

# Executive Summary

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This Integrated Regional Water Management Plan (IRWM Plan) defines a clear vision for the management of water and associated resources in the Tahoe-Sierra Region (Tahoe-Sierra Region, Region) and highlights important actions needed to accomplish that vision through the year 2035 planning horizon.

This plan is an update to the 2007 Tahoe-Sierra IRWM which is required to be in compliance with 2010 IRWM Grant Program Guidelines – Proposition 84 and 1E per the Proposition 84 Planning grant. It is also intended to comply with the 2012 IRWM Grant Program Guidelines – Proposition 84 and 1E published by the California Department of Water Resources (DWR) in November 2012. The information contained within this IRWM Plan was developed through the time and contributions of more than 30 water supply, wastewater treatment, land use management, public interest, and ecosystem-focused organizations with interests in the water resources of the Tahoe-Sierra Region.



Lake Tahoe from the Air  
(Photo courtesy of Great Bicycle Rides in El Dorado County)

## Introduction (Section 1)

The intent of this IRWM Plan update is to address the many major water-related needs/challenges and conflicts within the Region, including water quality, local water supply reliability, groundwater management, ecosystem restoration and integrated watershed management throughout the Region. The Memorandum of Understanding (MOU) discussed in Section 1.2.2 identifies topics related to collaboration to achieve ecosystem restoration, water supply and water quality improvements, and integrated activities for increased environmental education and stewardship. These MOU topics have resulted in the following Goals, which are organizing principles for the IRWM Plan objectives, described below:

- Protect and Improve Water Quality
- Protect the Community Water Supply and Treatment/Delivery System
- Manage Groundwater Sustainable Yield
- Contribute to Ecosystem Restoration
- Implement Integrated Watershed Management throughout the Region

The Tahoe-Sierra Region is generally based on watershed boundaries within the State of California for the Little Truckee River, Truckee River, Carson River and Lake Tahoe watersheds, all of which drain to Nevada. The Region encompasses approximately 802,600 acres, and includes the eastern parts of Alpine, El Dorado, Placer, and Nevada Counties, and the southeastern corner of Sierra County.

The Tahoe-Sierra IRWM Plan governance is comprised of several elements, the broader Partnership who are the heart of the Tahoe-Sierra IRWM, the Regional Water Management Group, which is a smaller group to meet the requirements of the DWR IRWM Program, and subcommittees which are formed on an as-needed basis. The Partnership consists of

signatories to a MOU that commits members to adopt and implement the Plan, and to revise and update it as needed. Partnership members are listed in Table 1-1.

The IRWM Plan development process was organized around regular subcommittee meetings/conference calls and partnership meetings at key IRWM plan junctures. The topics and plan sections were introduced and discussed during the subcommittee meetings prior to release to the Partnership. Stakeholders were provided the opportunity to review the content and sections prior to the meetings and submit written comments after the meetings. Key topics discussed during Plan development are outlined in Figure ES-1.

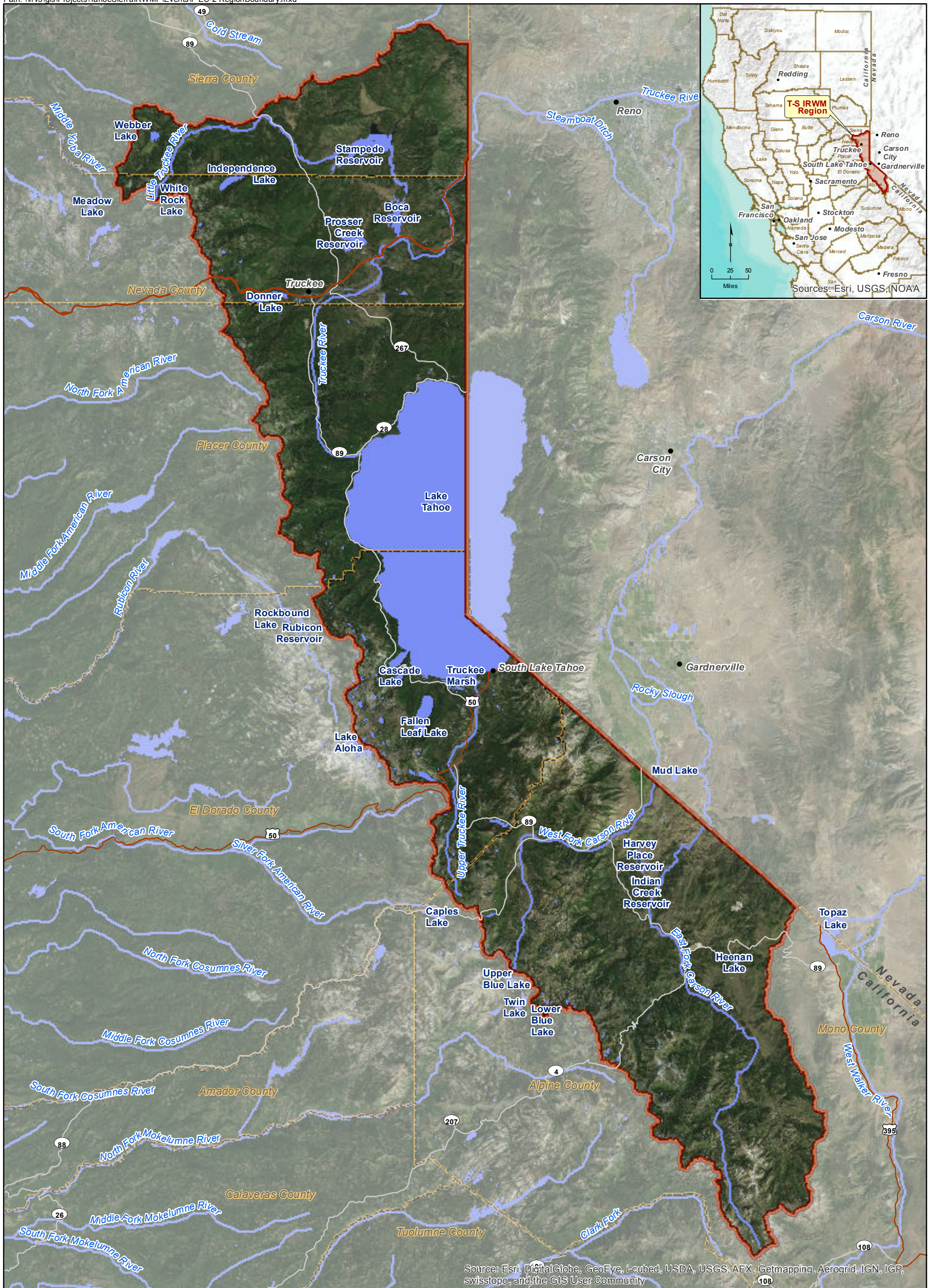


Figure ES-1: IRWM Planning Process Overview

To recognize the diverse Regional and local interests, the planning process incorporated community outreach focused on a wide variety of stakeholders including a focused disadvantaged community (DAC) outreach survey and communication with tribal representatives. The planning process centered around Partnership meetings, which were open to the public. Stakeholders were invited to participate through facilitated discussions and review of draft documents; the meetings were announced to a broad distribution list via e-mailed invitations, as described above. All meeting materials were made available on the website after each meeting.

## The Tahoe-Sierra Region (Section 2)

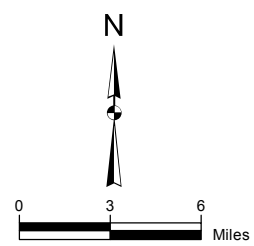
Section 2 describes the physical and environmental characteristics of the Region, describes social and demographic characteristics of the Region, and provides an overview of the Region’s water system. The Region is a mountainous area on the east slope of the Sierra Nevada mountain range that ranges from about 5,000 feet to almost 11,000 feet in elevation. It consists of the Truckee River system in California, which includes the Upper Truckee River, the California portion of Lake Tahoe, streams draining to Lake Tahoe within California, the Little Truckee River, and the Truckee River in California; and the East and West Forks of the Upper Carson River in California. Surface water flows in both river systems drain into Nevada, and Lake Tahoe straddles the border between California and Nevada, as shown on Figure ES-2.



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Legend**

- Tahoe-Sierra IRWM Boundary
- California Counties



**Kennedy/Jenks Consultants**  
Tahoe-Sierra IRWMP

**Regional Location**

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July 2014  
Figure ES-2

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The majority of the population within the Region lives in the City of South Lake Tahoe, the Town of Truckee, and unincorporated communities on the west and north shore of Lake Tahoe. A number of the Region's communities have been identified as DACs which have median household incomes less than \$48,706 per DWR criteria. Also within the Region is the Washoe Tribe of Nevada and California's Woodfords Community. The majority of the Region, approximately 80%, is open space including both public and private lands (DWR 2010). Within the Region, approximately 68% of the land area is publicly managed for recreation and/or forest, 10% is the California portion of the surface of Lake Tahoe, and 6% is urban, rural, or planned development. Approximately 1% of the land area of the Region is dedicated to agriculture with the remaining 15% as other open space (BLM 2011). Communities in the Region are economically dependent on tourism and recreation related to the natural resources of the area including mountain terrain, forests, rivers, and lakes. As an east slope area, water users downstream of the Region are in Nevada.

Water supply in the Region includes both surface water and groundwater. Groundwater is the primary source of water for most communities in the Lake Tahoe Basin, Martis Valley, and individual property owners outside of the Region's developed areas. Within the Region there are five major public water districts, over twenty smaller community water suppliers, and over 100 non-community water suppliers, as well as individual property owners with groundwater wells. There are four dams within the Truckee River and Little Truckee River hydrologic units (HUs); the Lake Tahoe Dam, the Prosser Creek Dam, the Stampede Dam, and the Boca Dam. In addition in Alpine County there are two man-made reservoirs: Indian Creek Reservoir and Harvey Place Reservoir.

Water quality is one of the more significant drivers for bringing the various partners together to participate in IRWM Planning in the Tahoe-Sierra Region. Surface water sources in the Region are generally acceptable for municipal use after disinfection. However, several bodies of water are 303(d) listed impaired waterbodies for pathogens, salinity (total dissolved solids and chloride), sedimentation, nutrients (nitrate, nitrogen, phosphorus), metals (aluminum, iron, manganese, silver), sulfates, and other organics. Total Maximum Daily Loads (TMDLs) have been developed for some of the listed waterbodies, including Lake Tahoe, the Truckee River, and Indian Creek Reservoir. Groundwater in the Region is generally of good quality, suitable for municipal water use. Threats to groundwater quality in the Region are both natural and anthropogenic. Naturally occurring uranium, radon, arsenic, iron and manganese affect some wells within the Region, while leaking underground storage tanks and other cleanup sites pose a threat to groundwater in urban areas.

Lake Tahoe is classified by limnologists as an oligotrophic lake, which means the lake has very low concentrations of nutrients that can support algal growth, leading to clear water and high levels of dissolved oxygen. The exceptional transparency of Lake Tahoe results from naturally low inputs of nutrients and sediment from the surrounding watershed. Lake Tahoe's famed transparency has declined by roughly 27 feet from 102.4 feet of visible depth to 75.3 feet, since monitoring began in the 1960s (TERC 2013b). Notwithstanding the decline in clarity, Lake Tahoe is designated an Outstanding National Resource Water by the U.S. Environmental Protection Agency.

Terrestrial vegetation in the Region is dominated by coniferous forest, and the many creeks, rivers, lakes, and wetlands in the Region support many different aquatic ecosystems. Releases from Prosser Creek, Boca, and Stampede dams support fisheries in the Truckee River and Pyramid Lake. The Region is in the historic ranges for the Lahontan cutthroat trout and the Paiute cutthroat trout, both of which are federally listed as threatened species.

There are many major issues and challenges for the Region with respect to water resource management including the following:

- **Climate Change** – Climate change has the potential to have significant impacts on the Region. As an alpine environment, the Region is highly vulnerable to the effects of climate change, especially because of the potential for higher elevation rain/snow line, decreased snow pack, the potential for increased wildfires, and the potential effects on habitats of increasing temperatures. The Region is economically and ecologically dependent on its snow pack.
- **Water Quality** – Water quality is a major concern throughout the Region. Many waterbodies in the Region are considered to be detrimentally impacted by pollutants including sediment, nutrients, and metals. For the protection of these waterbodies, quality of runoff is an issue in both urban and undeveloped areas. In urban areas stormwater transports sediment and other pollutants from impermeable surfaces into receiving waterbodies. In undeveloped areas the wetlands, meadows, and riparian areas that would naturally provide filtration and removal of sediment and nutrients are in some cases impaired and can no longer provide that filtration, and may instead contribute through erosion, to the sediment loading in downstream waterbodies. In addition to surface water quality concerns, groundwater in some areas is impacted with naturally-occurring chemicals like arsenic, or man-made contaminants such as MTBE or chlorinated organic chemicals.
- **Forest Management** – Because most of the land area in the Region consists of steep forested mountainsides, wildfires and the subsequent erosion by wind and water is a major concern. Fire risk is predicted to increase in the future as a result of climate change. Erosion following wildfires could become even more of a problem as wildfire risk is projected to increase.
- **Infrastructure Needs** – Aging and deteriorating infrastructure is a problem in the Region. The dams in the Region were all initially constructed between the 1910s and 1970s, although rehabilitation work has been done on several dams, as needed. Much of the existing water and wastewater infrastructure including treatment facilities and distribution or collection infrastructure was constructed in the 1960s and is nearing or long past the design lifespan. The small customer bases for utility districts in the Region contribute to financing issues, and the problem of financing improvement projects is exacerbated by the fact that there are many small private water providers in the Region that do not qualify for many grant programs.



Aged Water Main Replacement  
(Photo courtesy of North Tahoe PUD)

### Relation to Local Water and Land Use Planning (Section 3)

Section 3 describes how land use planning and decision making are coordinated with water management planning and implementation within the Region and highlights opportunities for improved communication and action in the future. Water resources and land use planning in the Region are inherently linked in that activities and processes that occur on the land directly affect the use and movement of water within the Region. These linkages between land use and the

impacts on the hydrologic cycle, and similarly between water management and the ability to support particular land uses, are important to consider when making land or water management decisions. DWR recognizes these linkages and requires that IRWM Plans describe the relationships and interactions between regional planning efforts fostered by the Regional Water Management Group and local water planning and local land use planning.

The Tahoe-Sierra IRWM Plan contains information from local planning efforts that have occurred throughout the Region and has drawn from numerous plans and studies related to water resources and land use management in the Region. The IRWM Plan is consistent with and supports locally-led planning and implementation of integrated water management. Additionally, through the IRWM process, land and water management organizations in the Region have taken steps towards better understanding and collaboration regarding regional water management issues.

## Plan Objectives (Section 4)

The goals and objectives presented in Section 4 represent the foundational intent of this IRWM Plan to improve water resources management throughout the Region over the planning horizon of the next 20 years to 2035. The five goals from the 2007 IRWM Plan were maintained; however updating the existing objectives to ensure they were still meaningful and relevant for the Tahoe-Sierra Region required a collaborative and interactive process over a 5-month period. The draft objectives were circulated for review and comment to the stakeholders two times to allow for thorough consideration and refinement for what ultimately sets the direction of the IRWM Plan.

The overarching Plan goals are listed below. Plan objectives were established within each of these Plan goals, with measurable planning targets established for each Plan objective.

1. **Protect and improve water quality.** A number of water quality concerns for surface water and groundwater exist particularly as they relate to Water Quality Control Plan beneficial uses and the water quality impairments to some of the major water bodies such as Lake Tahoe that occur in the Region. The main concerns expressed during the meetings are with water quality and aging wastewater infrastructure that impact water quality in the region. This goal highlights the importance of improving the water quality of water bodies as appropriate to water uses and preserving water quality levels that are now within desirable levels.
2. **Protect the community water supply and treatment/delivery system.** Although water supply within the Region is adequate, local water/wastewater agencies recognize that aging and deteriorating infrastructure is a problem in the Region. This goal acknowledges the importance of sustainability through the implementation of infrastructure improvements as well as cost-effective conservation and efficiency improvements to avoid wasting water and other natural resources.
3. **Manage groundwater for sustainable yield.** Groundwater is the main source of municipal water in the Region. This goal emphasizes the importance of managing groundwater through effective water management strategies that provide multiple benefits.
4. **Contribute to ecosystem restoration.** Improvements to the watershed including the many creeks, rivers, lakes, wetlands and forests can result in long-term benefits to the native habitats and their ecosystems as well as improvements to water quality. This goal

highlights the importance of continuing to monitor, understand, and mitigate the hazards related to watershed management.

5. **Implement integrated watershed management throughout the Region.** This goal recognizes that with improved integration and collaboration more successful watershed management can be achieved when compared to individual efforts.

## Resource Management Strategies (Section 5)

The Goals and Objectives presented in Section 4 describe a range of areas in which regional stakeholders intend to improve water-related conditions in the Region over the plan horizon. Achieving these objectives will require that resource managers and other stakeholders implement a variety of water management actions. Those actions could include projects, programs, or policies designed to help agencies and local governments manage water and related resources. A broad list of these actions, referred to as resource management strategies (RMS), were identified in the California Water Plan (CWP) Update 2009 and the CWP Update 2013 Public Review Draft and were considered for applicability to the Region. Table ES-1 provides a summary of the RMS described in Section 5, divided into six management outcomes.

Table ES-1: Resource Management Strategies

| <b>CWP Management Objective</b>                     | <b>Resource Management Strategies</b>  |
|---|--|
| <b>Reduce Water Demand</b>                          | Agricultural Water Use Efficiency<br>Urban Water Use Efficiency  |
| <b>Improve Flood Management</b>                     | Flood Management   |
| <b>Improve Operational Efficiency and Transfers</b> | [ <i>Conveyance – Delta</i> ]<br>Conveyance – Regional/Local<br>System Reoperation<br>Water Transfers  |
| <b>Increase Water Supply</b>                        | Conjunctive Management & Groundwater<br>[ <i>Desalination (Brackish and Sea Water)</i> ]<br>Precipitation Enhancement<br>Municipal Recycled Water<br>[ <i>Surface Storage – CALFED/State</i> ]<br>Surface Storage – Regional/Local |
| <b>Improve Water Quality</b>                        | Drinking Water Treatment and Distribution<br>Groundwater Remediation/Aquifer Remediation<br>Matching Water Quality to Use<br>Pollution Prevention<br>Salt and Salinity Management<br>Urban Stormwater Runoff Management            |
| <b>Practice Resource Stewardship</b>                | Agricultural Land Stewardship<br>Ecosystem Restoration<br>Forest Management<br>Land Use Planning and Management<br>Recharge Area Protection<br>Sediment Management (CWP Update 2013 Draft)<br>Watershed Management                 |
| <b>People and Water (CWP Update 2013 Draft)</b>     | Economic Incentives<br>Outreach and Engagement (CWP Update 2013 Draft)<br>Water and Culture (CWP Update 2013 Draft)<br>Water-Dependent Recreation  |

[ ] RMS not applicable to Tahoe-Sierra IRWM Plan



## Project Selection and Prioritization (Section 6)

Section 6 describes the project solicitation, development, and review process that was used to select and prioritize projects for inclusion in the Tahoe-Sierra IRWM Plan. The project solicitation process began with a Sub-committee review of previous IRWM Plan project submittals and evaluation followed by a discussion of how potential project submittals would be evaluated and considered for inclusion into the IRWM Plan Update. A draft list of project scoring criteria was discussed and made available for comment to the Partnership at the time the draft Project Information Form was distributed. The potential project scoring criteria were chosen to facilitate project comparison, review, selection, and prioritization. The next step of the process was to receive, evaluate, and score all project submittals, after which a list of projects with recommended scoring for each project was included. The final step of the process was to discuss the recommendations made with project proponents and stakeholders at a Partnership Meeting to formally accept the projects into the Plan.

A total of 60 projects were submitted from 16 organizations, with 22 projects categorized as restoration projects, 20 as stormwater/flood control projects, and 18 as water supply/wastewater projects. All of the Plan objectives are addressed at least in part, and almost all RMS are also included. The majority of the projects, 49 of the 60, involve multiple agencies or organizations, and 25 are located at least in part in a DAC.

All of the projects submitted during the call for projects are included in the Tahoe-Sierra IRWM Plan, and are summarized in Table ES-2. It should be noted that this represents a “snapshot” for this particular edition of the IRWM Plan as the list is expected to change over time as projects are completed and new project concepts added.

Table ES-2: Project Summary

| <b>Project Number</b> | <b>Agency/ Organization</b>  | <b>Project Title</b>   | <b>Project Type<sup>(a)</sup></b> |
|-----------------------|------------------------------|--|-----------------------------------|
| 1                     | Town of Truckee              | Aquatic Invasive Species Programs                                  | R                                 |
| 2                     | South Tahoe PUD              | BMP Implementation on STPUD Operating Sites                        | R                                 |
| 3                     | Town of Truckee              | Permanent BMP Implementation, Inspection, and Maintenance Programs | SW                                |
| 4                     | Town of Truckee              | Truckee Coldstream Culvert Replacement Program                     | R                                 |
| 5                     | City of South Lake Tahoe     | Bijou Area Erosion Control Project (Bijou Project)                 | SW                                |
| 6                     | City of South Lake Tahoe     | Ruby Way - Overlook Court  | SW                                |
| 7                     | City of South Lake Tahoe     | Sierra Tract Erosion Control Project, Phase 3/4                    | SW                                |
| 8                     | City of South Lake Tahoe     | Sierra Boulevard   | SW                                |
| 9                     | City of South Lake Tahoe     | South Lake Tahoe Integrated Roadway Management Strategy            | SW                                |
| 10                    | City of South Lake Tahoe     | Tahoe Valley Stormwater Improvement Project (SWIP)                 | SW                                |
| 11                    | El Dorado County             | Meyers SEZ and Erosion Control Project                             | R                                 |
| 12                    | El Dorado County             | Oflyng Erosion Control Project                                     | SW                                |
| 13                    | American Rivers              | Hope Valley Meadow Restoration                                     | R                                 |
| 14                    | South Tahoe PUD              | Iroquois Pond SEZ Restorations                                     | SW                                |
| 15                    | California Tahoe Conservancy | Greenway Shared Use Trail  | SW                                |

| <b>Project Number</b> | <b>Agency/ Organization</b>          | <b>Project Title</b>   | <b>Project Type<sup>(a)</sup></b> |
|-----------------------|--------------------------------------|--|-----------------------------------|
| 16                    | Alpine Watershed Group               | Grover Hot Springs State Park Meadow Restoration and ADA Access  | R                                 |
| 17                    | Friends of Squaw Creek               | Lower Squaw Creek Restoration Project  | R                                 |
| 18                    | California Tahoe Conservancy         | Upper Truckee River and Marsh Restorations   | R                                 |
| 19                    | Lukins Brothers Water Company, Inc.  | Meter Conversion   | W                                 |
| 20                    | Lukins Brothers Water Company, Inc.  | Waterline Replacement 2a   | W                                 |
| 21                    | Lukins Brothers Water Company, Inc.  | Waterline Replacement 7a   | W                                 |
| 22                    | Alpine County                        | Markleeville Creek Floodplain Restoration Project  | R                                 |
| 23                    | South Tahoe PUD                      | Mountain View Well Ground Water Protections  | W                                 |
| 24                    | Town of Truckee                      | Town of Truckee Stormwater Management and Retrofits  | SW                                |
| 25                    | South Tahoe PUD                      | Tahoe Keys Force Main Bypass   | W                                 |
| 26                    | Tahoe Resource Conservation District | Regional Aquatic Invasive Species Prevention, Control and Monitoring   | R                                 |
| 27                    | Tahoe Resource Conservation District | Small-scale Testing of Micro Stormwater Infiltration Systems   | SW                                |
| 28                    | Tahoe Resource Conservation District | Groundwater Monitoring to support nearshore management   | R                                 |
| 29                    | Tahoe Resource Conservation District | Regional Landscape Conservation Measures for Lake Tahoe  | W                                 |
| 30                    | Tahoe Resource Conservation District | Analyzing LiDAR data to identify Micro Stormwater Infiltration Systems (MSIS) for the whole Lake Tahoe Basin | SW                                |
| 31                    | Tahoe Resource Conservation District | Regional Stormwater Monitoring Program   | SW                                |
| 32                    | Town of Truckee                      | Trout Creek Trail  | SW                                |
| 33                    | Town of Truckee                      | Trout Creek Restoration  | R                                 |
| 34                    | Town of Truckee                      | Truckee River Legacy Trail   | SW                                |
| 35                    | Truckee River Watershed Council      | Dry Creek Restorations   | R                                 |
| 36                    | Truckee River Watershed Council      | First 4 Mile Restoration Project   | R                                 |
| 37                    | Truckee River Watershed Council      | Johnson Canyon Restoration   | R                                 |
| 38                    | Truckee River Watershed Council      | Lacey Meadows Restoration  | R                                 |
| 39                    | Truckee River Watershed Council      | Martis Watershed Restoration Plan Implementation   | R                                 |
| 40                    | Truckee River Watershed Council      | Non-native Invasive Plan Species   | R                                 |
| 41                    | Truckee River Watershed Council      | Truckee River Residential Voluntary BMP Implementation   | SW                                |
| 42                    | Truckee River Watershed Council      | TMDL Monitoring for the Truckee River  | SW                                |
| 43                    | Truckee River Watershed Council      | Truckee Wetlands Restoration   | R                                 |
| 44                    | South Tahoe PUD                      | Regional Water Conservation Programs   | W                                 |
| 45                    | Town of Truckee                      | Water Quality Monitoring   | SW                                |
| 46                    | South Tahoe PUD                      | Waterlines - Sierra Tract, Brockway, Black Bart  | W                                 |
| 47                    | Town of Truckee                      | West River Street Site Redevelopment and River Revitalization  | R                                 |
| 48                    | Town of Truckee                      | West River Street  | SW                                |

| Project Number | Agency/ Organization                  | Project Title  | Project Type <sup>(a)</sup> |
|----------------|---------------------------------------|--|-----------------------------|
| 49             | Tahoe City PUD                        | West Lake Tahoe Regional Water Treatment Plant         | W                           |
| 50             | North Tahoe PUD                       | Carnelian Woods Tanks Site EIPs                        | R                           |
| 51             | North Tahoe PUD                       | Dolly Varden Water Main Replacement Projects           | W                           |
| 52             | North Tahoe PUD                       | Kingswood West Tank Site EIPs                          | R                           |
| 53             | Washoe Tribe of Nevada and California | Woodfords Community Wastewater Infrastructure Upgrades | W                           |
| 54             | Washoe Tribe of Nevada and California | Woodfords Community Water Infrastructure Upgrades      | W                           |
| 55             | Squaw Valley PSD                      | Aquifer Monitoring                                     | W                           |
| 56             | Squaw Valley PSD                      | Squaw Valley Mutual Water Co. Intertie                 | W                           |
| 57             | Squaw Valley PSD                      | Squaw Creek Siphon                                     | W                           |
| 58             | Squaw Valley PSD                      | Truckee River Siphon                                   | W                           |
| 59             | Squaw Valley PSD                      | Well 3 Replacement                                     | W                           |
| 60             | Squaw Valley PSD                      | Redundant Water Supply                                 | W                           |

(a) R = Restoration, SW = Stormwater/Flood Control, W = Water Supply/Wastewater

## Impacts and Benefits (Section 7)

Section 7 provides an overview of the impacts and benefits likely to be realized with implementation of the Tahoe-Sierra Region IRWM Plan. This is a preliminary screening level assessment of potential impacts and benefits, due to the nature of the IRWM planning process, and it is not intended to be a complete list. More extensive and project-specific evaluations of impacts and benefits will occur through the project implementation process. This overview of potential impacts and benefits may be used as a benchmark for future evaluation throughout IRWM Plan implementation to understand if the potential benefits have been realized or if unanticipated impacts have occurred.

The primary benefit of this IRWM Plan is the development of a shared vision and objectives for regional water management and planning among the stakeholders in the Region and a framework for maintaining that into the future. The process of developing and updating this IRWM Plan has fostered improved coordination, collaboration, and communication among stakeholders, and a greater awareness of concerns throughout the Region. Additional potential benefits from implementation of Plan projects may include improved water quality, improved water treatment and delivery, improved groundwater management, and ecosystem restoration.

Negative impacts that may be associated with the Tahoe-Sierra IRWM Plan projects include short-term, site-specific impacts related to site grading and construction, and long-term impacts associated with project operation. The significance of these impacts will be evaluated in greater detail under project-specific and/or programmatic environmental compliance processes (consistent with California Environmental Quality Act and, if applicable, the National Environmental Policy Act).

## Implementation Framework (Section 8)

This section documents the relationships and decision-making structure recommended for use during the continued development and implementation of the Tahoe-Sierra IRWM 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 Tahoe-Sierra IRWM operates functionally using the concept of a Partnership. During the update of the Plan, the Regional Water Management Group was refined to be at least 3 entities two of which have statutory authority for water management, and which is included within the Partnership with no additional roles or responsibilities.

Once the Tahoe-Sierra IRWM Plan has been adopted, the focus of the 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 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.

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. These will include, at minimum, enlisting the support of a core Leadership Team (LT), with rotating members, to conduct outreach, create content and facilitate annual Partnership meetings, and support any Subcommittees that may be formed on separate topics. The Leadership Team will issue periodic e-mails and will post meeting materials and other relevant information to the project website and invite review and comment from any interested person or organization. During the meetings, all Partnership members are invited to participate as equals in the interaction to reach consensus on the implementation of the Plan. Decisions during implementation will continue to be made using consensus based agreement, with matters first considered by the Leadership Team 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.

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. The Tahoe-Sierra IRWM anticipates continuing as a volunteer-led organization using the Leadership Team as the focus for IRWM Plan implementation. Members of the Partnership may provide in-kind services to fulfill the roles of the LT and administrative support. The current project list includes 60 projects 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. The section identifies potential funding sources, and documents some of the activities that the Partnership and others may employ to secure additional project implementation funding.

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 (DMS) 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 can be useful for continuing implementation of, updating or amending the Plan. Project implementation will be tracked as part of the IRWM Plan Implementation activities

In order to bring focus to specific implementation actions, and to support early and proactive progress, recommendations are provided in Table ES-3.

Table ES-3: 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 (Leadership Team or LT) for implementation support and manage expenditures of administration support activities.                       | Partnership         | 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. | LT                  | Schedule 2015 and 2016 meetings |
| 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 new and existing projects and project status updates.   | LT                  | By February 2016                |
| 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              |

## Coordination (Section 9)

As described in other sections of this IRWM Plan, management of water and related resources within the Tahoe-Sierra Region is complex and has many interdependencies. Many different agencies, organizations, and other stakeholders have authorities and responsibilities for managing water and related resources within the Region. This complexity and the distributed network of shared responsibilities create the need for robust and effective coordination. Section 9 describes how the Tahoe-Sierra Partnership plans to coordinate with neighboring IRWM regions, local, state, and federal agencies and other stakeholders within the Region to improve integrated water management throughout the Region and neighboring areas.

A collaborative approach to water management is essential to meeting the Region's goals. The majority of the projects included in this Plan involve multiple agencies or organizations, which reinforces the need for collaboration to achieve efficient project execution. Many of the local water management agencies within the Region have developed cooperative relationships and processes for coordination with each other and with other local organizations. Coordination with state and federal agencies has occurred during the initial formation of the Region and during

Plan preparation. In the future, coordination with these agencies will occur on an as-needed basis for planning and implementation of specific projects and during future Plan updates.

One of the critical ingredients for improving water resources management is to provide multiple opportunities for water managers, community stakeholders, and other organizations with interests related to water resources to be informed about and participate in the IRWM program. The partnership will provide this through continued stakeholder meetings, dialogue with the Washoe Tribe and representatives of DACs, and use of the Tahoe-Sierra IRWM Plan webpage (<http://tahoesierrairwm.com/>) throughout Plan implementation.