

Section 8: Implementation Framework

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 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”

During the update of the Plan, the RWMG was refined to be at least three entities, two of which have statutory authority for water management. The Tahoe-Sierra Partnership (Partnership) will decide on the composition of the Tahoe-Sierra RWMG annually at the Partnership meeting and/or on an as-needed basis. However, 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 term Partnership, which includes the smaller RWMG, is the term used from this point forward. Both the Tahoe Resource Conservation District and the South Tahoe Public Utility District have provided leadership to the



Trout Creek Restoration Project
(Photo courtesy of the Town of Truckee)

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, Proposition 50 IRWMP Funding Supplemental Round, and Proposition 84, Round 2 Planning.

8.2 Recommended Governance Structure

Once the Tahoe-Sierra IRWM Plan has been adopted, the focus of the Partnership, who are the signatories to the MOU provided in Appendix 1-A, 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 Partnership and other Plan stakeholders and participants.

8.2.2 Roles and Responsibilities

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

- Tahoe Sierra Regional Water Management Group (three entities, two of whom have water management authority and are required to adopt the Plan for grant application acceptance)
- Tahoe-Sierra Partnership who are also MOU Signatories
 - Leadership Team (LT) – a group of volunteer individuals (typically 3-5) from the Partnership who rotate 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 Partnership will provide leadership for fostering cooperation, continuing coordination, tracking of Plan performance, and updating of the IRWM Plan through the development of a Leadership Team (LT). This is similar to how the Partnership has been functioning since its inception. The LT will be comprised of up to 5 volunteers from the Partnership who will generally serve in overlapping terms to implement the IRWM activities which are focused on communication and implementation and summarized in Table 8-1. Generally, volunteers on the LT do not have a set term to serve as has happened in practice with this small group, some members have continued for over seven years especially to administer an implementation grant. However, it is recommended that a minimum two-year term be considered. With a two-year term, the terms will overlap to ensure continuity between the LT members by always having an experienced LT member finishing his/her second year that can orient the new first year members. Stakeholders can also support the activities of the LT members.

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 Partnership.

The subsections that follow describe some of the specific roles and responsibilities of various participants involved in Plan implementation. Table 8-1 summarizes the overall activities of IRWM Plan implementation with the identification of the LT 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 8-1: Activities, Participants, and Roles for Implementing the Tahoe-Sierra IRWM Plan

Potential Roles: Lead and Support

IRWM Activities	Leadership Team Role	Stakeholder/ Participant Role	Project Proponents Role	Other/Notes
1. Public outreach and involvement processes -				
a. Establish Point of Contact for IRWM Program	Lead			
b. Maintain e-mail list	Lead			both internal and external to the Region
c. Schedule and Announce meetings	Lead			both internal and external to the Region
d. Prepare agendas and content	Lead	Support		
e. Facilitate meetings	Lead			
f. Prepare meeting summaries	Lead	Support		
g. Administer website, and update content with meeting materials, and other relevant information	Lead			both internal and external to the Region
2. Balanced access and opportunity for participation in the IRWM process				
a. Monitor and maintain DAC and Tribal Contacts list through Notification Prior to Partnership Meetings	Lead	Support		
3. Effective Communications External to the Region				
a. Communication External to the Region	Lead	Support		See also 1
b. Coordination with neighboring IRWM efforts - Sierra Water Work Group and Lahontan Region IRWMs,	Lead	Support		See also 1
c. Coordination with state and federal agencies (e.g., RWQCB)		Lead and Report to LT		
4. Long-term implementation of the IRWM Plan				
a. Evaluate Plan Performance and Monitoring for Meeting Objectives	Lead	Support		
b. Review and act on objectives/targets not accounted for in projects	Lead			
c. Gather and synthesize data related to Plan projects and report to stakeholders	Lead	Support		
d. Manage and share-related data and information (also could be Data Management System)	Lead			
5. Update Tahoe-Sierra IRWM Plan				
a. Review and update objectives	Lead	Support		
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	Lead	Support	Support	
c. Revise Plan content at least every 5 years	Lead	Support	Support	LT to determine if Subcommittee should be convened

IRWM Activities	Leadership Team Role	Stakeholder/ Participant Role	Project Proponents Role	Other/Notes
6. Financing Plan Implementation				
a. Evaluate IRWM Plan Implementation Administration (e.g. Local Staff in-kind contributions, and/or grants, or other financial sources)	Lead	Support		
b. Communicate information on upcoming funding	Lead	Support		See also 1
c. Improve project integration and select projects for inclusion in grant applications	Lead	Support	Support	
d. Prepare and submit grant applications	Support		Lead	

8.2.2.1 Partnership

The primary function of the Partnership will be to act on all matters necessary for IRWM Plan implementation. The Partnership requires signing the MOU and represent a spectrum of public agencies, a Federally Recognized Native American Tribe, 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. The LT, which has been described earlier, provides the core leadership for IRWM Plan implementation.

8.2.2.2 Regional Water Management Group (RWMG)

The RWMG 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 Partnership, South Tahoe PUD, Tahoe City PUD, North Tahoe PUD, Tahoe Donner PUD and Squaw Valley PSD all have statutory authority over water supply or water management and would be eligible to fulfill this requirement. As noted earlier, the Partnership will decide the composition of the RWMG annually at the Partnership meeting and/or on an as-needed basis. The RWMG does not have additional authority and is considered part of the Partnership.

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 list maintained by the LT that may aid in advancing the Plan's regional objectives.
2. Seek opportunities to integrate, and where possible and practical, develop Plan projects in the list 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 list 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 list 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 potential 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 Partnership. Any member of the 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 Partnership and IRWM participants, including, at minimum, the following:

- The Partnership will conduct outreach, create content and facilitate at annual (minimum frequency) Partnership meetings. In addition, the 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 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 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 8-1, multiple avenues of internal and external communication will be facilitated by the 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 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 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. DACs and Tribes will continue to be an important aspect of outreach in the Region. The public involvement processes to be completed by the 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.

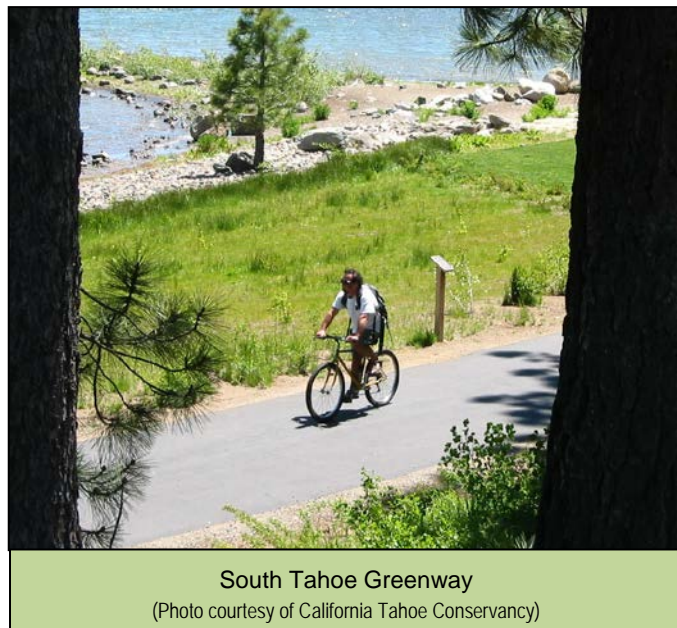
- Maintain and update content to the Tahoe-Sierra IRWM Plan website.
- Maintain a contact e-mail and phone number for people to send comments or ask questions about the Tahoe-Sierra IRWM Plan.
- Maintain the Tahoe-Sierra stakeholder e-mail list and send updates and meeting invitations as appropriate.

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 LT 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 Partnership and others could employ to secure additional funding.



South Tahoe Greenway
(Photo courtesy of California Tahoe Conservancy)

8.3.1 Funding Needs

8.3.1.1 Implementation Administration Funding

Development of the IRWM Plan was funded by the 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 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 LT as the focus for IRWM Plan implementation.

- Members of the Partnership (and potentially other agencies/organizations within the Region) may provide in-kind services to fulfill the roles of the LT and administrative support.
- The 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 8-2 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 a Proposition 84 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
- Special taxes, assessments, and fees
- State or federal grants and loans
- Private loans
- Local bonds

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Table 8-2: Project Financing Summary

Project No.	Project Title	Agency/Organization	Total Capital Cost	Secured Sources of Funding for Project Cost and % of Total Cost	How O&M costs will be Financed
1	Aquatic Invasive Species Programs	Town of Truckee	\$ 1,000,000	Some funding will be generated by the boat inspection and certification fees - 13%	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.
2	BMP Implementation on STPUD Operating Sites	South Tahoe Public Utility District	\$ 496,250	STPUD Capitol Improvement Funding - 5%	STPUD General Funds
3	Permanent BMP Implementation, Inspection, and Maintenance Programs	Town of Truckee	\$ 550,000	Project Proponent Input Pending	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.
4	Truckee Coldstream Culvert Replacement Program	Town of Truckee	\$ 2,500,000	Project Proponent Input Pending	Will be programmed in Town of Truckee annual operational and Capital Improvement Program budget.
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 - 100+%	O&M maintenance costs will be funded through the City's General Fund
6	Ruby Way - Overlook Court	City of South Lake Tahoe	\$ 150,000	Project Proponent Input Pending	O&M maintenance costs will be funded through the City's General Fund
7	Sierra Tract Erosion Control Project, Phase 3/4	City of South Lake Tahoe	\$ 3,912,500	CTCUSFS - 34%	Maintenance responsibilities will be carried out by the City's Street Maintenance Division using General Fund budget allocations.
8	Sierra Boulevard	City of South Lake Tahoe	\$ 2,500,000	City of South Lake Tahoe - Caltrans Settlement - 8%	Maintenance responsibilities will be carried out by the City's Street Maintenance Division using General Fund budget allocations.
9	South Lake Tahoe Integrated Roadway Management Strategy	City of South Lake Tahoe	\$ 1,145,500	Project Proponent Input Pending	O&M Costs are included within the City's annual budget for roadway maintenance and stormwater management from the City's General Fund.
10	Tahoe Valley Stormwater Improvement Project (SWIP)	City of South Lake Tahoe	\$ 750,000	US Forest Service (SNPLMA) - 47%	O&M maintenance costs will be funded through the City's General Fund
11	Meyers SEZ and Erosion Control Project	El Dorado County	\$ 550,000	SNPLMA Erosion Control - 45%	Operation and maintenance costs will be provided by the County of El Dorado Maintenance and Operations Division and the County Road Fund.
12	Oflyng Erosion Control Project	El Dorado County	\$ 247,500	Project Proponent Input Pending	Operation and maintenance costs will be provided by the County of El Dorado street maintenance division and the County Road fund
13	Hope Valley Meadow Restoration	American Rivers	\$ 850,000	Wildlife Conservation Society, National Fish and Wildlife Foundation - 56%	--
14	Iroquois Pond SEZ Restorations	South Tahoe Public Utility District	\$ 266,250	Project Proponent Input Pending	STPUD General Funds
15	Greenway Shared Use Trail	California Tahoe Conservancy	\$ 8,443,300	Prop 84 - 11%	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.
16	Grover Hot Springs State Park Meadow Restoration and ADA Access	Alpine Watershed Group	\$ 627,000	Project Proponent Input Pending	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.

Table 8-2: Project Financing Summary

Project No.	Project Title	Agency/Organization	Total Capital Cost	Secured Sources of Funding for Project Cost and % of Total Cost	How O&M costs will be Financed
17	Lower Squaw Creek Restoration Project	Friends of Squaw Creek	\$ 1,400,000	several in development - 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 in kind support from Placer County
18	Upper Truckee River and Marsh Restorations	California Tahoe Conservancy	\$ 5,880,000	California Tahoe Conservancy US Bureau of Reclamation US Bureau of Reclamation/SNPLMA - 27%	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.
19	Meter Conversion	Lukins Brothers Water Company, Inc.	\$ 2,770,000	Project Proponent Input Pending	Operation and maintenance costs will be provided by Lukins Water Company general operation and maintenance budget.
20	Waterline Replacement Project 2a	Lukins Brothers Water Company, Inc.	\$ 1,550,000	Remaining funding from Phase 1 Waterline Project - 6%	Operation and maintenance will be funded through Lukins general fund operation and maintenance account.
21	Waterline Replacement Project 7a	Lukins Brothers Water Company, Inc.	\$ 700,000	Project Proponent Input Pending	Operation and maintenance will be funded through Lukins general fund operation and maintenance account.
22	Markleeville Creek Floodplain Restoration Project *	Alpine County	\$ 1,600,000	District Attorney - 2%	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 - 20%	STPUD General Funds
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 - 70%	General Fund through on-going operations costs for Public Works personnel
25	Tahoe Keys Force Main Bypass	South Tahoe Public Utility District	\$ 875,000	STPUD Capitol Improvement Funding - 20%	STPUD General Funds
26	Regional Aquatic Invasive Species Prevention, Control and Monitoring *	Tahoe Resource Conservation District	\$ 3,850,000	User Fees - 19%	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
27	Small-scale Testing of Micro Stormwater Infiltration Systems	Tahoe Resource Conservation District	\$ 375,000	Project Proponent Input Pending	EI Dorado County for two selected communities, landowners with MSIS on their properties
28	Groundwater Monitoring to support near shore management	Tahoe Resource Conservation District	\$ 237,500	Project Proponent Input Pending	SB 630 funds could be used to continue monitoring activities at a reduced rate to continue to inform modeling efforts into the future.
29	Regional Landscape Conservation Measures for Lake Tahoe	Tahoe Resource Conservation District	\$ 562,500	Project Proponent Input Pending	Operation and maintenance costs would be the responsibility of the private property owner.
30	Analyzing LiDAR data to identify Micro Stormwater Infiltration Systems (MSIS) for the whole Lake Tahoe Basin	Tahoe Resource Conservation District	\$ 125,000	Project Proponent Input Pending	Counties, Landowners
31	Regional Stormwater Monitoring Program	Tahoe Resource Conservation District	\$ 1,062,500	SNPLMA, State Water Board - 141%	There are no O&M costs

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Project No.	Project Title	Agency/Organization	Total Capital Cost	Secured Sources of Funding for Project Cost and % of Total Cost	How O&M costs will be Financed
32	Trout Creek Trail	Town of Truckee	\$ 5,000,000	TSSA #1, RSTP, LTF - 80%	Will be programmed in Town of Truckee annual operational and Capital Improvement Program budget.
33	Trout Creek Restoration	Town of Truckee	\$ 14,200,000	Supplemental Prop 50 - 6%	Will be programmed in Town of Truckee annual operational and Capital Improvement Program budget.
34	Truckee River Legacy Trail	Town of Truckee	\$ 4,000,000	Project Proponent Input Pending	Will be programmed in Town of Truckee annual operational and Capital Improvement Program budget.
35	Dry Creek Restorations	Truckee River Watershed Council	\$ 665,000	Project Proponent Input Pending	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.
36	First 4 Mile Restoration Project	Truckee River Watershed Council	\$ 410,000	Project Proponent Input Pending	USFS and Tahoe City PUD have standing operation and maintenance agreements
37	Johnson Canyon Restoration	Truckee River Watershed Council	\$ 300,000	Project Proponent Input Pending	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.
38	Lacey Meadows Restoration	Truckee River Watershed Council	\$ 1,500,000	Project Proponent Input Pending	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.
39	Martis Watershed Restoration Plan Implementation	Truckee River Watershed Council	\$ 1,000,000	Project Proponent Input Pending	The restoration work is designed to be self-sustaining, therefore there should not be any additional maintenance costs.
40	Non-native Invasive Plan Species	Truckee River Watershed Council	\$ 210,000	Martis Fund - 14%	Project partners, landowners, and stakeholders
41	Truckee River Residential Voluntary BMP Implementation	Truckee River Watershed Council	\$ 507,500	CWA 319 (h) - 34%	Operation and maintenance costs will be financed by homeowners who have installed BMPs.
42	TMDL Monitoring for the Truckee River	Truckee River Watershed Council	\$ 150,000	Match will be difficult to obtain for this project - 0%	Because this is a monitoring project, there are no operations and managements costs.
43	Truckee Wetlands Restoration	Truckee River Watershed Council	\$ 1,250,000	Project Proponent Input Pending	all land owners are project partners and have agreed to maintain the project
44	Regional Water Conservation Programs *	South Tahoe Public Utility District	\$ 600,000	Water Utility General Funds - 17%	Operation and maintenance costs will be provided by the landowner/homeowner
45	Water Quality Monitoring *	Town of Truckee	\$ 625,000 / 5 years	Prop 84 Round 2 - 37%	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.
46	Waterlines - Sierra Tract, Brockway, Black Bart	South Tahoe Public Utility District	\$ 1,875,000	STPUD Capitol Improvement Funding - 20%	O&M Costs are included in the STPUD general revenue budget annually.

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Project No.	Project Title	Agency/Organization	Total Capital Cost	Secured Sources of Funding for Project Cost and % of Total Cost	How O&M costs will be Financed
47	West River Street Site Redevelopment and River Revitalization	Town of Truckee	\$ 22,325,000	Project Proponent Input Pending	General Fund through on-going operations costs for Public Works personnel
48	West River Street	Town of Truckee	\$ 3,000,000	Measure V and AB 1600 Traffic Impact Fees - 67%	Maintenance will continue to be performed by Town of Truckee Public Works/ Street Maintenance Division Staff (funded through local funds).
49	West Lake Tahoe Regional Water Treatment Plant *	Tahoe City Public Utility District	\$ 8,544,911	PCWA - 0.4%	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.
50	Carnelian Woods Tanks Site EIPs	North Tahoe Public Utility District	\$ 737,618	Project Proponent Input Pending	NTPUD's annual operating budget
51	Dolly Varden Water Main Replacement Projects	North Tahoe Public Utility District	\$ 1,200,000	Project Proponent Input Pending	NTPUD's annual operating budget
52	Kingswood West Tank Site EIPs	North Tahoe Public Utility District	\$ 88,660	Project Proponent Input Pending	NTPUD's annual operating budget
53	Woodfords Community Wastewater Infrastructure Upgrades	Washoe Tribe of Nevada and California	\$ 600,000	Project Proponent Input Pending	O&M Costs are included in the Woodfords Community general fund.
54	Woodfords Community Water Infrastructure Upgrades *	Washoe Tribe of Nevada and California	\$ 600,000	Project Proponent Input Pending	O&M Costs are included in the Washoe Tribe Water Utility revenue annually.
55	Aquifer Monitoring	Squaw Valley Public Service District	\$ 65,000	Not presently secured - 0%	O & M will be funded from District operating budget
56	Squaw Valley Mutual Water Co. Intertie	Squaw Valley Public Service District	\$ 155,000	Placer County Water Agency Grant District Capital Fund - 13%	The Operations and Maintenance cost will be provided by the District as a portion of the annual operating budget
57	Squaw Creek Siphon	Squaw Valley Public Service District	\$ 250,000	SVPSD asset replacement fund - 20%	The District already covers O & M costs and will continue to maintain the system through user fees
58	Truckee River Siphon	Squaw Valley Public Service District	\$ 500,000	District asset replacement fund - 20%	The District already covers O & M costs and will continue to maintain the system through user fees
59	Well 3 Replacement	Squaw Valley Public Service District	\$ 750,000	District Asset Replacement Fund - 27%	The District currently provides O & M for Well 3 through operating revenue and will continue to support the replacement well
60	Redundant Water Supply	Squaw Valley Public Service District	\$ 3,685,000	Undetermined - 0%	O & M will be provided by District when constructed through operating revenues.

* Projects have been submitted for Prop 84 Round 2 Implementation

8.3.2.2 Grants and Other Sources

The 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 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 the Region while others may 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 who 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 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 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 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 will 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-years (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 will be maintained in a spreadsheet or on the Data Management System described further in Section 8.4.2. It is anticipated that the 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 8-3 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 8-3: Project Specific Monitoring Plans

Category	Description
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 shall report this information to the 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.
Typical project-specific monitoring plan requirements	Monitoring plans will include delineation of the following components: <ul style="list-style-type: none"> ▪ Description of what will be monitored for each project, ▪ Methods for monitoring problems that occur during project implementation and their correction, ▪ Monitoring location(s), ▪ Monitoring frequency, ▪ Monitoring protocols, procedures, and responsibilities, ▪ 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 ▪ Procedures and funding assurances to document that the monitoring will take place as intended during the entire monitoring period.

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 Partnership and stakeholders, and through project reporting mechanisms.

8.4.2 Objectives Focused Performance Monitoring

For the Partnership, the tracking of Plan Objectives WQ1 – IWM6 and the associated MPT will require more effort and coordination than tracking of IRWM Plan projects. The Objectives Tracking table found in Appendix 8-A 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 should be periodically reviewed and updated by the Partnership. The data associated with this table could also be maintained in the Data Management System.

8.4.3 Data Management

The 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 DWR California Water Data Library and many others – links are provided in Appendix 8-B), the Partnership 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 will be linked to the tahoesierrairwm.com website and includes the following features:

- 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
- Revised plan sections when complete
- Project and objective tracking tables

Other DMS Elements that could be included in a future DMS include:

- 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 may include an on-line database, which will require an administrator to manage and add the projects. At the present time, a project tracking spreadsheet, found in Appendix 8-C, will track project information including:
 - Project name
 - Project proponent
 - Estimated cost and funding status (such as Proposition 84/1E funded)
 - Project schedule and current status
 - Type and location of project specific monitoring information
 - Objectives the project will contribute to
- Objectives Tracking Database. Similar to the project tracking database, this would be an on-line database specifically for periodic updating (likely biannual with project updates) and evaluation of progress with meeting IRWM Plan objectives. A tracking spreadsheet will be developed as described in Section 8.4.2 and is included in Appendix 8-A 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 (a group consisting of a small group of individuals representing foothill water agencies and Sierra environmental groups to assist in regional efforts to protect and enhance water quality, supply and watershed health) 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 (an organization of conservation groups in the Sierra Nevada region that work to protect and restore the natural resources) or neighboring IRWM with DMS Hardware and Software or cloud-based 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 8-4.

Table 8-4: IRWM Plan Near-Term Implementation Activities and Schedule

Activity/Action	Lead Entity	Planned Schedule
1. Establish an annual operating mechanism for the Leadership Team (LT) for implementation support and manage volunteers for administration support activities.	Partnership	By September 2014
2. Convene Partnership Plan Implementation Meetings to develop proposed meeting schedule for 2015 and 2016. It is suggested that at a minimum one Plan implementation meeting be held per year.	LT	Schedule 2015 and 2016 meetings by December 2014
3. Develop long-term DMS plan and pilot DMS for transition and maintenance by partner.	Partnership/Partner	By December 2014
4. Issue a Call for Projects to add, delete, or integrate existing projects and project status updates.	LT	By early 2016 and/or as-needed
5. Prepare for applying for 2015 DWR Implementation Grant funds and other grant funding opportunities.	Subcommittee	By Fall 2015
6. Coordinate with neighboring IRWM regions and local, state and federal agencies.	Partnership	Ongoing - annually

8.6 Plan Updates and Changes

8.6.1 Making Changes to the IRWM Plan

The Partnership Leadership Team will evaluate the need to convene a Subcommittee 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 Partnership will lead the process for revising the Plan. Once substantial revisions are made, the Partnership will request that Partnership 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 by individual Partnership members. Instead specific changes will be submitted to the Partnership for consideration to adopt as an amendment to the existing Plan. Updates or amendments specifically include changes to the project lists and refinements to the IRWM Plan objectives.

The 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 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.