

Southern Sierra Regional Water Management Group

2017 ANNUAL REPORT

TABLE OF CONTENTS

Contents

Executive Summary	1
Meetings and Outreach Activities	3
Financial Statement	7
Monitoring	8
Implementation Projects	13
Governance and IRWMP Amendments or Updates	15
Contact Information	16
Grantee Organization	16
Appendix	17
Appendix A – Regional Water Management Group Project List	18
Appendix B – Regional Water Management Work Plan	19

EXECUTIVE SUMMARY

Executive Summary

OVERVIEW

Sequoia Riverlands Trust (SRT) was awarded \$217,000 grant from the California Department of Water Resources on behalf of the RWMG. The Plan update will continue the partnership between SRT, Provost and Pritchard Consulting Group and Kamansky's Ecological Consulting and will add research, synthesis and modelling from UC Merced scientists.

The IRWMP sets objectives and strategies to unify land use and water planning to enhance the water management portfolio of the Region.

The Three Rivers Water Supply Study was included in the Three Rivers Community Plan Update and the US Forest Service - Sequoia National Forest continued meadow restoration efforts with its NEPA grant to evaluate 20 meadows on the Kern Plateau, while Sierra National Forest may have up to three meadows projects to contribute. With the current grant, a research and modelling program geared toward understanding climate change, drought, floods, water supply and effective resource management and knowledge to action framework to educate and inform stakeholders, including communities will be applied to the water management portfolio in the Southern Sierra.

The Regional Water Management Group held a project development workshops and field trips on March 2-3, 2017. The workshops/field trips were in two parts/locations because of the size of the Region: a northern workshop, at the US Forest Service – Sierra National Forest Headquarters, and a southern meeting at the Quaker Oaks Farm, outside of Visalia. The workshops were partially conducted indoors, where participants reviewed projects, funding and watershed maps, and a field portion, at a nearby field location. The southern workshop included a driving tour to the Tule River watershed to view the implementation projects at the Circle J/Norris Ranch, in Springville. The RWMG held quarterly meetings in March, June, a kick-off planning Regional Water Management Group meeting on September 7, 2017, in Fresno, and December, where IRWMP chapters and chapter-sections were discussed and preliminarily-approved chapters 3, 4 and 5 of the updated IRWMP.

The RWMG seeks projects to include in the plan update and will be providing agency and stakeholder briefings and regular RWMG meetings and workshops during 2017-2018.

See www.southernsierrairwmp.org or email southernsierrairwmp@gmail.com for more information.

FINANCIAL HIGHLIGHTS

SRT received the DWR commitment letter on February 10, 2017. The Project Team met and reviewed the grant and the requirements and contracts the contract, scope, payment process and advanced payment procedures. Sequoia Riverlands Trust applied for advanced payment for the \$217,927.00 IRWMP Update Grant. The IRWMP Update Grant Agreement was signed by the parties in July, 2017. Sequoia Riverlands Trust discussed the contract, scope, payment process and advanced payment procedures with DWR and

EXECUTIVE SUMMARY

submitted an advanced payment request and invoice to DWR on August 9, 2017, working with Kamansky's Ecological Consulting. In the meantime, we worked with contractors to execute contracts and agreements for the scope of work and the Project Team met to finalize plans, going forward.

OPERATING HIGHLIGHTS – MEETINGS, MONITORING AND OUTREACH

The RWMG held an additional project development, funding and integration workshops in March (two), and quarterly meetings in March, June, September and December.

Once the advanced payment was in place, our progress accelerated and the process has been effective, producing a work plan, outreach and draft chapters at the December RWMG meeting. It takes time to hire and start the post-doc researcher, so we anticipate UC Merced providing a data synthesis, soon. At the December meeting, Dr. Roger Bales provided a partial synthesis of the hydro-geomorphic understanding based on detailed measurements in the Kings River Watershed.

LOOKING AHEAD

In 2018, the RWMG will continue updating the IRWMP, continue implementation of the IRWMP, soliciting projects, monitoring, outreach and regular business activities.

Bobby Kamansky
Regional Water Management Group Coordinator
January, 2018

MEETINGS AND OUTREACH ACTIVITIES

Meetings and Outreach Activities

The Regional Water Management Group held a project development workshops and field trips on March 2-3, 2017. The workshops/field trips were in two parts/locations because of the size of the Region: a northern workshop, at the US Forest Service – Sierra National Forest Headquarters, and a southern meeting at the Quaker Oaks Farm, outside of Visalia. The workshops were partially conducted indoors, where participants reviewed projects, funding and watershed maps, and a field portion, at a nearby field location. The southern workshop included a driving tour to the Tule River watershed to view the implementation projects at the Circle J/Norris Ranch, in Springville.

At the December, 2016 meeting, the RWMG determined that a formal workshop where all members and interested parties can collaborate and learn what they can do to fund, integrate and make their projects regional, and climate smart. The workshop components and the goals included:

1. Introduction and discussion the upcoming implementation grant opportunities;
2. Discussion of projects and provide feedback to project proponents on integration, regional nature and competitiveness;
3. Discussion and recommendation of work plan for project implementation and projects to move forward.

The meetings and workshop were successful in developing additional projects and promoting RWMG work and funding for projects. The National Fish and Wildlife Foundation offers funding for



Figure 1. Project development workshop participants review project details at the Circle J/Norris Ranch.

MEETINGS AND OUTREACH ACTIVITIES

The RWMG held quarterly meetings in March, June, a kick-off planning Regional Water Management Group meeting on September 7, 2017, in Fresno, and December, where IRWMP chapters and chapter-sections were discussed and preliminarily-approved chapters 3, 4 and 5 of the updated IRWMP.

The Three Rivers Water Supply Study was included in the Three Rivers Community Plan Update and the US Forest Service - Sequoia National Forest continued meadow restoration efforts with its NEPA grant to evaluate 20 meadows on the Kern Plateau, while Sierra National Forest may have up to three meadows projects to contribute. With the current grant, a research and modelling program geared toward understanding climate change, drought, floods, water supply and effective resource management and knowledge to action framework to educate and inform stakeholders, including communities will be applied to the water management portfolio in the Southern Sierra.

In 2017, instead of exceptional drought, many areas experienced above-average rainfall and flooding. This was a great relief from the drought but highlighted the need for flood planning and understanding landslides and debris flows in the Southern Sierra.

SRT and other regional collaborators planned and executed a highly effective program for the Headwaters to Groundwater Symposium. Initiative, momentum and will were garnered during the symposium and will be used to advance watershed-scale planning and implementation and garner financial support.

Regarding the process for moving projects concept/idea to proposals, the RWMG and Project Team met with various members and stakeholders to discuss new projects, including a study of wetland springs, and landslides and debris flows, as well as an exotic species eradication effort. SRT will serve as project proponent for the *Arundo donax* Eradication Project and other watershed protection projects. KEC met with the National Forest Foundation, Blue Forest Conservation to discuss funding and planning the project and a potential WaterSmart grant proposal. KEC coordinated with UC Merced, Provost and Pritchard Consulting, and Sierra Resource Conservation District (will assist with some Fresno County outreach) to draft and execute the necessary contracts for the planning grant process.

DAC Outreach

The Tulare Basin Dis-advantaged Community (DAC) Program, under the auspices of the County of Tulare was awarded a DWR grant to work with an advisory committee to develop DAC projects and programs for Tulare Basin DACs.

In addition, the Mountain Counties Funding Area DAC program is under way and has submitted a proposal to DWR and will have regular meetings. The Southern Sierra Regional Water Management Group has participated in the Coordinating Committee steering the effort and initiated discussions of DAC mapping, issue identification and projects scoping and outreach in eastern Fresno County.

For our proposal to DWR, the primary data sources for the DAC determination were the Disadvantaged Community Place, Tract and Block Group shapefiles downloaded from the Disadvantaged Communities Mapping Tool established by DWR. Similarly, the DWR EDA Mapping Tool web page was used to indicate

MEETINGS AND OUTREACH ACTIVITIES

which block groups were considered Economically Distressed. Care was taken to confirm that the newly identified EDA communities met the combinations of criteria for income, total population, and unemployment (EDD). Geographic areas were included in our counts if they met either the DAC or EDA criteria. DACs identified at the block group, tract and place levels were all combined as they did not overlap geographically (preventing double counting). Finally, the population estimates for DACs/EDAs were compared to those for the entire SSIRWMP boundary to obtain a percentage of approximately 50%.

The DACs and EDAs cover areas with a total population of 16,084. This represents 50.2% of the permanent regional population of 32,040. The Region has a relatively low permanent population due to its rural and mountainous nature, but does accommodate millions of seasonal and part time visitors each year.

DACs have been an integral part of the planning and implementation process. Springville, an EDA and SDAC (based on community surveys), represented by the Springville Public Utilities District has participated in the RWMG since its inception in 2008 and sponsored and proposed projects and provided essential information in the initial IRWMP.

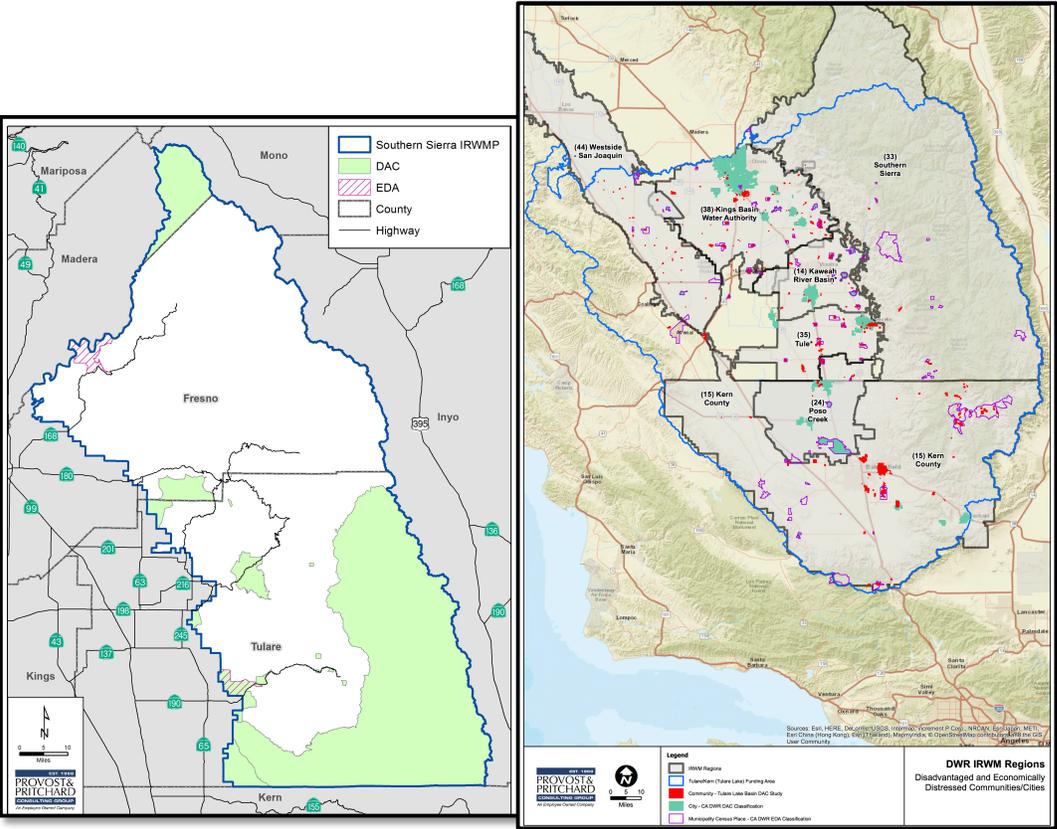


Figure 2. Preliminary community/DAC/EDC maps in the southern Sierra.

MEETINGS AND OUTREACH ACTIVITIES

DACs will continue to be an integral part of planning and the RWMG seeks to improve project implementation in DACs in the Region. Supporting and planning projects and adapting to drought and climate in DACs will be a major focus of the IRWMP update proposed herein. The RWMG seeks to continue to identify specific planning and project needs in these communities and participate in the Tulare Lake and Mountain Counties Overlay DAC efforts. The RWMG participates in both efforts and will apply information learned since 2008 about the needs in these communities as well as apply information from other DAC-active groups such as the Inyo-Mono RMWG's DAC work to the IRWMP update to best engage and partner with DACs.

FINANCIAL STATEMENT

Financial Statement

STATEMENT OF FINANCIAL POSITION

- Liabilities
 - The RWMG liabilities are limited to consultant and staff time to execute the RWMG business and process.
 - The total annual need was determined to be approximately \$30,000. These costs include:
 - Facilitation - \$5,000;
 - Grant writing - \$10,000;
 - Outreach and coordination - \$10,000;
 - Indirect and administration - \$5,000.

INCOME AND EXPENSES

- The RWMG income is limited to grants, donations and contracts for services.
- The expenses include costs to run to RWMG including consultant and staff time, as well as copies, and incidentals and overhead, administration.

INCOME SOURCES

We applied and received the \$108,000 advanced payment.

FINANCIAL BREAKDOWN*

SOURCE	REVENUE (GRANTS AND CONTRACTS)	EXPENSES
Department of Water Resources	\$217,000	
Consultants – outreach, meetings and facilitation		\$9,000
Staff time – meetings, administration		\$500
Copies, incidental		\$0
Overhead		\$0

*Figures are estimates

MONITORING

Monitoring

MONITORING IRWMP OBJECTIVES

The following are the IRWMP adopted objectives, monitoring metrics and 2017 results, which the RWMG uses as benchmarks/milestones to track progress toward IRWMP implementation:

Table 1. Summary of IRWM Objectives, Measurement Methods and 2016 Results.

No.	Objective	Methods for Measurement	2017 Results
1a, 4d	Promote natural storage through meadow, stream and forest restoration	<ul style="list-style-type: none"> • Number of meadows and acres restored • Number of forest acres restored • Number of acres/miles of streams restored • Water temperatures pre-and post-restoration • Groundwater level change • Wetland vegetation restoration, increases in native cover and diversity • Number of special status species' habitat improved in restored areas • Number of acre-feet stored or delayed in runoff 	<ul style="list-style-type: none"> • Need data
1b	Increase understanding of the water balance and groundwater resources	<ul style="list-style-type: none"> • Number of groundwater studies completed • Number of monitoring wells • Coverage of groundwater supply information • Increased knowledge of local geology and aquifer • More accurate predictive model(s) of water balance • Number of studies improving water balance data 	<ul style="list-style-type: none"> • Distributed one new study •
1c, 3d	Increase capacity of water storage facilities	<ul style="list-style-type: none"> • Increase in volume of water stored • Number of days of delayed runoff • Increased duration of irrigation deliveries 	
1d	Efficiently use, conserve and recycle water resources	<ul style="list-style-type: none"> • Number of sites employing native, near-native, or xeric landscaping • Amount of water conserved • Number of hours spent on public awareness education • Number of households contacted on public awareness education 	<ul style="list-style-type: none"> • 250 • >100

MONITORING

No.	Objective	Methods for Measurement	2017 Results
1e	Manage/adapt to climate change impacts on water supplies	<ul style="list-style-type: none"> • Reductions in greenhouse gas emissions in local project area • Number of Projects Completed • Number of studies on climate change and greenhouse gas emissions • Number of adaptation strategies employed by managers • Success in implementing adaptation strategies 	<ul style="list-style-type: none"> • One
1f	Promote sustainable water supplies for human developments	<ul style="list-style-type: none"> • Number of land-use plans utilizing BMPs for sustainable management that have been adopted • Amount of policies emplaced by local jurisdictions increasing sustainability of water supply 	
2a	Protect natural streams, lakes and other water bodies from contamination	<ul style="list-style-type: none"> • Number of studies identifying sources and types of contamination • Number of identified contamination sources mitigated • Hours of public education on contamination • Number of people/households contacted for public education efforts 	
2b, 4a	Promote best practices to protect water quality or reduce water contamination	<ul style="list-style-type: none"> • Number of water quality violations • Number of riparian management projects completed • Beneficial changes in the miles of impaired streams in the Region • Beneficial changes in the number of impaired water bodies in the Region • Beneficial changes in the number of miles of riparian/wetland fencing • Number and type of BMPs employed in projects that disturb soils • Hours of public awareness education • New or long-term efforts to monitor general water quality such as nutrients, pH, turbidity, electrical conductivity, etc. 	<ul style="list-style-type: none"> • Yes • >100
2c, 4c	Reduce erosion and sedimentation	<ul style="list-style-type: none"> • Amount of development that is relocated away from sensitive areas • Acreage of protected lands • Number of properly employed sediment/erosion BMPs • Number of studies evaluating land use and erosion/sedimentation 	

MONITORING

No.	Objective	Methods for Measurement	2017 Results
2d	Promote storm water management planning and implementation	<ul style="list-style-type: none"> • Number of stormwater management plans created and adopted • Improvement in runoff water quality after baseline is established • Number of beneficial uses of storm water 	
2e	Assess water quality problems of small water systems	<ul style="list-style-type: none"> • Number of assessments performed • Number of violations mitigated • Number of water quality improvement / treatment projects implemented 	<ul style="list-style-type: none"> • One in progress
2f	Study impacts of septic systems on water quality	<ul style="list-style-type: none"> • Number of studies identifying areas of concentrated septic systems • Number of water quality samples taken in areas with high concentrations of septic systems • Number of projects implemented to reduce water quality impacts 	
3a	Identify and implement projects to accommodate flood related impacts from climate change	<ul style="list-style-type: none"> • Number of studies identifying flood prone areas • Number of projects implemented that reduce flood risk to property • Amount of flood reduction/mitigation infrastructure installed 	
3b	Integrate flood management with other land management activities	<ul style="list-style-type: none"> • Number of acres of farmland or urban parks irrigated with floodwater • Number of stream and meadow restoration projects that mitigate downstream flooding • Acres of reforested land-both logged and burned areas 	
3c, 4f	Protect and restore connectivity of floodplains with other water bodies	<ul style="list-style-type: none"> • Number of critical areas identified • Number of projects to establish floodplain connectivity • Number of key areas protected, acres of floodplain restored/protected 	<ul style="list-style-type: none"> • One – Little/Big Dry creeks • One

MONITORING

No.	Objective	Methods for Measurement	2017 Results
4b	Manage vegetation to reduce catastrophic fire risk / keep fires within natural range of variability	<ul style="list-style-type: none"> • Number of projects completed • Area of land managed to reduce unnaturally large fires • Number of acres of fuel breaks 	<ul style="list-style-type: none"> • At least five fuels projects in Sequoia-Kings, Sierra, Sequoia National Forests.
5a	Promote community education about water issues	<ul style="list-style-type: none"> • Number of new programs • Number of days of educational activity provided • New materials and dissemination • Number of people/households contacted 	
5b	Increase outreach to Native American Tribes	<ul style="list-style-type: none"> • Number of outreach meetings and MOUs signed by tribal entities • Number of water resources related projects completed on tribal lands 	<ul style="list-style-type: none"> • One meeting • One project in progress
5c	Increase outreach to disadvantaged communities	<ul style="list-style-type: none"> • Number of outreach meetings and MOUs signed by DACs • Number of water resources related projects completed in DACs • Demand by DACs for additional water and climate information and capacity to use that information for water-resources management 	<ul style="list-style-type: none"> • Two meetings
5d	Develop/maintain comprehensive website for Regional Water Management Group	<ul style="list-style-type: none"> • Successful website • Number of users of the website • Hours of public awareness education supplied 	<ul style="list-style-type: none"> • Achieved/accomplished/completed • 160-269 users per month • >100
6a	Protect unique areas with high value to water storage and groundwater recharge	<ul style="list-style-type: none"> • Number of new areas identified for protection • Number of acres protected 	

MONITORING

No.	Objective	Methods for Measurement	2017 Results
6b	Protect unique areas with high value to water quality protection and remediation	<ul style="list-style-type: none"> Number of new areas identified for protection Number of acres protected 	
6c	Protect unique areas with high value to other water resources issues	<ul style="list-style-type: none"> Number of new areas identified for protection Number of acres protected 	
6d	Enhance water management in already protected areas	<ul style="list-style-type: none"> Number of projects completed Number of acres enhanced 	

PROJECT-SPECIFIC MONITORING

These data will be presented when available.

IMPLEMENTATION PROJECT PROGRESS

The Three Rivers Water Supply Study is complete with the California Department of Water Resources' John Kirk conducting the study. The Big Sandy Pipeline Project is currently ongoing. We are awaiting an update from the Project Proponent.

Implementation Projects

1.1 Identifying and promoting projects

The Southern Sierra Regional Water Management Group seeks to implement the Integrated Regional Water Management Plan that the Group adopted in November, 2014. For California Department of Water Resources proposals, projects should have a regional emphasis or have impacts at a regional level. A regional basis or impact strengthens proposals to other funding agencies as well.

Because the Region is very large (the second or third largest in the State), it is difficult to create stand-alone projects which encompass the entire Region. However, projects may be phased temporally or geographically for feasibility. The geologic and geographic nature, including steep, incised canyons and little infrastructure, of the SSRWMG Region also may preclude cost-effective strategies addressing the entire Region. Because very little water management has occurred in our Region, smaller-scale projects may be used as demonstrations or initial steps towards regional implementation. Demonstrations can lead phased approaches. It will be important to provide detailed descriptions of scope, scale, phases, impacts and benefits.

Examples of phased, demonstration or regional projects include:

- Three Rivers Hydrology and Water Supply Project (and other studies and research) – very important demonstration and regional project with initial phase in Three Rivers;
- DAC and tribal water supply and quality projects – DACs and Tribal projects provide important regional benefits and impacts to the Region through providing essential water management improvements to human communities;
- Meadow Restoration and forest treatments – meadows may provide watershed-level impacts directly and indirectly benefit regions because of flood attenuation.

Integrated Projects

Integrated projects integrate impacts and benefits across multiple sectors including water supply and quality, tribal needs, disadvantaged community needs, flood management, ecosystem water needs, climate and drought adaptation, and others. Integration can occur on a project basis, meaning each project is designed to integrate multiple benefits, and on a suite or a package of projects, which integrate across the projects, submitted to a funding agency.

Project integration enables projects, packages and applications to be more competitive across a wide variety of funding sources and stakes project benefits.

1.2 Project workshops

The RWMG determined that one key method in developing, promoting, integrating and ranking projects is to hold project workshops where projects can be proposed, discussed, ranked and improved. Two such workshops were held in March, 2017.

IMPLEMENTATION PROJECTS

1.3 Project proponents

All of the SSRWVG projects are good projects worthy of funding. However, some projects are easier to scope, fund and implement if project proponents have information, done some initial work and are engage with expertise or funding to submit the project. In many cases, projects which are ready to construct or begin, or where the project proponent commits resources will be able to submit grant applications. But the RWMG is committed to developing and promoting all possible projects for funding.

1.4 Roles and responsibilities

As part of the National Forest Foundation grant, the RWMG evaluated member roles and responsibilities and encouraged new and expanded roles for members. Many members have already taken on new roles, such as project proponents. See also roles under project proponents.

1.5 Project List

An updated project list is included as Appendix A.

1.6 Grant Funding

The RWMG encourages project proponents to continue to develop and submit projects to the RWMG but also seek funding from the following sources:

- National Fish and Wildlife Foundation;
- Bureau of Reclamation;
- US Fish and Wildlife Service;
- California Wildlife Conservation Board;
- State Water Resources Control Board;
- Natural Resources Conservation Service;
- Sierra Nevada Conservancy.

1.7 Looking Ahead

In 2018, we will update the IRWMP and incorporate the UC Merced Research Project on Kings River Hydrology and Climate and continue efforts to implement the IRWMP. We will incorporate our Watershed Action Plans and our funding to implement our Climate-smart project list. We anticipate our IRWMP update will strategically position the RWMG to receive future implementation funding for the Region in 2018. In meantime, we seek funding to support our process and programs.

Governance and IRWMP Amendments or Updates

There are no proposed IRWMP amendments or updates at this time.

CONTACT INFORMATION

Contact Information

NAME

TITLE

Bobby Kamansky

Stakeholder Coordinator

Tel 559.287.3311

southernsierrairwmp@gmail.com

Grantee Organization

Sequoia Riverlands Trust acts as a grantee and administrator for the IRWM Program

Sequoia Riverlands Trust

427 Garden Street, Visalia, California 93277

Tel 559.738.0211

Fax fax

www.sequoiariverlands.org

Appendix

APPENDIX A – REGIONAL WATER MANAGEMENT GROUP PROJECT LIST

Appendix A – Regional Water Management Group Project List

Tiered List of New and On-going Implementation Projects – 2017

Southern Sierra Regional Water Management Group

TIER 1 PROJECTS

Project Category	Project Title	Project Proponent	Project Description	Project Status
Studies				
	Spring wetlands/water supply study	Sierra Club – Kern-Kaweah Chapter	Understand the role of springs in water supply, quality, climate and drought, and how improvement work impacts wetland function, response to climate and drought.	In development
	Water Supply and Water Quality Study in the Southern Sierra Fractured Bedrock Aquifer	SSRWMG/DWR	A study that will determine the availability of water in the fractured rock system - hydrologic capacity in Auberry, Prather, Squaw Valley, Dunlap, Badger, Three Rivers (complete), Springville, Posey, and White River communities. Provide a uniform approach to data collection and analysis, methodology, results and recommendations. Monitor wells for quality and quantity in Auberry, Prather, Squaw Valley, Dunlap, Badger, Three Rivers, Springville, Posey, and White River communities. Compile all data sets on one table, e.g. nitrates, radon, Uranium, salts etc.	Complete, incorporated into the Three Rivers Community Plan Update/EIR
Restoration and other Projects				

	Mill Flat Creek Project	USFS - Sequoia	Decommission roads, restore riparian areas and fisheries	
		USFS Sequoia National Forest	Replacing a bridge and associated wetland enhancement in the Kern River Watershed	Funding applied for under the National Fish and Wildlife Foundation
	Cahoon Meadow Restoration	Sequoia National Park	Restoring a montane meadow with a large gully in the Kaweah Watershed.	Design/NEPA phase.
	Improving water supply and quality in the Kaweah River Watershed with the Goliath Prescribed Fire	Sequoia National Park		Project completed with appropriations funding.

	Restoring wetlands and riparian areas at Circle J Norris Ranch	Tulare County Office of Education.	Restoring riparian areas, creating wetland habitat, enhancing water quality, monitoring of flora and fauna.	Project in progress with US Fish and Wildlife and NRCS funding.
	Enhancing water supply and water quality in the Kings River Watershed – restoring three meadows on Sierra National Forest	Sierra National Forest	Restoration and permitting for three head-cut and eroding meadows.	Studies and design complete. Seeking NFWF funding.
Tribal	Big Sandy Rancheria Leech Field/Pipeline Project	Big Sandy Rancheria	Installing a leech field and potentially a pipeline in the BSR	In progress with Prop 1 technical assistance and implementation.

Other Tier 1 projects are already underway. See [Current Projects](#).

TIER 2 PROJECTS				
Project Category	Project Title	Project Proponent	Project Description	Project Status
Studies				

TIER 2 PROJECTS				
Project Category	Project Title	Project Proponent	Project Description	Project Status
Studies				
	Springville PUD Purple Pipe Project Design and Permitting	Springville PUD	SDAC project collecting treated water and utilizing it for landscaping in the PUD area.	
	Modelling Hydrologic Capacity with drought and climate change	UC Merced/PSW Research Station	A modeling exercise to evaluate whether forest fuel reduction and/or restoration activities result in an increase or no change in water yield from small watersheds. Data to parameterize model(s) is available from KREW. The thinning and burning treatments are ongoing and can provide data to verify model results in the next 1-2 years. UC Merced is already in the process of parameterizing one model with KREW data. Forest Service would supply data but there would be a cost for modeling. Quantifies positive and negative effects to stream ecosystems from forest restoration and fuels reduction activities at the watershed scale. It focuses on water yield and water quality in headwater streams of the Kings River watershed and would contribute to the continuation of data collection and analyses that have been ongoing for 10 years.	
	Understanding Landslide, Debris Flows and Flood Risks in the Southern	?		

TIER 2 PROJECTS				
Project Category	Project Title	Project Proponent	Project Description	Project Status
Studies				
	Sierra			
	SCADA System monitoring wells	Sierra RCD	An automated water monitoring system in Auberry	Needs funding
	Little/Big Dry Creeks Water Quality, Flood Control and Supply Project	Sierra RCD	Focused studies for flood control, salmonid restoration, water quality and supply.	Needs funding
Plans				
		USFS Sequoia National Forest	Prioritize meadows for restoration on the Sierra, Sequoia, Inyo national forests, Sequoia and Kings Canyon National Parks	
Tribal Projects				
	Tule River Tribe water supply needs		Tule River Indian Reservation has identified a need for a reliable supply of water. It has negotiated it's water rights and taken steps to implement water supply solutions including the potential for a new dam or other impoundments of surface water.	
Restoration and Other Projects				

TIER 2 PROJECTS				
Project Category	Project Title	Project Proponent	Project Description	Project Status
Studies				
	Improving water supply and reduce flooding risk with <i>Aundo donax</i> removal in the Kaweah and Tule River watersheds	Sequoia Riverlands Trust	Invasive Species: remove tamarisk, <i>Arundo donax</i> , along the San Joaquin River, Kings River, Kaweah River, Tule River, Deer Creek, White River and Kern River	
		Sequoia Riverlands Trust	Watershed protection through protection from development, by voluntary conservation easement especially in the Tule River Watershed, Deer Creek the Kaweah River, Kings River and other flood prone areas in order to protect water quality	
		Mountain Aire Water Company	Replacing water supply tank and associated infrastructure.	In development
	Osa Meadow, Kern Plateau/Kern River Watershed Project		This proposed project would restore approximately 80 acres of meadow through restoration of Osa Meadow.	

TIER 3 PROJECTS			
Project Category	Project Title	Project Proponent	Project Description
Best Management Practices			

TIER 3 PROJECTS

Project Category	Project Title	Project Proponent	Project Description
Best Management Practices			
			BMPs for residential pesticide use in Auberry, Prather, Squaw Valley, Dunlap, Badger, Three Rivers, Springville, Posey, and White River communities.
			BMPs and educational materials for septic tank maintenance in Auberry, Prather, Squaw Valley, Dunlap, Badger, Three Rivers (has an existing program and information), Springville, Posey, and White River communities
			BMPs regarding fire clearance in Auberry, Prather, Squaw Valley, Dunlap, Badger, Three Rivers, Springville, Posey, and White River communities
			BMPs for flood control and flood management/riparian management along the San Joaquin River, Kings River, Kaweah River, Tule River, Deer Creek, White River and Kern River
			BMPs regarding preventing sedimentation and erosion in headwaters in the San Joaquin River, Kings River, Kaweah River, Tule River, Deer Creek, White River and Kern River watersheds
			BMPs regarding well maintenance and monitoring in Auberry, Prather, Squaw Valley, Dunlap, Badger, Three Rivers, Springville, Posey, and White River communities
			BMPs to promote grazing practices, cattle ponds and riparian areas along San Joaquin River, Kings River, Kaweah River, Tule River, Deer Creek, White River and Kern River
			BMPs to identify land use to minimize environmental impact (cluster development) Auberry, Prather, Squaw Valley, Dunlap, Badger, Three Rivers, Springville, Posey, and White River communities

TIER 3 PROJECTS

Project Category	Project Title	Project Proponent	Project Description
Best Management Practices			
Plans			
			Watershed management plans in the San Joaquin River, Kings River, Kaweah River, Tule River, Deer Creek, White River and Kern River watersheds
			Studies and plans to prioritize oak woodland sites for protection in the San Joaquin River, Kings River, Kaweah River, Tule River, Deer Creek, White River and Kern River watersheds
Demonstration Projects			
			Meadow restoration – has been complete at Big Meadows and multiple locations on the Sierra National Forest
			Fuel management for fire safety and water production
			Invasive species removal (Arundo, Tamarisk, Scarlet Wisteria) along the San Joaquin River, Kings River, Kaweah River, Tule River, Deer Creek, White River and Kern River
			Total exclusion of development from certain sensitive watersheds such as Deer Creek, White River
			Flood control projects (floodplain, etc.) that have multiple benefits (habitat, water quality, groundwater recharge etc.);
			More detailed vegetation mapping throughout the region
			Integrated strategies for increasing water supply in Shaver Lake, Auberry, PratherSquaw Valley, Dunlap, Badger, Three Rivers, Springville, Posey, and White River
			Native plants (fire resistant/drought tolerant) in public and private landscaping

TIER 3 PROJECTS

Project Category	Project Title	Project Proponent	Project Description
Best Management Practices			
			Riparian protection through fencing, grazing rotation, additional water distribution systems.

APPENDIX B – REGIONAL WATER MANAGEMENT WORK PLAN

Appendix B – Regional Water Management Work Plan



2017-18 WORK PLAN | SOUTHERN SIERRA IRWMP

This work plan identifies Coordinating Committee and Regional Water Management Group (RWMG) meetings and goals for August, 2017 through December, 2018, and associated project milestones.

#	MEETING DATES, TIMES, AND LOCATIONS	DESCRIPTION & MEETING GOALS
1.	Regional Water Management Group Meeting (RWMG) September 7, 2017 1 am to 4:30 pm Fresno	<ol style="list-style-type: none"> 1. Review and approve chapter sequence; 2. Review financial status, assets and needs; 3. Review projects and programs; 4. Review and discuss timeline for grants and proposal applications; 5. Discuss projects.
	Coordinating Committee November 17, 2017 1 pm to 3:30 pm Teleconference only	<ol style="list-style-type: none"> 1. Review and recommend work plan; 2. Review financial status, assets and needs; 3. Review December RWMG meeting agenda items; 4. Review and discuss timeline for grants and proposal applications; 5. Discuss projects and programs.
2.	RWMG December 7, 2017 1:00 pm to 4:30 pm Tulare	<ol style="list-style-type: none"> 1. Present Drafts of Chapters 3, 4, & 5 and receive feedback; 2. Discuss Update Requirements for: <ol style="list-style-type: none"> a. Chapter 6 – Project Review Process b. Chapter 8 – Plan Performance and Monitoring c. Chapter 12 – Land Use and Water Planning 3. Review, discuss and approve work plan, annual report; 4. Review and discuss UC Merced work, sequence and applications; 5. Review financial plan and tasks, member roles; 6. Review and discuss new projects; 7. Review and discuss DAC and outreach efforts.
3.	Coordinating Committee February 16th, 2018 1 pm to 3:30 pm Teleconference only	<ol style="list-style-type: none"> 1. Review and address outstanding action items; 2. Review March RWMG meeting agenda; 3. Review chapters and IRMWP materials; 4. Review PSPs, projects list and need for work group.

6.	RWVG March 8th, 2018 1 pm to 4:30 pm Fresno	<ol style="list-style-type: none"> 1. Present Revised Drafts of Chapters 3, 4, & 5 2. Present Drafts of Chapters 6, 8, & 12 and receive feedback 3. Discuss Update Requirements for: <ol style="list-style-type: none"> a. Chapter 13 – Stakeholder Involvement b. Chapter 15 – Climate Change c. Chapter 16 – Disadvantaged Communities 4. Present Draft UC Merced Climate Change Study materials; 5. Discuss and approve proposal applications.
7.	Coordinating Committee May 18, 2018 1 pm to 3:30 pm Teleconference only	<ol style="list-style-type: none"> 1. Review and address outstanding action items; 2. Review and discuss IRWMP materials; 3. Review June RWVG meeting agenda; 4. Review PSPs, projects list.
8.	RWVG June 7, 2018 1 pm to 4:30 pm Visalia	<ol style="list-style-type: none"> 1. Review and address outstanding action items; 2. Present Revised Drafts of Chapters 6, 8, & 12; 3. Present Drafts of Chapters 13, 15, & 16 and receive feedback 4. Review UC Merced Materials and reports.
June through August, 2018 <ul style="list-style-type: none"> • Schedule distribution of 1st composite Draft of all revised IRWM Plan Chapter Updates and completed UC Merced Climate Change Study • Schedule meeting to discuss and receive further feedback • Circulate Final Draft IRWM Plan Update (composite) and Climate Change Study for RWMP for “acceptance” • Submit IRWM Plan Update to DWR (by 8-28-18) 		
9.	Coordinating Committee August 17th, 2018 1 pm to 3:30 pm Teleconference only	<ol style="list-style-type: none"> 1. Review and address outstanding action items; 2. Review September RWVG meeting agenda; 3. Review PSPs, projects list; 4. Review and discuss IRWMP materials.
10.	RWVG September 6th, 2018 1 pm to 4:30 pm Fresno	<ol style="list-style-type: none"> 1. Review and approve revised project list; 2. Review and approve annual report materials; 3. Review and approve any last/final IRWMP materials.
11.	Coordinating Committee November 16th, 2018	<ol style="list-style-type: none"> 1. Outreach and adoption update; 2. Review projects and proposals.
12.	RWVG December 6th, 2018 Visalia/Tulare	<ol style="list-style-type: none"> 1. Outreach and adoption update; 2. Review annual report.