisheries, and health of watersheds on a region-wide scale.
27	Small-scale Testing of Micro Stormwater Infiltration Systems	Tahoe Resource Conservation District	\$375,000	--	\$0	DWR, EPA	\$0	\$10,000	El Dorado County for two selected communities, landowners with MSIS on their properties	Increased high impact development, increased nutrient and sediment input to Lake Tahoe, decline in water quality, increased localized flooding risk, increased erosion
28	Goundwater Monitoring to support nearshore management	Tahoe Resource Conservation District	\$237,500	--	\$0	SB 630 - Lahontan Regional Water Board, 319 Funds are also a possibility.	\$25,000	\$0	SB 630 funds could be used to continue monitoring activities at a reduced rate to continue to inform modeling efforts into the future.	The proposed Nearshore monitoring effort for status and trends will not have supporting data regarding groundwater contributions. Management actions for groundwater protection may then be delayed, the Lake Tahoe TMDL will also not likely be implemented as successfully without considering data from this source category.
29	Regional Landscape Conservation Measures for Lake Tahoe	Tahoe Resource Conservation District	\$562,500	--	\$0	319 Funds	\$150,000	\$0	Operation and maintenance costs would be the responsibility of the private property owner.	The Lake Tahoe TMDL and the EIP will not likely have significant pollutant load reductions from the private sector. The TRPA BMP ordinance would also not likely be implemented effectively. We also would also delay opportunities for water conservation and GHG reductions.
30	Analyzing LIDAR data to identify Micro Stormwater Infiltration Systems (MSIS) for the whole Lake Tahoe Basin	Tahoe Resource Conservation District	\$125,000	--	\$0	DWR, EPA	\$0	\$0	Counties, Landowners	Increased high impact development, increased nutrient and sediment input to Lake Tahoe, decline in water quality, increased localized flooding risk, increased erosion
31	Regional Stormwater Monitoring Program	Tahoe Resource Conservation District	\$1,062,500	SNPLMA, State Water Board	\$1,500,000	319 Funds	\$350,000	\$0	There are no O&M costs	The Lake Tahoe TMDL will not likely be implemented successfully. The EIP program would not have extensive information to support benefits associated with project implementation.
32	Trout Creek Trail	Town of Truckee	\$5,000,000	TSSA #1, RSTP, LTF	\$4,000,000	Various Grants-uncertain	\$1,000,000	\$30,000	Will be programmed in Town of Truckee annual operational and Capital Improvement Program budget.	Project will be constructed as funds allow
33	Trout Creek Restoration	Town of Truckee	\$14,200,000	Supplemental Prop 50	\$800,000	Various Grants-uncertain	\$0	\$20,000	Will be programmed in Town of Truckee annual operational and Capital Improvement Program budget.	Project will not be constructed.
34	Truckee River Legacy Trail	Town of Truckee	\$4,000,000	--	\$0	Various Grants-uncertain	\$0	\$30,000	Will be programmed in Town of Truckee annual operational and Capital Improvement Program budget.	Project will not be constructed.
35	Dry Creek Restorations	Truckee River Watershed Council	\$665,000	--	\$0	Bella Vista Foundation (applied), National Fish and Wildlife Foundation (applied), U.S. Forest Service internal funds (applied)	\$265,000	\$0	Operations and maintenance costs will be minimal. Every 5 years, some maintenance on the existing road will take place, which is covered by Forest Service operations budgets.	Meadow degradation and water quality impacts will continue. Implementation costs will rise as degradation becomes more severe.
36	First 4 Mile Restoration Project	Truckee River Watershed Council	\$410,000	--	\$0	Truckee River Fund	\$50,000	\$0	USFS and Tahoe City PUD have standing operation and maintenance agreements	Lack of TMDL attainment, continued erosion and increased sedimentation into the Truckee River; loss of native habitat and potential impact to bike trail
37	Johnson Canyon Restoration	Truckee River Watershed Council	\$300,000	--	\$0	U.S. Forest Service - likely cost share	\$75,000	\$2,000	Operations and maintenance costs will be minimal. Every 5 years, some maintenance on the existing road will take place, which is covered by Forest Service operations budgets.	Severe erosion will continue. Every year that restoration is delayed in Johnson Canyon increases implementation costs due to the increase in damage.
38	Lacey Meadows Restoration	Truckee River Watershed Council	\$1,500,000	--	\$0	--	\$0	\$2,000	The restoration project are designed to be self-sustaining. Road management requires periodic maintenance- approximately every 5 years. The bulk of the roads are U.S. Forest Service roads and maintenance will be covered from their operations budgets.	Meadow degradation and water quality impacts will continue. Implementation costs will rise as degradation becomes more severe.
39	Martis Watershed Restoration Plan Implementation	Truckee River Watershed Council	\$1,000,000	--	\$0	Funding agencies that would support restoration in Martis include: Martis Fund, Truckee River Fund, Partner contributions, National Forest Foundation, Wildlife Conservation Board. we have not applied to any of these sources for work described in this project template.	\$0	\$0	The restoration work is designed to be self-sustaining, therefore there should not be any additional maintenance costs.	Degradation will continue in the Martis watershed resulting in water quality impacts, wetland and meadow loss, and increased upland runoff.
40	Non-native Invasive Plan Species	Truckee River Watershed Council	\$210,000	Martis Fund	\$30,000	NFF Treasured Landscapes	\$30,000	\$0	Project partners, landowners, and stakeholders	Continued increase in non-native invasive plant species, increase erosion along streams and the Truckee River, decrease in recreational value and wildlife habitat.
41	Truckee River Residential Voluntary BMP Implementation	Truckee River Watershed Council	\$507,500	CWA 319 (h)	\$175,000	--	\$0	\$0	Operation and maintenance costs will be financed by homeowners who have installed BMPs.	Sediment source reduction from residential properties will cease
42	TMDL Monitoring for the Truckee River	Truckee River Watershed Council	\$150,000	Match will be difficult to obtain for this project	\$0	--	\$0	\$0	Because this is a monitoring project, there are no operations and managements costs.	There is no comprehensive monitoring plan to track the attainment of the Truckee River TMDL. Our monitoring program is essential to understanding if implementation measures are having any impact.
43	Truckee Wetlands Restoration	Truckee River Watershed Council	\$1,250,000	--	\$0	--	\$0	\$0	all land owners are project partners and have agreed to maintain the project	Continued erosion and increased sedimentation into the Truckee River; loss of native habitat through continued drying conditions.
44	Regional Water Conservation Programs	South Tahoe Public Utility District	\$600,000	Water Utility General Funds	\$100,000	--	\$0	\$0	Operation and maintenance costs will be provided by the landowner/homeowner	Water conservation/water use efficiency has been identified as an important aspect in dealing with future water supply and source needs. Without a program to implement water efficiency use by all, water sources will be impacted negatively.
45	Water Quality Monitoring	Town of Truckee	\$ 625,000 / 5 years	Prop 84 Round 2	\$232,635	General Fund	As Needed	\$0	Water quality monitoring is essentially operation and maintaining the stations and will not be continued without funding. Stations are removed if funding is not available to continue and equipment can be re-installed as funding is available at a later date.	Monitoring will not be continued past 2015 if additional funding is not secured
46	Waterlines - Sierra Tract, Brockway, Black Bart	South Tahoe Public Utility District	\$1,875,000	STPUD Capitol Improvement Funding	\$375,000	--	\$0	\$0	O&M Costs are included in the STPUD general revenue budget annually.	This project provides water savings as well as fire protection benefits. Both of these benefits would be lost without funding for project implementation, leaving vulnerable commercial and residential areas without adequate fire protection.
47	West River Street Site Redevelopment and River Revitalization	Town of Truckee	\$22,325,000	--	\$0	Development Impact Fees, General Fund, Private Developer Funding	\$0	\$100,000	General Fund through on-going operations costs for Public Works personnel	Truckee River will continue to flow through degraded area inDowntown Truckee.
48	West River Street	Town of Truckee	\$3,000,000	Measure V and AB 1600 Traffic Impact Fees	\$2,000,000	General Fund	As Needed	\$45,000	Maintenance will continue to be performed by Town of Truckee Public Works/ Street Maintenance Division Staff (funded through local funds)	Roadway will be widened but minimal water quality improvements will be installed.
49	West Lake Tahoe Regional Water Treatment Plant	Tahoe City Public Utility District	\$8,544,911	PCWA	\$37,000	CDPH SRF, CDPH Prop 50, LTCFPP	\$1,214,000	\$140,568	TCPUD Board of Directors are in support of the new treatment plant, and are committed to the District funding the operation and maintenance of the new plant.	This project is critically important to solve the water delivery issues on the West Shore of Lake Tahoe. TCPUD will continue to pursue funding opportunities to ensure the project is completed.
50	Carnelian Woods Tanks Site EIPs	North Tahoe Public Utility District	\$737,618	--	\$0	NTPUD funding dependent on Board budget approval	\$1	\$0	NTPUD's annual operating budget	Continued erosion in Carnelian Canyon will continue from NTPUD vehicles driving on the access road to perform maintenance on water storage tanks.
51	Dolly Varden Water Main Replacement Projects	North Tahoe Public Utility District	\$1,200,000	--	\$0	NTPUD funding dependent on Board budget approval	Dependent on grant amount	\$5,000	NTPUD's annual operating budget	This project must be completed prior to the completion of the Placer County Commercial Core project and would reduce District's capital funds which would delay other water main replacement projects, potentially not meeting 2020 reduction requirement by target date.



Table 8-3 Project Financing Summary

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52	Kingswood West Tank Site EIPs	North Tahoe Public Utility District	\$88,660	--	\$0	NTPUD funding dependent on Board budget approval	\$1	\$0	NTPUD's annual operating budget	Continued erosion of the access road will continue from NTPUD and cell phone company's vehicles driving on the access road to perform maintenance on water storage tank and cell phone towers and equipment.
53	Woodfords Community Wastewater Infrastructure Upgrades	Washoe Tribe of Nevada and California	\$600,000	--	\$0	--	\$0	\$0	O&M Costs are included in the Woodfords Community general fund.	This project provides wastewater conveyance and treatment upgrades to protect the integrity of the system. Without this project, possible aquifer pollution and pollution of downstream fisheries could occur.
54	Woodfords Community Water Infrastructure Upgrades	Washoe Tribe of Nevada and California	\$600,000	--	\$0	--	\$0	\$0	O&M Costs are included in the Washoe Tribe Water Utility revenue annually.	This project provides water savings as well as fire protection benefits. Both of these benefits would be lost without funding for project implementation, leaving vulnerable governmental and residential areas without adequate fire protection.
55	Aquifer Monitoring	Squaw Valley Public Service District	\$65,000	Not presently secured	\$0	District Capital Reserves	\$15,000	\$67,500	O & M will be funded from District operating budget	The Squaw Valley Groundwater Management Plan Advisory Group is a loosely knit group of valley pumpers, water purveyors, interested stakeholders, and the District. The group goal is to identify and implement best management practices, yet no funding mechanism exists to pull projects together. Lack of funding will delay project implementation and prevent resource management from advancing. Loss of valuable data and understanding of resource will be reduced
56	Squaw Valley Mutual Water Co. Intertie	Squaw Valley Public Service District	\$155,000	Placer County Water Agency Grant/District Capital Fund	\$20,000		\$0	\$157,500	The Operations and Maintenance cost will be provided by the District as a portion of the annual operating budget	The SVPSD and SVMWC have discussed the benefits of an interconnection for many years. The SVMWC is a small supplier serving only 315 customers so funding is limited. Without grant funding which the SVPSD has secured matching funds from PCWA in the form of a grant; the project will likely continue as it has in the past.
57	Squaw Creek Siphon	Squaw Valley Public Service District	\$250,000	SVPSD asset replacement fund	\$50,000		\$0	\$251,500	The District already covers O & M costs and will continue to maintain the system through user fees	The project would be delayed until funding is secured
58	Truckee River Siphon	Squaw Valley Public Service District	\$500,000	District asset replacement fund	\$100,000		\$0	\$503,000	The District already covers O & M costs and will continue to maintain the system through user fees	The project would be delayed until funding is secured
59	Well 3 Replacement	Squaw Valley Public Service District	\$750,000	District Asset Replacement Fund	\$200,000		\$0	\$760,000	The District currently provides O & M for Well 3 through operating revenue and will continue to support the replacement well	The District inherited a series of old wells from the State of California that were constructed 56 years ago. All of those wells have suffered casing failure due to corrosion with the exception of Well 3. Well 1 an identical well to Well 3 was replaced in 2005 at a cost of \$650,000. Well 2 which houses the control systems for all 3 wells was replaced in 2011 at a cost of 1.7 million, a project that exhausted the District's reserve funds. Recovery of the reserve fund such that a 25% match may be considered is somewhat difficult due to loss of revenue through the recession. The District strives to meet the Water Code requirement to meet average maximum demand with the largest source out of service. Although well 3 is the smallest well it is currently out of service making it difficult to meet required demands with the loss of any additional source capacity. District well #2R is currently being throttled back due to drought levels in the Squaw Valley aquifer. Therefore, failure by the District to fund a replacement project could result in mandatory cut backs and mandatory conservation practices should the drought worsen. The District seeks grant funding assistance to replace the aging and failing well before it becomes and operational issue. Without funding the project is not likely to proceed for an extended period of time. The project design was completed in conjunction with the Well 1R project in 2005 and stands shovel ready since that time.
60	Redundant Water Supply	Squaw Valley Public Service District	\$3,685,000	Undetermined	\$0	PCWA/Placer County/CDPH-SRF	\$0	\$10,000	O & M will be provided by District when constructed through operating revenues.	The subject of this application is the construction of a terminal tank and the environmental and permitting phase of a larger regional water supply project to import water from the Martis Valley aquifer to the Truckee River, Olympic Valley, and potentially Alpine Springs CWD, and Squaw Valley Mutual Water Company. Should importing water from Martis Valley, a technically feasible project, become the preferred alternative the total cost of the project may be 26 million dollars or more. The District is actively pursuing funding partnerships with other agencies including Placer County Water Agency, Placer County Parks and Recreation (Truckee River Access and Bike Trail Project), Southwest Gas, Suddenlink Cable, Alpine Springs CWD, developers, and other beneficiaries. It is imperative at this stage the District assume a leadership role in establishing the environmental feasibility, obtain permits, and construct the terminal tank. With the Placer County Truckee River Access and Bike Trail project moving forward the opportunity for a joint project is now. If the project is not funded the future redundancy and reliability of the District water source remains uncertain. The eastern subdivisions in Squaw Valley will continue to suffer from pressure fluctuations and water hammer without the terminal tank to balance water demand. The Squaw Valley aquifer may be further depleted by long term impacts of global warming. Regional growth as projected in the Squaw Valley General Plan will not be possible due to lack of water supply resulting in long term economic impact. The opportunity cost of partnering with Placer County and developers who are considering a natural gas pipeline would be lost. Funding for the EIR stage of the project at this time will put the project on track with other stakeholders and pave the way for forming the funding mechanisms for a project of this magnitude.

- Special taxes, assessments, and fees,
- State or federal grants and loans,
- Private loans, and
- Local bonds.

### **8.3.2.2 Grants and Other Sources**

The RWMG/Partnership will research, identify and pursue grant funds that could help implement the projects and meet the objectives included in the Tahoe-Sierra IRWM Plan. The RWMG/Partnership will not serve as a fiscal agent for grant funds, but rather will identify a willing agency or organization with the appropriate authority and financial management capacity to serve as a fiscal agent on behalf of the Region, as necessary, for each specific grant opportunity that is pursued. Some grant programs may require a single grantee for a Region while others can be applied for by individual member agencies.

The fiscal agent(s) may distribute grant funds to other project proponents within the Region according to the specific terms of the grant program that provides funds. The project proponents whom receive grant funds will be responsible to complete their project(s) as described in the relevant grant application and/or grant agreement. The fiscal agent will not be responsible to fund or complete projects for other project proponents outside of the specific commitments made in a particular grant agreement.

The RWMG/Partnership will track the amount of grant funds brought into the Region to support implementation of the IRWM Plan and the specific projects being funded (or partially funded) with grant funds. The RWMG/Partnership will include this information in their annual report of Plan performance.

## **8.4 Plan Performance and Monitoring**

Another important element of successful Plan implementation is a well-developed approach to performance and monitoring. This section describes such an approach, including monitoring, adjustments, and data sharing in order to meet the 2012 IRWM Guidelines. The key elements of plan performance and monitoring involve tracking of project implementation and progress towards achieving objectives and the individual measurable planning targets (MPTs). This tracking will be monitored in a Data Management System described in the following section and will provide key information to inform the RWMG/Partnership and stakeholders as to whether the Plan is being implemented as intended, or whether updates or other changes are needed to keep the Plan on track.

The tracking and monitoring of plan performance does not replace required regulatory reporting by specific agencies within the Region. Plan performance tracking is being done to monitor progress on Plan implementation and provide information that can be useful for continuing implementation of, updating or amending the Plan.

### 8.4.1 Project-Focused Performance Monitoring

Project implementation will be tracked as part of the IRWM Plan Implementation activities included in the topic area: Update Tahoe – Sierra IRWM Plan and Manage and Share Related Data and Information. It is expected that project implementation tracking will include:

- Every two-year (minimum) call for new/revised projects.
- Update of status of the existing project list including project archival following completion of projects every two-years.
- Monitoring of in-progress project performance including project status, data results, budget and schedule.
- Consideration of opportunities to integrate or enhance existing projects.

Information about projects can be maintained in an excel spreadsheet or on the Data Management System described further in Section 8.4.2. It is anticipated that the RWMG/Partnership will have primary responsibility for maintaining information regarding project focused monitoring sufficient for the IRWM Plan and will periodically request current project status information from proponents.

Table 8-4 outlines several considerations for monitoring efforts as articulated in the Proposition 84/1E guidelines (required for Proposition 84/1E grant-funded projects and recommended for all other projects in the Plan) for purposes of this Plan:

Table 8-4: Project Specific Monitoring Plans

<b>Category</b>	<b>Description</b>
Responsibility for developing project specific monitoring plans and monitoring activities	Project proponent responsibilities include development of project-specific monitoring plans and monitoring of project performance after implementation. Project proponents must report this information to the RWMG/Partnership and to any lead agency responsible for grant or loan funding contributions.
Stage of project development when a project-specific monitoring plan will be prepared	Project-specific monitoring plans will be developed by the project proponent before the start of project implementation.

Category	Description
Typical project specific monitoring plan requirements	<p>Monitoring plans will include delineation of the following components:</p> <ul style="list-style-type: none"> <li>▪ Description of what will be monitored for each project,</li> <li>▪ Methods for monitoring problems that occur during project implementation and their correction,</li> <li>▪ Monitoring location(s),</li> <li>▪ Monitoring frequency,</li> <li>▪ Monitoring protocols, procedures, and responsibilities,</li> <li>▪ Reporting of data collected to the data management system (DMS) described in Section 8.4.2 for sharing with project stakeholders as well as to statewide databases, and</li> <li>▪ Procedures and funding assurances to document that the monitoring will take place as intended during the entire monitoring period.</li> </ul>

Lessons learned will be applied to future project implementation by evaluating the extent to which the Plan objectives and targets are accomplished, and reviewing and refining the types of projects or targets themselves based on the various experiences. For example, technical information and data collected will contribute to a greater body of understanding about certain challenges faced by the Region. Likewise, financial performance and reporting experiences will help inform more efficient ways of planning and implementing important projects. These experiences will be shared through the (at minimum annual) interactions with the RWMG/Partnership and stakeholders, and through project reporting mechanisms.

#### 8.4.2 Objectives Focused Performance Monitoring

For the RWMG, the tracking of Plan Objectives WQ1 – IWM6 and the associated measureable planning targets (MPT) will require more effort and coordination than tracking of IRWM Plan projects. The Objectives Tracking table found in Appendix F (TO BE DEVELOPED) was created in Excel and focuses on individual MPTs. The table identifies the projects that can contribute to meeting the MPT, and where appropriate, identifies specific activities or projects that may be needed to achieve the MPTs. The table is sorted by MPT. The activities and dates are suggested and can and should be periodically reviewed and updated by the RWMG/Partnership. The data associated with this table could also be maintained in the Data Management System.

#### 8.4.3 Data Management

The RWMG/Partnership has the opportunity to develop a grant-funded Data Management System (DMS) to help retain, organize and process key Plan performance and monitoring data. The data management system linkage and tracking of information will feed into the Region's understanding of the success of Plan implementation, and whether adjustments to objectives, projects, or strategies may be needed in the future.

As data are collected, whether linked to implementation grant programs or other funding mechanisms, there are typically reporting requirements. Many water resources linked efforts are also attached to mandatory regulatory reporting requirements to statewide databases. To make

data from the Region accessible and compatible with State databases (such as SWAMP, Geotracker, GAMA, CEDEN, the California Water Data Library and many others), the RWMG will require implementation projects clearly delineate the nature of the data being collected (parameters, units), the timeframe associated with the data, and the location associated with the data. The Tahoe-Sierra DMS is not intended to supersede or duplicate the statewide data collection efforts, but instead work together with the databases as resources to draw important information.

#### 8.4.3.1 Data Management System

The DMS relies on a combination of systems such as GIS, spreadsheets, and databases to track important Plan information. The DMS is a hybrid solution and provides a user friendly ESRI-software based GIS front-end interface that is supported by databases and spreadsheets for specific data. The DMS is located at (URL to be inserted) and includes the following features:

**NOTE TO SUB-COMMITTEE- AN EXAMPLE DMS IS AT: <http://aims3.kennedyjenks.com/ts-irwm/>**

- Topographic Base map with layers for water Organization boundaries, watershed boundaries with rivers and lakes, DAC areas, Tribal lands (partial), 303d listed streams and water bodies, watersheds, General Plan and DWR Land Use classifications
- Production of custom maps with available information
- Project Locations
- IRWM Projects and project information forms
- Flood hazard areas
- Hydrologic and other types of models
- Document library and document search tool
- Reference documents
- Plan sections when complete
- Project and objective tracking tables

Other DMS Elements that could be included in a Pilot

- Water quality data for surface and groundwater to either be hosted directly within or live-linked to other web sources
- Water quantity data through live links with gauging stations, meter data, and diversion data
- Water rights data
- Project Tracking Database. A future DMS phase could include an on-line database which will require an administrator to manage and add the projects. The spreadsheet will track information including:
  - Project name
  - Project proponent
  - Project location
  - Short description

- Estimated cost and funding sources (such as Proposition 84/1E funded)
- Project schedule and current status
- Type and location of project specific monitoring information
- Objectives and MPTs the project will contribute to
- Objectives Tracking database Similar to the project tracking database, this would be an on-line database specifically for period updating and evaluation of progress with meeting IRWM Plan objectives. A tracking spreadsheet will be developed as described in Section 8.4.2 and will be included in **Appendix F** to this Plan as a first level tracking effort.

#### **8.4.3.2 Potential Long-Term Data Management Options**

Although funding is available to develop the basic DMS, at present, questions remain regarding the future update, maintenance, hosting, and troubleshooting of the DMS. Discussions have been initiated with both the Sierra Water Workgroup as well as other Sierra IRWMs that may resolve both long-term maintenance concerns and to have the DMS be potentially more broadly available to other IRWMs. These will be resolved and specific actions documented in an appendix to be added to the IRWM Plan. Potential DMS options and opportunities to further enhance the DMS in the future that should be considered are summarized below.

Options under discussion include:

- i. -Partnerships with the Sierra Nevada Alliance or neighboring IRWM with DMS Hardware and Software for DMS hosting
- ii. -Partnerships with Sierra Water Work Group (SWWG) for maintenance
- iii. -Partnerships with other Sierra IRWM Groups to contribute DMS data for sharing
  - a. Upper Feather IRWM
  - b. Tuolumne-Stanislaus IRWM
  - c. Cosumnes, American, Bear and Yuba IRWM
  - d. Southern Sierra IRWM
  - e. Inyo-Mono IRWM (potential partner for pilot DMS development)
  - f. Yosemite-Mariposa IRWM (potential partner for pilot DMS development)
  - g. Mokelumne/Amador/Calaveras (MAC) IRWM
  - h. Upper Pit River Watershed IRWM
  - i. Madera IRWM

- j. Yuba County IRWM
- k. Lahontan Basins IRWM

## 8.5 Suggested Initial Steps for Plan Implementation

In order to bring focus to the specific implementation action recommendations described in Table 8-2, the following near-term activities and schedules are suggested as shown in Table 8-5.

Table 8-5: IRWM Plan Near-Term Implementation Activities and Schedule

<b>Activity/Action</b>	<b>Lead Entity</b>	<b>Planned Schedule</b>
1. Establish an annual operating mechanism (PLT) for implementation support and manage expenditures of administration support activities.	RWVG	By September 2014
2. Convene Plan Implementation Meetings to develop proposed meeting schedule for 2015 and 2016. It is suggested that at minimum one Plan implementation meeting be held per year.	RWVG/PLT	Schedule 2015 and 2016 meetings
3. Develop long-term DMS plan and pilot DMS for transition and maintenance by partner .	RWVG (OTHER PARTNERS?)	By December 2014
4. Issue a Call for Projects to add, delete, or integrate existing projects and project status updates.	RWVG/PLT	By February 2016
5. Prepare for applying for Round 3 DWR Implementation Grant funds and other grant funding opportunities.	RWVG/Sub-committee	By fall 2015
6. Coordinate with neighboring IRWM regions and local, state and federal agencies.	RWVG	On-going - annually

## 8.6 Plan Updates and Changes

### 8.6.1 Making Changes to the IRWM Plan

The RWVG/Partnership will convene a Sub-Committee to review the Tahoe-Sierra IRWM Plan at least once every five years to determine if the content of the Plan needs to be changed in a significant way other than the periodic updates or amendments of the objectives and projects as described below. If significant changes are needed, the RWVG/Partnership will lead the process for revising the Plan. Once substantial revisions are made, the RWVG/Partnership will request that RWVG members and project proponents adopt the revised Plan.

## 8.6.2 Updating and Amending the IRWM Plan

Minor updates or amendments to the IRWM Plan will not require a complete re-adoption of the entire IRWM Plan. Instead specific changes will be submitted to the Partnership for consideration to adopt as an amendment o the existing Plan. Updates or amendments specifically include changes to the project lists and refinements to the IRWM Plan objectives.

The RWMG/Partnership will invite stakeholders and project proponents at least once every two-years to submit additional projects for consideration to be included in the IRWM Plan or provide updates to projects already included in the IRWM Plan. The RWMG/Partnership will publicize the opportunity and process to submit new projects (or updates) for consideration. The Partnership will present and discuss the potential additions/revisions to the project list within the Tahoe-Sierra IRWM Plan in one or more stakeholder input meetings, and recommend the project list and/or objective refinement for inclusion in the Plan as an amendment. Following acceptance of the addition/revisions to the project list by the Partnership, adoption of IRWM Plan amendment may be required on a case by case basis by individual project proponents to meet requirements of the IRWM Guidelines or individual proposal solicitation packages. .



**DRAFT**  
**Memorandum of Understanding (MOU)**  
**Regarding the Tahoe Sierra IRWM Plan**  
**(Integrated Regional Water Management Plan)**  
**Revised**  
**January 30, 2014,**

**1. Purpose of MOU**

The signatories of this Memorandum of Understanding (MOU) recognize the value of coordinating water management, planning and implementation activities within the Tahoe Sierra Integrated Regional Water Management Plan Region (Region) which includes the Truckee River watershed including the Tahoe Region, and the Carson River watershed all of which are contained in portions of Alpine, El Dorado, Placer, Sierra, and Nevada Counties as shown on Exhibit A.

This MOU is in reference to the intent of the IRWM Program is to encourage integrated regional strategies for management of water resources and to provide funding, through competitive grants, for projects that protect communities from drought, protect and improve water quality, and improve local water security by reducing dependence on imported water.

This MOU facilitates the implementation of the Tahoe Sierra Integrated Regional Water Management Plan (IRWM Plan), a set of coordinated strategies for management of water resources and for the implementation of projects that protect our Tahoe Sierra communities from drought, protect and improve water quality and improve local water security.

**2. Goals of IRWM Plan**

Water management goals within the Tahoe Sierra IRWM Plan include but are not limited to:

- Aligning with ongoing IRWM requirements
- Supporting and improving local and regional water supply reliability;
- Reducing conflict between water users and resolving water rights disputes;
- Contributing measurably to the long-term attainment and maintenance of water quality standards;
- Eliminating or significantly reducing pollution in impaired waters
- Restoring and protecting sensitive habitat areas;
- Coordinate with the Lahontan Regional Water Quality Control Board Basin Plan;
- Implementing non-point source (NPS) pollution plans.

The 2014 Revised Tahoe Sierra IRWM Plan can be found at (<http://tahoesierrairwm.com/>). All future revisions of the Tahoe Sierra IRWM Plan will also be posted at this location.

The implementation projects as chosen by all the agencies are listed in the IRWM Plan. These projects have been evaluated and ranked in implementation order by all members of the Tahoe Sierra IRWM. It is expected the signatories of this MOU will apply for available funding. Stakeholders and project proponents will be invited at least once every two-years to submit additional projects for consideration to be included in the IRWM Plan or provide updates to projects already included in the IRWM Plan, without formal amendment of the IRWM Plan.

### **3. Mutual Understandings**

This MOU does not abridge any decision-making authorities of any signatory.

The Tahoe Sierra IRWM Plan and implementation guidelines developed under this MOU will not conflict with any legal obligation of any signatory, including those under contracts, licenses, permits, regulations and statutes.

This MOU is not an obligation of funds, and does not control or limit pursuit of funding for any future project of any signatory.

It is expected that signatories to this MOU will contribute staff time necessary to meet the goals of this MOU.

### **4. Withdrawal from the MOU**

Any party to the MOU may end its participation by providing written notice to the partnership lead at their normal business address.

### **5. Signatories to the MOU**

MOU Signatories: The signatories to this MOU represent a spectrum of public agencies, special districts, non-profit organizations and education institutions throughout the Tahoe Sierra region.

The signatories of this MOU will:

- Foster a collaborative water management planning environment;
- Promote integration of water management across geographies of the region;
- Recommend priorities for implementation projects;
- Cooperatively apply for and obtain funding for implementation projects;
- Revise and update the Tahoe Sierra IRWM Plan as needed;
- Communicate the best available information to decision makers, stakeholders and the public

We the undersigned adopt the Tahoe Sierra IRWM Plan and will act to implement it to the best of our ability in compliance with applicable legal requirements.

Future signatories to this agreement are welcome, and past signatories to the original MOU are still viable unless written notice to end the participation of the agency has been received by the partnership lead.

This MOU may be executed by submittal of individual signature pages that when combined, shall constitute a single instrument. The signatories to this MOU represent that they have the authority to bind their respective agency to this MOU.

1. Tahoe Sierra IRWM Plan

**Memorandum of Understanding**

**Signatory Page**

**Agency** \_\_\_\_\_

\_\_\_\_\_  
**Responsible party/title for signature**

**Signed** \_\_\_\_\_

**Date signed** \_\_\_\_\_

Exhibit A- Map of Region