

5 ATTACHMENT 3 - WORK PLAN

For the “AttachmentName” in the naming convention of BMS, use “WrkPln” for this attachment.

The work plan must be consistent with the budget and schedule. The work plan shall contain all the necessary details to show the process the applicant will take to develop, enhance, or complete the IRWM Plan(s). The level of detail must be sufficient such that the reviewer understands the work to be performed and is able to evaluate the adequacy of the work tasks toward development of an IRWM Plan that meets IRWM plan standards; such that the work plan functions as the scope of work for the grant agreement; and such that the work plan allows reviewers to understand the level of effort of the work being performed in order to further substantiate the cost estimates in the budget. If the applicant does not have an existing IRWM Plan, then it should use this section to detail the process by which one will be created.

The work plan should consist of at least two and possibly three sections: (1) current status in meeting IRWM standards, (2) grant work plan content, and (3) additional work performed outside the grant. Note that for future implementation funding, IRWM Plans will be evaluated on their progress toward meeting the IRWM Plan Standards.

5.1 Current Status in Meeting IRWM Plan Standards

This section should be used to provide a short summary of the areas of the IRWM Plan in which more work is necessary to meet one or more IRWM Plan standards or which component of a IRWM Plan requires creation or modification. The IRWM Guidelines (Section IV) detail sixteen separate standards that all IRWM Plans must meet. The grant proposal should indicate the areas of work needed in the development of a new IRWM Plan or in the improvement of an existing IRWM Plan that will meet all IRWM Plan standards. If the proposal is not focused on making a IRWM Plan standards compliant, this section of the work plan should explain how the IRWM Plan is already standards compliant or how the IRWM Plan is becoming standards compliant. Then justify the need for the proposed work (i.e. need to fill data gap or how the IRWM Plan improvements are necessary). It is not necessary that the grant cover all areas of needed work; any work areas needed that will be funded outside should be explained in the Additional IRWM Plan Work section discussed below.

5.1.1 Region’s Historic IRWM

For over 100 years, landowners and water managers in this region have managed water incorporating regional needs, capabilities and partnership based enhancements. The Kaweah River originates in the Sierra Nevada Mountains and has historically provided the surface water for the Kaweah River Basin IRWM Region. Agriculture first started in this Region in the 1800s and has been the backbone of the local economy ever since. The majority of the water rights on the Kaweah River and its tributaries and distributaries were established before 1914, when

California formally defined its state water rights management and the process for water rights acquisition. At that point, as now, there was a water right holders association for the St. Johns River and separate one for the Kaweah River. Later in the 1930 – 1940s, the Bureau of Reclamation and the Army Corps of Engineers began planning efforts for major flood protection and water supply projects in and through the Region. Around this time, the two rivers associations joined together due to the prospect of the construction of Terminus Dam. Through this effort, a schedule of water right allocation was developed for all water right holders in both associations that accounted both for losses along the system, storage in the reservoir, and entitlement based on the inflow to the reservoir per day of the year. Construction of the major flood control and water supply facilities throughout the Region (Terminus Dam, Friant Dam, Pine Flat Dam, Friant-Kern Canal, Madera Canal, California Aqueduct) generally occurred in the 1950s with contracts being in place that either that same decade or in the next.

Since that time, water allocation procedures have generally been fairly stable and water managers throughout the Region have developed forums and agreements that have facilitated the Regional management of water. The Kaweah River Basin IRWM Region has a limited supply of surface water and so has historically balanced available surface water supplies with groundwater resources optimized through Regional conjunctive use. In this Region, groundwater resources are the only reliable source of supply, but surface water resources are used to the greatest extent possible so as to make the finite groundwater resources as reliable as possible during drought conditions. Also, as many of the Region’s water conveyance facilities are also used for flood protection, there is a natural connection between municipalities and water management agencies and even some large farming corporations that have developed facilities in order to regionally manage floodwaters. These efforts have fostered significant Regional management of available water resources and have developed numerous mutual agreements between municipalities, water management entities and other impacted parties.

5.1.2 Current Planning Document

The Kaweah River Basin Integrated Regional Water Management Plan (KRB IRWM Plan) has been under development for several years. In 2009, the KRB Region was accepted by DWR through the Regional Acceptance Process (RAP) and determined to have a “deemed equivalent” IRWM plan for the Region. Since then, Regional participants have worked with Kaweah Delta Water Conservation District (KDWCD) and a few consultants have diligently worked to develop a formal IRWMP for the KRB Region (Region) that outlines the Region’s unique challenges, common objectives, and how this group of participants work together under the current

governance structure. Through this process, KDWCD has taken the lead as both the entity that funded the continuance of regional planning efforts and has taken the position of being the responsible entity to DWR for any potential grant funds or secondary requirements.

The goals of the KRB IRWM Plan are to improve drought preparedness, maintain existing and expand capabilities to the recharge groundwater reservoir, improve flood protection and sustain and improve groundwater quality for all water users in the Region. These Regional goals have been pursued through efforts to promote conjunctive use of surface and groundwater, reduce groundwater overdraft, develop projects that mitigate surface water supplies lost to environmental restoration efforts or lawsuits, and to encourage the conservation of as much wet year water as possible through groundwater recharge.

In the Fall of 2009 KDWCD's consultants, in a collaborative forum developed a format for a written IRWMP and developed a table of contents around which the formal written plan would be prepared. The working, collaborative forum has been working toward the development of a draft IRWMP since then. During this time participating parties have continued to work to promote regional goals, have developed implementation project selection criteria, have discussed and worked on governance issues related to disadvantaged communities, and have continued to meet and discuss regional issues both in connection with available funding opportunities and the development of the IRWMP. Current plans are to have a draft IRWMP available for participating parties to review in April 2012. This IRWMP will reflect the participating parties' regional planning and implementation efforts from roughly 2007 to 2011. After the participating parties have reviewed and commented on the draft IRWMP Plan, their comments and concerns will be addressed and then the KRB IRWM Group will publish a public notice that the IRWMP is planned to be adopted and solicit public comment. This public notice is anticipated to be published toward the end of May 2012 and the public comment period is anticipated to last through the month of June 2012. After summarizing any public comments on the draft IRWMP, the governing body for the KRB IRWMP (currently the KDWCD Board of Directors) will consider and address the public comments submitted and then in all likelihood proceed with the formal adoption of the IRWMP in September 2012.

Current DWR IRWMP Standards have been considered during the development of this draft IRWMP and for that reason the IRWMP is anticipated to be fully compliant with DWR IRWMP Standards when it is expected to be adopted in September 2012. The following is a brief description of the current status of the KRB IRWMP as to each of the DWR IRWMP Plan Standards:

5.1.2.1 Governance

The governing body for the Region is the Kaweah Delta WCD Board of Directors. The RWMG is made up of representatives from KDWCD, Tulare ID, Lakeside Irrigation Water District (Lakeside IWD), the City of Visalia, the City of Tulare, the City of Lindsay and the County of Tulare. Members of this group have signed an MOU with KDWCD and committed to financially share in supporting Regional IRWM efforts. Through the MOU, the RWMG members commit to continue to implement the IRWMP and updating it on a regular basis.

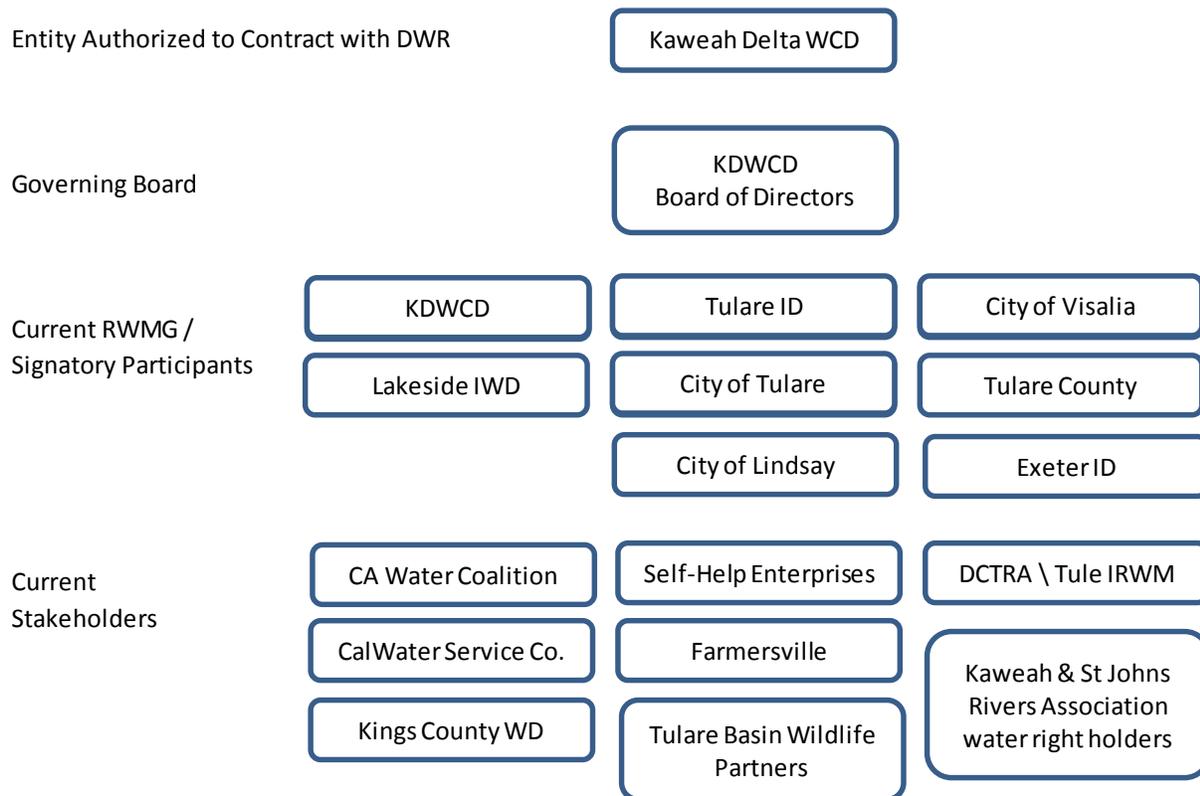


Figure 5-1: KRB IRWM Group Current Governance Schematic

Currently the RWMG holds monthly meetings at which Interested Parties are welcome and can be part of discussions. Both Interested Parties and Signatory Participants can submit projects to the RWMG for consideration. The RWMG is the group that evaluates and ranks submitted projects based on the developed project ranking criteria. KDWCD’s General Manager is the RWMG’s Chairman as well as Secretary to the KDWCD Board of Directors. Generally the Chairman of the RWMG brings recommendations to the KDWCD Board of Directors once a broad consensus among RWMG representatives has been reached. The KDWCD Board of Directors as the governing board votes to determine how the Regional group will proceed.

As per the Proposition 84 Guidelines, the governance structure of a RWMG is documented in the IRWMP Plan, including how the RWMG complies with the California Water Code, and has sufficient breadth of membership and participation for Plan development. The IRWM Plan describes the development of the group's participation MOU and how the MOU was initially presented to both the public and the RWMG. This section of the IRWM Plan describes the current decision making structure of the group and how different entities are allowed to participate and communicate. Finally, this section outlines the outreach efforts that were undertaken by the group in the past to involve Regional partners, as well as the process for changes, updates and implementation of the IRWM Plan.

The KRB Region is currently at a point where the RWMG desires to move to a more representative governing body which will be pursued in the proposed grant work.

5.1.2.2 Region Description

The regional description in the current KRB IRWMP includes a description of the region being managed by the RWMG (IRWM Plan Boundary). Also the IRWMP includes an explanation of how the KRB IRWM boundary was developed and its appropriateness, as well as a discussion of neighboring IRWMs and planned or working relationships with them. The KRB IRWM Plan includes descriptions of local watersheds and water systems, internal service area boundaries, water supplies and water demands for the required 20-year planning horizon, water quality conditions, social and cultural makeup, as well as major water related objectives and conflicts. The IRWM Plan also includes a description of the identified disadvantaged communities within the Region and the understood needs of these communities.

The IRWM Plan also includes mapping and descriptions of neighboring IRWM Plan efforts, and describes the RWMG's relationship with each neighboring group, including any MOU's with other IRWM Plan groups.

The current Regional description is a somewhat historic view of the Region over the last few decades. Given recent water supply reductions that have recently occurred, the RWMG desires to update the regional description and update the water supply information contained in the IRWM Plan to reflect surface water supplies that are impacted by San Joaquin River Restoration Settlement and South of Delta Export Pumping limitations.

Table 5-1: KRB IRWM Needs and Plan Goals

KRB Regional Need:	5.1.3 KRB IRWM Plan Goal:
Estimated existing groundwater overdraft of 20,000 to 40,000 acre-feet per year (prior to 2007) with expected increases due to reductions in SWP deliveries to Tulare Lakebed farming interests and Friant Division CVP deliveries within Region	1 Maintain and augment surface water supplies that directly affect groundwater levels. Accomplishing this will reduce expected impacts of increased demands on groundwater supplies, which is critical in maintaining the ability to stabilize long-term draw down.
	2 Stabilize and potentially reverse the long-term decline of groundwater levels. Accomplishing this will provide a balance between groundwater demand and supply, ensuring a resource that will be available into the future.
	3 Evaluate groundwater replenishment projects. Accomplishing this will focus efforts on providing greater recharge productivity, which will make the most efficient and effective use of facilities and resources.
	4 Evaluate cooperative management projects. Accomplishing this will provide for greater recharge opportunities, which is important in attaining the stabilization and improvement of groundwater levels.
	5 Provide effective and efficient management of groundwater recharge projects, facilities and programs. Accomplishing this will increase recharge in the effort to stabilize groundwater levels.
	6 Coordinate groundwater basin management with local agencies with groundwater authority within the Plan Area. Accomplishing this will promote a consistency in objectives between local agencies, providing a unified approach to meeting goals.
	7 Monitor inelastic land surface subsidence resulting from groundwater pumping. Accomplishing this will help in determining available groundwater storage and evaluating groundwater supplies and assessing potential impacts to the region's surface water delivery systems.
Maintain high quality groundwater resources as this supply is currently the principal source of supply for the region	1 Monitor groundwater quality. Accomplishing this will enable the Plan to assess possible impacts that might diminish the usability of the resource.
	2 Monitor changes to surface water quality that directly affect groundwater quality. Accomplishing this will enable the Plan to assess possible impacts that might diminish the usability of the resource.

5.1.3.1 Objectives

Development of objectives for the KRB IRWMP was an iterative and consensus based process. The objectives listed in the current KRB IRWM Plan are generally to 1) maintain and where possible improve water supply, 2) improve operational efficiency, 3) improve water quality, 4) promote land use planning and resource stewardship, and 5) improve regional flood management. The KRB IRWM Plan goals are to offer efficient and effective groundwater management in an effort to provide a sustainable, high quality supply of groundwater for agricultural, environmental and urban uses for the future. However, the primary goal of the existing KRB IRWM Plan is to maintain surface water imports into the regions and to stabilize and then improve groundwater conditions.

The goals of the IRWM Plan currently address the conservation requirement included in Senate Bill X7-7. Qualitative or quantitative metrics have been assigned to each goal in the IRWM Plan. The selected metrics are practical so that data will be readily available to inform the metric, and the metric will be useful in evaluating progress toward achieving related goals.

The IRWM Plan also describes the analysis of how each Plan objective may be affected by global climate change, and how each fits into the overall State strategy for greenhouse gas reduction as mandated by Assembly Bill 32 (AB 32).

5.1.3.2 Resource Management Strategies (RMS)

Development of resource management strategies for the KRB IRWMP was an iterative and consensus based process. The RMS of the current KRB IRWMP are generally directed to 1) salt and salinity management, 2) urban runoff management, 3) agricultural lands stewardship, 4) ecosystem restoration, and 5) watershed management. This chapter includes critical review of the entire palette of 32 resource management strategies included in the 2009 California Water Plan Update.

The IRWM Plan also describes evaluation of how each plan strategy may be affected by global climate change, and how each fits into the overall State strategy for greenhouse gas reduction as mandated by AB 32.

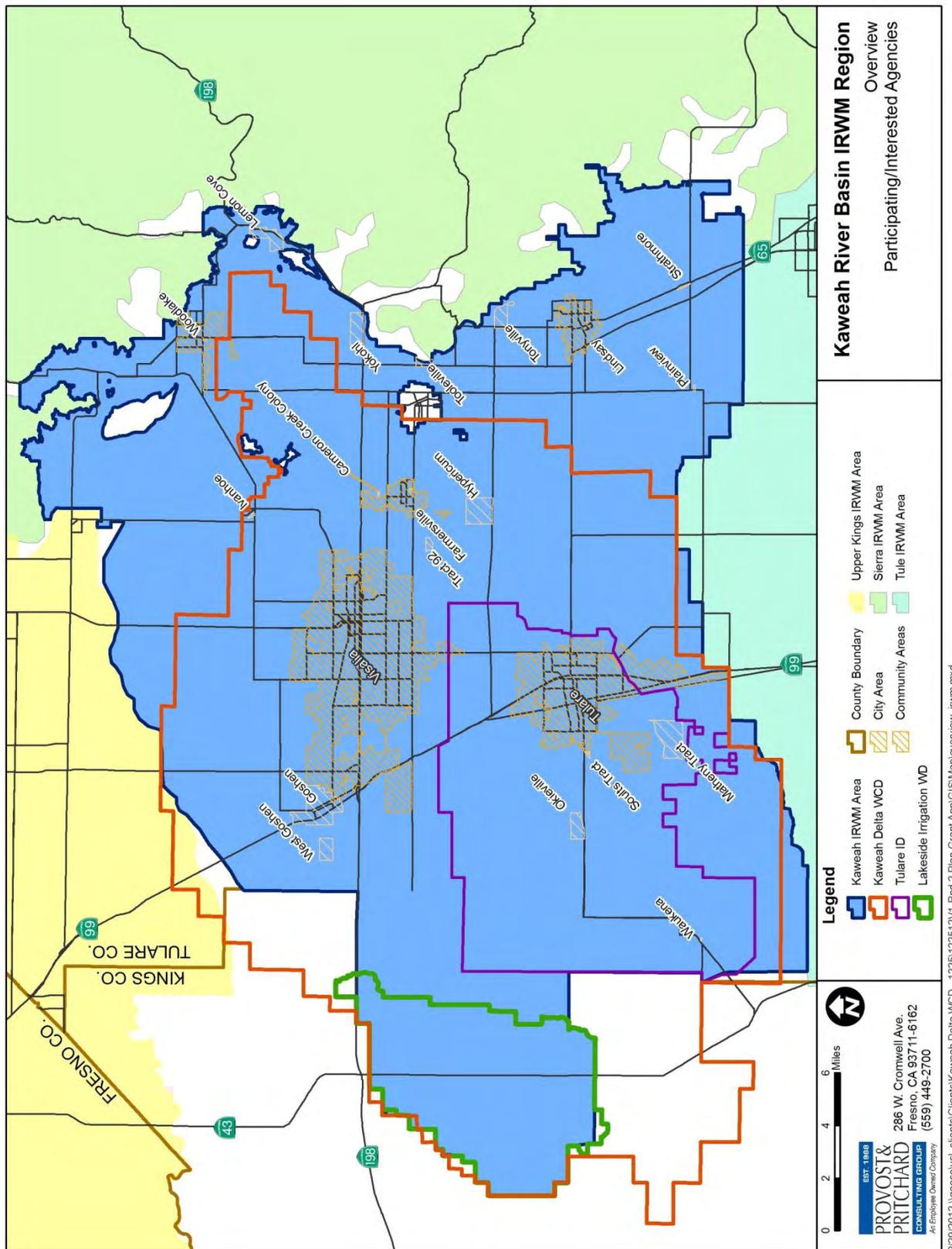


Figure 5-2: KRB IRWM Region and Plan Participants

5.1.3.3 Integration

Integration is combining separate pieces into an efficiently functioning unit. The KRB IRWMP contains structures and processes that provide opportunities to develop and foster integration. Integration of these efforts can be identified in Regional governance, stakeholder involvement and data management. The IRWM Plan documents that the Group is forming, coordinating, and integrating individual, separate efforts in order to function as a unified effort.

5.1.3.4 Project Review Process

The project review process was developed in the summer of 2010. This process identified the method required for potential projects to be submitted by interested parties, the scoring criteria that those projects would be ranked against, and the open process used by the RWMG to evaluate projects. Generally, each project must be submitted to the KRB IRWM Project selection committee for review and is evaluated and internally scored in an effort to be transparent and allow projects that were supported by the group to move forward in the IRWM implementation grant application process.

Each project must demonstrate that it has significant benefits to the region, has been developed by a local agency, had been identified in other planning documents as an important and necessary project, and that same local agency is willing and able to commit to the necessary cost share associated with the project, including ultimate operation and maintenance costs. Also, submitted projects submitted for potential implementation grant funding must be developed beyond the conceptual stage and must include sufficient detail for grant applications to be reasonably made from the available information without significant project development. Finally, submitted projects that are reviewed by the Interested Parties provide a entities with a chance to capitalize on opportunities for project combining or collaboration that improves benefits or reduces costs. This process was successfully used to evaluate potential projects from signatory participants and interested parties for the first round of IRWM Implementation Grants in the Fall of 2011.

The IRWM Plan contains a full description of the method by which the Region will evaluate submitted projects. The IRWM Plan contains a list of submitted projects that have been reviewed which identifies any DAC nexus in each project. These projects are listed in the IRWM Plan in a prioritized fashion consistent with how they match-up with the Region's established selection criteria.

5.1.3.5 Impact and Benefit

The KRB IRWM Plan contains a discussion of potential impacts and benefits of Plan implementation. This discussion includes both impacts and benefits within the IRWM Region; between regions; and those directly affecting DACs, Environmental Justice related concerns, and Native American tribal communities. A critical impact and benefit review of the entire palette of 32 resource management strategies included in the 2009 California Water Plan Update is also included in the IRWM Plan.

5.1.3.6 Plan Performance and Monitoring

Updates to the IRWMP are outlined in the IRWM Plan to occur at no more than five year intervals and project evaluations and prioritization will occur every year. Also the RWMG will modify the IRWM Plan as needed to address significant issues that arise within the Region. Through these processes, the Plan's performance and monitoring data will be evaluated to determine if IRWM efforts are producing their intended objectives. The IRWM Plan outlines specific metrics to monitor success in achieving the goals of the IRWM Plan. Examples of specific metrics include reduction in groundwater overdraft in acre-feet, total dollar amount of funding secured, number of new stakeholders to join the IRWM Plan, and quantity of new water supplies secured through water conservation or floodwater capture. The IRWM Plan contains a pathway for monitoring progress in meeting the goals of the IRWMP. The Plan identifies responsibilities, procedures, and discusses the use of databases or forms to track progress.

5.1.3.7 Data Management

Data collected as part of the KRB IRWM Plan can be used to support existing state programs such as the Surface Water Ambient Monitoring Program (SWAMP), the Groundwater Ambient Monitoring and Assessment (GAMA), and the California Environmental Resources Evaluation System (CERES), as well as water use efficiency and demand reduction data collected by the State Water Resources Control Board (SWRCB) through the CA Urban Water Conservation Council (CUWCC) Ancient World Mapping Center (AWMC), and CA Statewide Groundwater Elevation Monitoring (CASGEM).

Dissemination of data to Stakeholders, agencies, and the general public is integrated into the IRWMP process to ensure overall success. A database for maintaining project information is available to each Signatory Participant for use when proposing new, or updating current or

prior, projects for inclusion in the IRWMP. Data collected or produced as part of the IRWMP will then be presented and disseminated during future meetings.

5.1.3.8 Finance

The KRB IRWM is supported by the Signatory Participants in the RWMG who agree to the terms and conditions in KDWCD's MOU. Part of this MOU outlines the financial obligations of Signatory Participants to ensure the on-going implementation of the IRWMP.

5.1.3.9 Technical Analysis

The KRB IRWMP documents the data and technical analyses that were used in the development of the IRWM Plan. Generally these documents were regional groundwater management plans, the KDWCD Water Resources Investigation, the KDWCD Habitat Conservation Plan, and County and city General Plans.

5.1.3.10 Relation to Local Water Planning

The KRB IRWMP documents the local water planning efforts that were used to help develop the IRWM Plan. The local plans that were used in the KRB IRWMP are listed and discussion is provided to show how the IRWM Plan relates to local documents and programs and the dynamics between them.

5.1.3.11 Relation to Local Land Use Planning

The KRB IRWMP contains the processes that foster communication between land use managers and the RWMG. The IRWM Plan documents the current relationship between the two regarding local land use, regional water issues, and management objectives and expands on future plans to further integrate the collaborative relationship.

5.1.3.12 Stakeholder Involvement

The KRB IRWMP documents the different discussions and decisions regarding various stakeholder participation in the development and implementation of the IRWM Plan, regardless of degree of financial contribution.

5.1.3.13 Coordination

The KRB IRWMP documents the different coordination efforts to be made. The efforts include the process to coordinate management projects and activities of participating agencies and

stakeholders, identification and cooperation with neighboring IRWM efforts with discussion of any ongoing management conflicts, and identification of areas where other agencies may add assistance for different IRWM Plan components or State/Federal decisions.

5.1.3.14 Climate Change

The KRB IRWMP addresses both adaptation to the effects of climate change and mitigation of GHG emissions. The KRB IRWMP includes a discussion of the potential effects of climate change on the Region, including an evaluation of the Region's vulnerabilities to the effects of climate change and potential adaptation responses to those vulnerabilities. Also, it includes a process that discloses and considers GHG emissions when choosing between project alternatives. The analyses and evaluations included in the KRB IRWMP on climate change are consistent with the guidance that DWR released in December 2011.

5.2 Grant Work Plan Content

Work plan tasks are specific tasks that will be performed as part of the grant proposal. In addition, the work plan must contain, as specific tasks, the submittal of: progress reports, a final report, and other deliverables expected to be generated during performance of the proposal. Exact numbers of meetings, trips, etc are not mandatory, but approximate numbers, minimum or maximum are helpful in determining consistency with budget estimates. Linkages between tasks need to be fully explained so that it is clear to reviewers how the product of a task will be used in subsequent tasks and ultimately in the update or development of the IRWM Plan. If meetings are part of the work plan, what are the desired outcomes of the meetings and how is that information incorporated into the work plan in subsequent tasks? If decision points are necessary in the work plan, these decision points should be clearly articulated as well as how that decision impacts the work plan direction or will be incorporated in the work plan. Where possible, work that facilitates and supports the involvement of DACs in the IRWM planning effort should be presented as separate tasks or subtasks. This will help clearly identify such work and clearly identify associated costs in the budget.

The current KRB IRWM Plan is a "deemed equivalent" IRWM Plan. This means that in 2009 the Region's water management efforts / plans were evaluated and determined to be equivalent to what was required of fully documented and written IRWM Plan at that time. Since then the Region has been developing a formal IRWM Plan and is very close to releasing the first drafts of this plan to the RWMG (MOU Signatory Participants of the IRWM Group) for review and comment (April 2012). This draft IRWM Plan is essentially a formalizing of the historic regional water management efforts in the area. It is hoped to be finalized this summer (July 2012) and adopted by the Kaweah Delta WCD Board of Directors on behalf of the IRWM Region in late summer (September 2012). It is the applicant's belief that the draft IRWM Plan will be fully

consistent with DWR IRWM Plan Standards as set forth in the August 2010 Proposition 84 & Proposition 1E Integrated Regional Water Management Guidelines (Guidelines), although the layout of the Plan's information is more consistent with Proposition 50, Chapter 8 IRWM Plan Standards. However, the proposed enhancements to the Region's IRWM Plan are intended to be improvements in water management planning areas that have been significant growing issues over time, that have not yet been addressed in the IRWM Plan. The following three topics (Regional Governance, Water Supply Reductions and Nutrient Management) are briefly described below to give the broad view of the planning effort. Then in a following section the scope of work for the grant is described in greater detail and set-up so that the budget and schedule identify the same components.

The proposed IRWM Plan enhancement and update is intended to help to facilitate a more Regional approach to these statewide mandated regulatory programs, develop a new form of governance and financing to ensure that the IRWM effort is diverse and reliably sustainable into the future, and more accurately depict the current Regional water supply situation so that more affective Regional water planning is possible.

5.2.1 Regional Governance

For many years Kaweah Delta WCD has shouldered the responsibility for governance of the KRB IRWM Region (see **Figure 5-1**). This agency initially committed to the IRWM effort as there did not appear to be any other regional entity willing to fund and govern the undertaking. Kaweah Delta WCD has supported the KRB IRWM for nearly two decades and has recently welcomed several Memorandum of Understanding (MOU) signatory agencies to this effort.

In the last few years the involvement of MOU signatory agencies to the IRWM Group has risen to a significant level and it is now feasible for this IRWM Region to transition from governance by the Board of Directors of one entity to a more Regional committee of water management entity representatives. This shift would also relieve some financial burden on Kaweah Delta WCD and would shift a greater burden to others that are now more involved in IRWM efforts. As part of the improvements to the KRB IRWM Plan, this group will develop a new form of governance and financing to ensure that the IRWM effort is sustainable into the future.

**KAWEAH RIVER BASIN IRWM GROUP
2012 PLANNING GRANT PROPOSAL**

Kaweah Delta WCD

**Table 5-2: Comparison of Districts with Reduced Supplies Impacting
KRB IRWM Region**

	Service Areas (Acres)	Contract Supply (AF)		Historical Avg. Contract Supply Previous to Reductions (AF)	Estimated Contract Supply Reduction (AF)		Future Estimated Contract Supply (AF)
		(AF)	(AF)		(AF)	%	
SWP Contractors - Kings Co		<i>Table A</i> 165,570	--	137,162	54,377	39.6%	82,785
County of Kings	--	9,305	--	3,302	0	0.0%	3,302
Dudley Ridge Water District	37,600	57,343	--	44,585	15,914	35.7%	28,672
Empire-West Side ID	7,400	3,000	--	2,263	763	33.7%	1,500
Tulare Lake Basin WSD	189,519	95,922	--	87,012	39,051	44.9%	47,961
San Luis Division CVP Contractors							
Westlands Water District	600,000	1,150,000		776,988	284,192	36.6%	492,797
Friant Div. CVP Contractors - Near Region		<i>Class 1</i>	<i>Class 2</i>				
	611,896	200,850	457,900	429,800	53,300	12.4%	376,500
City of Lindsay	--	2,500	0	2,500	200	8.0%	2,300
Exeter ID	14,945	11,500	19,000	21,000	2,400	11.4%	18,600
Ivanhoe ID	11,202	6,500	500	11,650	1,200	10.3%	10,450
Kaweah Delta WCD	340,000	1,200	7,400	not avail.	not avail.	~12%	not avail.
Lewis Creek WD	1,233	1,450	0	1,450	100	8.0%	1,350
Lindmore ID	27,561	33,000	22,000	44,000	4,000	9.1%	40,000
Lindsay-Strathmore ID	15,751	27,500	0	27,500	1,700	6.2%	25,800
Lower Tule River ID	103,961	61,200	238,000	180,200	25,000	13.9%	155,200
Porterville ID	17,065	16,000	30,000	31,000	3700	11.9%	27,300
Stone Corral ID	6,587	10,000	0	10,000	600	6.0%	9,400
Tulare ID	73,591	30,000	141,000	100,500	14,400	14.3%	86,100
Totals	1,211,896	1,516,420	457,900	1,343,950	391,869	29.2%	952,082
		1,974,320		0.93 AF/Ac			0.66 AF/Ac

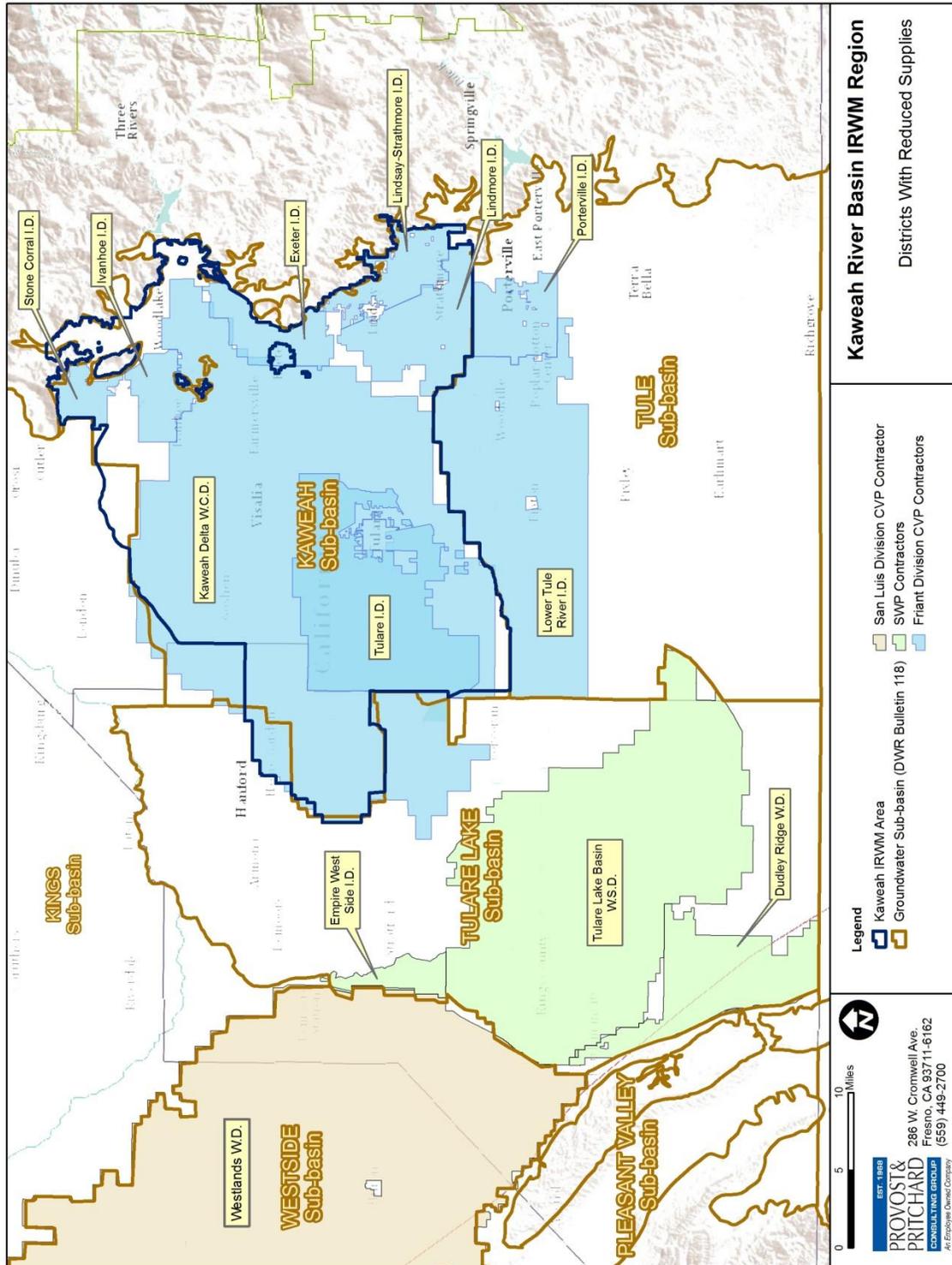


Figure 5-4: Districts with Reduced Supplies Impacting KRB IRWM Region

5.2.2 Water Supply Reductions

Over the last several years a few significant surface water supply issues have been developing that are redefining the understood water balance components within the Region. One of these is the San Joaquin River Restoration Settlement that has reduced the expected yield from Friant Division CVP contract supplies into the Region. The other is the Wanger Decisions¹ that limited CVP and SWP surface water export pumping south of the Delta and significantly reduced the amount of surface water available to districts adjacent to the Region that pump groundwater from common groundwater aquifers (see **Figure 5-4**). Only four or five years ago it was understood from regional water models that the Region was approximately 20,000 to 40,000 acre-feet per year in overdraft. However, recent updates to these analytical tools have indicated that the combined impacts from the San Joaquin River Restoration Settlement and the Wanger Decisions may have increased that number to more than 100,000 acre-feet per year. **Table 5-2** provides some broad estimates of the impacts now being considered and should convey the significance of the effort being proposed.

Given the dramatic change that is becoming more regionally apparent, an effort will be made to evaluate the potential magnitude of impacts within the Region. Using these “bookends”, the Region’s water management entities will reevaluate and update the goals, strategies and project priorities as part of the improvements to the KRB IRWM Plan.

5.2.3 Nutrient Management

Over the past several years there have been two developing water quality related regulatory efforts that have not been incorporated in the Region’s IRWM plan. One is the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) and the other is the Irrigated Lands Regulatory Program (ILRP). CV-SALTS is an effort to address salinity and nitrate problems in California’s Central Valley and adopt long-term solutions that will lead to enhanced water quality and economic sustainability. CV-SALTS also appears to be the vehicle that the Central Valley RWQCB is using to pursue the eventual development of modifications to the Water Quality Control Plan for the Tulare Lake Basin (Basin Plan). The Irrigated Lands Regulatory Program (ILRP) is a State Water Resources Control Board program that regulates discharges

¹ U.S. District Judge Oliver Wanger ruled in 2007 that the Biological Opinion (BO) issued by the USFWS and for the SWP and CVP did not sufficiently consider the Delta Smelt. Subsequent BOs by USFWS (2008) and the NMFS (2009) have required SWP and CVP pumping restrictions to protect Delta Smelt (including adaptive management), winter-run and spring-run Chinook salmon, steelhead, green sturgeon and killer whales, but have been the focus of considerable litigation and scrutiny.

from irrigated agricultural lands. Its purpose is to prevent agricultural discharges from impairing the waters that receive the discharges and has traditionally regulated irrigation and drainage waters that contacted natural waterways. Recently this program has begun to view irrigation and the application of fertilizers as necessary for permitting even if they never leave the field because of the potential connection to and contamination of groundwater. Coalitions of growers have developed to provide the required representative information showing compliance with existing regulations.

Both local water management entities and the KRB IRWM Group have been drawn into these efforts for various reasons. However, it is apparent to many within the Region that there is a significant lack of available groundwater quality data within the rural areas of the Region and there are significant legacy issues of groundwater quality that remain unclear in terms of how to proceed. Part of the proposed effort to improve the IRWM Plan is to evaluate these two State mandated efforts and modify the IRWM Plan so that it addresses water quality issues for the Region in light of the regulatory efforts and better defines the IRWM Groups role in these efforts. Also, it is hoped that with additional consideration of the efforts, regional water quality projects like monitoring well networks and baseline water quality evaluations could be developed to be included for future available funding.

5.2.4 Existing and Proposed Plan Comparison

The proposed improvements/updates to the KRB Region's IRWM Plan are intended to improve water management planning areas that have been growing issues over the last few years, but have not yet been addressed Regionally in the IRWM Plan. The content of the current (meaning draft) IRWM Plan was compared to the proposed improved IRWMP Plan. This comparison is summarized in **Table 5-3**, which shows each chapter of the proposed IRWM Plan updated sections from the existing IRWM Plan that will be reused, and updated information that will be added. **Table 5-3** provides the basis for the detailed scope of work provided later.

**KAWEAH RIVER BASIN IRWM GROUP
2012 PLANNING GRANT PROPOSAL**

Table 5-3: Comparison of Chapters in Current IRWM Plan to the IRWM Plan Update

No.	Chapter	Current IRWM Plan	Prop 84 IRWM Plan Standards	IRWM Plan Update
1	Introduction to Group	• Background and Purpose of the Plan	• Regional Description	• Modifications to Governance Structure: committee structure, decision making authority, new memorandum of understanding.
		• Development of Plan	• Regional Description	
		• Governance Structure	• Governance	
2	Introduction to Plan	• Plan Goals	• Regional Description	• Update of Regional Goals if evaluations determine that specific goal values (like groundwater overdraft amounts) have changed.
		• Regional Goals	• Objectives	
		• Plan Scope	• Objectives	
		• Regional Planning Process	• Relation to Local Water and Land Use Planning	
3	Description of Study Area	• General Description	• Regional Description	• None.
		• County Study Areas	• Regional Description	
		• Population	• Regional Description	
		• Topography	• Regional Description	
		• Climate	• Regional Description	
		• Land Use	• Regional Description	
		• Sub-watersheds	• Regional Description	
		• Geology	• Regional Description	
		• GW Basin Characteristics	• Regional Description	
		• Ecological Processes and Environmental Review	• Relation to Local Water and Land Use Planning	
• Natural Hazards Requiring Emergency Planning	• Relation to Local Water and Land Use Planning			
4	History of Water and Wastewater Management	• Key Water Management Milestones	• Regional Description	• None.
		• History of Wastewater Management	• Regional Description / Relation to Local Land Use Planning	
		• History of Integrated Regional Water Resource Management	• Regional Description / Relation to Local Water Planning	
5	Responsible Entities, Major Infrastructure and Water Supplies	• Water Service Providers	• Regional Description	• Consideration of water supply reliability and demand variations based on San Joaquin River Restoration Settlement and Wanger Decisions.
		• Other Water Management Agencies	• Regional Description	
		• Wastewater Service Providers	• Regional Description	
		• Major Infrastructure	• Regional Description	
		• Water Supplies	• Regional Description	
		• Historical Water Supplies	• Regional Description / Technical Analysis	
		• Water Demand Projections	• Technical Analysis	
		• Comparison of Water Demand and Supply	• Regional Description / Technical Analysis	
• Water Resources Impacts of Continued Groundwater Use	• Regional Description / Technical Analysis / Impact and Benefit			
6	Water Quality	• Groundwater Quality	• Groundwater Quality	• None
		• Surface Water Quality	• Surface Water Quality	
		• Impacts of Failing Septic Systems	• Technical Analysis / Relation to Local Land Use Planning	
		• Existing County Ordinances	• Relation to Local Water and Land Use Planning	

**KAWEAH RIVER BASIN IRWM GROUP
2012 PLANNING GRANT PROPOSAL**

Kaweah Delta WCD

No.	Chapter	Current IRWM Plan	Prop 84 IRWM Plan Standards	IRWM Plan Update
7	Flood Control Planning	• Current Flood Control Problems	• Region Description / Relation to Local Water and Land Use Planning	• None
		• Flooding Problems	• Region Description / Relation to Local Water and Land Use Planning	
8	Key Issues, Plan Objectives, Regional Priorities and Water Management Strategies	• Key Region wide and Watershed-specific Issues	• Region Description	• Consider the effects of reduced water supplies on the applicability and effectiveness of each water • Consider if new water management strategies should be included
		• IRWMP Objectives	• Objectives	
		• Regional Priorities	• Objectives	
		• Water Management Strategies	• Resource Management Strategies (RMS)	
		• Water Management Strategies and their Integration with Objectives and Regional Priorities	• RMS / Integration / Relation to Local Water Planning	
9	Water Resources Management Opportunities	• Valley Floor Water Management Opportunities	• RMS	• None.
		• Foothill Water Management Coordination Opportunities	• Integration	
		• Water Quality Improvement Opportunities	• RMS	
10	Water Resources Management Framework	• Planning Framework • Water Management and Monitoring Programs	• Plan Performance and Monitoring	• Update of regional basin analysis
11	Stakeholder Involvement and Coordination	• Introduction	• Stakeholder Involvement	• Discussion of stakeholder coordination under new governance structure
		• Cooperating Partners Involvement	• Stakeholder Involvement / Coordination	
		• Public Stakeholder Outreach Workshops	• Stakeholder Involvement / Coordination	
12	Strategic Approach for Plan Implementation	• Strategic Approach	• Plan Performance and Monitoring	• Potential modifications to project prioritization due to investigations and updates to priorities
		• Project Solicitation and Prioritization	• Project Review Process	
		• Description of Current High Priority Projects	• Impact and Benefit	
13	Compliance with Statewide Priorities, Benefits and Impacts from IRWMP Implementation	• Compliance with Statewide Priorities	• Climate Change / Integration	• Consideration of CV-Salts, Irrigated Lands Regulatory Program and Basin Plan Amendment efforts.
		• Overall Benefits for the IRWMP	• Impact and Benefit	
		• Resource-specific Impacts	• Impact and Benefit	
		• Possible Obstacles to IRWMP Implementation	• Relation to Local Water and Land Use Planning	
		• Ongoing Support and Financing	• Finance	
		• The IRWMP's Role in Future Planning Efforts	• Relation to Local Water and Land Use Planning	

**KAWEAH RIVER BASIN IRWM GROUP
2012 PLANNING GRANT PROPOSAL**

No.	Chapter	Current IRWM Plan	Prop 84 IRWM Plan Standards	IRWM Plan Update
14	Plan Performance, Data Management and Ongoing Coordination	<ul style="list-style-type: none"> • Technical Analysis and Plan Performance 	<ul style="list-style-type: none"> • Technical Analysis / Plan Performance 	<ul style="list-style-type: none"> • “Book end” analysis of water supply reduction impacts from San Joaquin River Restoration Settlement and Wanger Decisions
		<ul style="list-style-type: none"> • Data Management 	<ul style="list-style-type: none"> • Data Management 	<ul style="list-style-type: none"> • General summary of available groundwater quality data sources and identification of additional needed data
		<ul style="list-style-type: none"> • Ongoing Coordination 	<ul style="list-style-type: none"> • Coordination 	<ul style="list-style-type: none"> • On-going coordination for the new governance structure for the IRWM Group
15	Climate Change	<ul style="list-style-type: none"> • Legislative and Policy Context 	<ul style="list-style-type: none"> • Climate Change 	<ul style="list-style-type: none"> • Analysis of new estimates of climate change impacts to surface water supplies.
		<ul style="list-style-type: none"> • Describe and consider the effects of climate change 	<ul style="list-style-type: none"> • Climate Change 	
		<ul style="list-style-type: none"> • Identification of climate change impacts and adaptation strategies 	<ul style="list-style-type: none"> • Climate Change 	
		<ul style="list-style-type: none"> • Mitigation and Green House Gas reduction 	<ul style="list-style-type: none"> • Climate Change 	
		<ul style="list-style-type: none"> • Implementation of the Standard 	<ul style="list-style-type: none"> • Climate Change 	

5.2.5 Improved IRWM Plan Scope

The IRWMP update will be a 20-month process. This will provide sufficient time for the following:

- Stakeholder meetings to obtain feedback,
- Hold workshops to develop integrated strategies to address developing issues,
- Development of a new governance structure for the IRWM Group,
- Investigate and analyze developing water supply and water quality issues, and
- Update of the current IRWM Plan according to the most current data, stakeholder input, and the workshop results.

This will also provide sufficient time for submittal of quarterly reports, final reports and other administrative requirements.

The process will be managed by the applicant, the Kaweah Delta WCD, which has been chosen to work with and represent the Regional group of MOU Signatory Plan Participants (RWMG). The applicant will supply the grant administrator and the clerical/fiscal administration support throughout the 20-month period.

The Regional group of MOU Signatory Plan Participants (RWMG) has selected Provost & Pritchard Consulting Group to be primarily responsible for collecting stakeholder information, rewriting, and improving the current IRWMP to DWR Plan Standards. Also, Dennis Keller, Consulting Engineer, will be involved in improving the current IRWM Plan, as he is the primary author of the current IRWM Plan and is Kaweah Delta WCD's water quality coordinator. The RWMG members and other interested stakeholders will all have opportunities to assist with preparing the IRWMP update and providing comments.

The following tasks have been identified to prepare an update to the KRB IRWM Plan. This update is necessary in order to address significant water management planning areas that have been developing concerns over time, but are beyond the scope of the current IRWM Plan. In the task listing below, the necessary additional sections and subjects are highlighted and briefly discussed.

The tasks are consistent with the budget and schedule sections, and have been prepared to provide an efficient way to solicit stakeholder input and address the significant water management planning areas. The approach for development of the IRWMP update will utilize committee and regular meetings to solicit stakeholder input and present updates on the IRWMP update.

5.2.5.1 Task 1 – IRWMP Update Committee and Stakeholder Input Meetings

5.2.5.1.1 Subtask 1.1 - Initial Project Meeting.

Representatives of member entities will be invited to participate on an IRWMP Update Committee which will steer the Plan Update. One initial kick-off meeting will be held with the IRWMP Update Committee to review IRWMP improvements and the planned scope for development of the IRWMP update. During this meeting, a summary of the proposed scope of work, budget and schedule for completion will be presented, and confirmation of the approach planned to achieve maximum stakeholder input to the process will be obtained.

5.2.5.1.2 Subtask 1.2 – Research and Issue Development.

There are three areas that will require research and analysis before the IRWM Group can begin to engage on the issues. The efforts will be to prepare initial information for others to consider and use during the Plan update meetings.

5.2.5.1.2.1 Subtask 1.2.1 – Modified Regional Governance Structure.

This subtask will include the initial research and development of scenarios to allocate voting authority and financial obligation by a consultant for the on-going IRWM Group efforts. Suggestions will be developed by the consultant on how population, average annual surface water deliveries, service acreage, groundwater recharge activities/authority, and groundwater pumping might be factored into the voting basis. These potentially used variables will be summarized by entity within the Region for consideration of the IRWM Plan Update Committee. Suggestions will be also developed on what metric might be used to establish which MOU Signatory Participants would financially contribute to the on-going IRWM Group's annual budget. Three organizational and financial structures will be developed into a technical memorandum for use as a starting point for consideration by the IRWMP Update Committee.

5.2.5.1.2.2 Subtask 1.2.2 – Regional Water Supply Reductions.

This subtask will include the initial research and development of a range of impacts that could occur depending on several factors over the next several years. The most optimistic view would be that the impacts currently being seen would continue without increase. This would be one “book-end” for the impacts. However, the other “book-end” could be that pumping restrictions associated with the Wanger Decisions continue, no alternate pumping facility is developed, the San Joaquin River Restoration Settlement

impacts move from interim flows to full restoration flows after the San Joaquin River channel is improved to handle the full amount of committed flows, and there is no way for the Friant Division CVP contractors to receive any water back from “recirculation”². This “book-end” could be increased by an additional percentage as there are provisions in the Settlement for additional flows to be diverted if the benefits to targeted species are not reached. It is anticipated that previously modeled average annual impacts to contractors would be used to estimate these water supply reductions. Ranges of water supply reduction estimates will be related to the potential costs to develop conceptual groundwater recharge facilities, groundwater banking facilities and surface water storage facilities to offset the water supply impacts. This information will be developed into a technical memorandum and presented as starting points for consideration to the IRWMP Update Committee.

5.2.5.1.2.3 Subtask 1.2.3 – Developing Nutrient Management Regulations.

This subtask will include the initial research and development of the understanding of the most likely direction that the CV-SALTS and ILRP efforts will take in terms of regulations and requirements on local landowners and their stance on Regionally significant issues. It is anticipated that this subtask will not be undertaken for several months in an effort to allow both state mandated programs to develop their regulations and requirements as they are currently preliminary. Issues that will be researched and summarized include how state agencies will deal with the identification of surface water non-point source issues that likely have developed in watersheds upstream of the testing location, with legacy groundwater quality constituents and how these relate to permitted application of fertilizers, with Regional farming practices that relate to groundwater quality (i.e. application of gypsum), with irrigation efficiencies, and with amounts of unavailable nutrients in the soil profile over time. Also, issues such as monitoring networks and available background data will be investigated and summarized on the effort. This information will be developed as a technical memorandum and presented as starting points for consideration to the IRWMP Update Committee.

² Recirculation is a term used here to describe the hope that Friant Division CVP contract water discharged to the river as Settlement flows could be delivered to the Delta through the San Joaquin River channel and then returned to Friant Division CVP contractors through the California Aqueduct and the Cross Valley Canal or some other future conveyance facility that would make that water available to the Contractors for irrigation purposes.

5.2.5.1.3 Subtask 1.3 – Development of Outreach Plan and Outreach to non-participatory Water Management Entities.

This task will include a review of past outreach efforts and a review of stakeholder representation to assure the opportunity for representation by all major stakeholders. This task will document a public outreach and community affairs process to help ensure that stakeholders are involved with the RWMG governance. A Future Stakeholder Involvement Plan will be developed based on past outreach efforts, and any new methods that could have merit. It is anticipated that the Future Stakeholder Involvement Plan will include a combination of flyers, newsletter articles, website postings, e-mail notifications, meetings/presentations, and workshops. The Consultant will also develop a draft plan to provide involvement for those stakeholders who choose to not become official members of the RWMG. After comments by reviewers the draft plan will be finalized. The goal is to develop a sustainable IRWM Plan that will keep all stakeholders involved for the long-term.

A newsletter article will also be prepared for public outreach. It will be published in the beginning of the update process. It will explain the purpose of the RWMG and IRWM Plan, describe funding sources, and solicit input on the IRWMP update. The articles will be published and posted in a variety of print and electronic media to maximize the audience that reads it. Specifically, the articles will be placed on member agency websites, and in member agency newsletters and regular mailings.

5.2.5.1.4 Subtask 1.4 – Development of Outreach Plan and Outreach to Regional DACs.

This subtask will facilitate and support the involvement of DACs in the KRB IRWM planning effort. A DAC Outreach Plan will be prepared, including protocols and goals for engaging DACs in the near and long-term future. The DAC Outreach Plan which will consider some practical factors, such as some DACs not having internet access or transportation to attend meetings. The Plan will document specific outreach methods, high priority DACs, and methods for measuring the success of outreach efforts. The Plan will also describe possible efforts to engage Non-Governmental Organizations (NGOs) that assist DACs. The goal of the DAC Outreach Plan is to establish a long-term sustainable movement designed to last beyond initial outreach efforts. The Draft DAC Outreach Plan will be presented to the IRWM Update Committee for comments, and then later will be presented to the RWMG. The plan will begin to be implemented after its approval by the Region's governing body.

5.2.5.1.5 Subtask 1.5 - Plan Update Progress Meetings.

Throughout the course of the project, the Consultant will conduct regular meetings with the IRWMP Update Committee to provide updates to the progress in preparation of the IRWMP update, and solicit input from the Committee. For estimating purposes it is assumed that 15 monthly meetings will be necessary by either the IRWMP Update Committee or the RWMG in order to accomplish the proposed IRWM Plan update. The Committee will face several decision points during these meetings regarding how to deal with the three primary planning issues within the context of the IRWM Plan Update. The outcome of (the discussions in) these meetings is hoped to be a consistent vision on how the KRB IRWM will address the three significant planning issues involved in this IRWM Plan update so that this vision can be shared with others for their comment. Also it is hoped that input from these meetings will be used in the subtasks of Task 3 to develop the Draft IRWM Plan Update.

5.2.5.1.6 Subtask 1.6 - Stakeholder Input.

Critical to a thorough and implementable Plan is stakeholder understanding and input. At least one presentation will be made at the RWMG and governing board meeting to inform the RWMG, Board members, and interested parties of the Plan Update process and opportunity for stakeholder input.

Following the presentation at the RWMG and IRWM's regular Board meeting, a series of open meetings will be conducted to solicit input for the IRWMP update. Each meeting will focus on a specific topic, such as water supply reductions, rather than the entire update program. These 15 meetings will be scheduled to coincide with the IRWMP Update Committee meetings, and will be publicized through electronic correspondence and the KDWCD website.

The Applicant will regularly update the KDWCD website with information about upcoming meetings, meeting agendas and notes, and drafts of the updated document. The page will be designed to allow stakeholders to upload additional documents or references related to the IRWMP work.

Disadvantaged Community (DAC) and Regional Native American authorities will also be contacted to solicit input. All meetings will be documented and considered for implementation into the Plan Update. There will not necessarily be decision points associated with these meetings as their purpose is to provide the public with a venue to comment on the developments proposed in the IRWM Plan Update.

5.2.5.2 Task 2 – CEQA Compliance

Based on the content of the existing IRWM Plan, the Plan update would be statutorily exempt from CEQA pursuant to Section 15262. Paraphrasing that section, “a project involving only planning studies for possible future actions which the agency has not yet approved, adopted, or funded does not require the preparation of an EIR or Negative Declaration but does require consideration of environmental factors. This section does not apply to the adoption of a plan that will have a legally binding effect on later activities.” Since the IRWM Plan does not create policy or invoke restrictions on future projects, the action is exempt from CEQA review, and this proposal does not include any CEQA efforts. When specific policies are proposed or projects are considered, Project proponents will be required to provide necessary environmental review at that time.

5.2.5.3 Task 3 – Prepare Draft IRWM Plan Update

Upon receiving stakeholder input for sections of the updated IRWM Plan, a complete Draft Update to the IRWM Plan will be prepared. The sub-tasks for this task will follow each modified chapter:

5.2.5.3.1 Subtask 3.1 – Introduction to Group (Ch. 1).

This first chapter of the current IRWM Plan includes information on the background and purpose of the IRWM Plan, the history of how the IRWM Plan was developed and the current governance structure under the Kaweah Delta WCD Board of Directors. The proposed scope for this section of the IRWM Plan Update will be to revise the described governance structure for the group and how that structure operates. The intent is to develop a new governance structure that will provide a more sustainable structure where multiple water management entities can share in the authority of decision making for the Region and also financially provide for on-going IRWM Planning. The described structure will define:

- The decision making body for the IRWM Group, how members of this decision making body are selected and what length of term they serve;
- Who has the ability to propose a project for consideration by the IRWM Group and who will be responsible for evaluating projects using the Region’s established criteria;
- Who has the ability to propose modifications to the IRWM Plan and who has the ability to propose modifications to the on-going IRWM effort budget;
- The method and amount of financial support that MOU Signatory Participants (RWMG) would be obligated to fulfill;
- How new MOU Signatory Participants could be added to the current group; and

- The venues and avenues available to interested parties and the public (including DACs) and how they could interact with representatives of the IRWM to request support or involvement in projects specific to local issues.

Proposition 84 Guidelines require that the governance structure of a RWMG be documented in their IRWM Plan, including how the RWMG complies with the California Water Code, and has sufficient breadth of membership and participation to develop the Plan. Through the IRWMP Update Committee meetings a new MOU will be developed for participation in the IRWM. As mentioned in the description of Plan Update meetings, the revised MOU will be presented at a public IRWMP meeting and posted on KDWCD's website for a 30-day review period. The new governance structure will be established early so the Group can operate under a more formal organized structure during the Plan update period.

Also, a description of the new IRWM Plan update will be included under the history of the development of the IRWM Plan.

5.2.5.3.2 Subtask 3.2 – Introduction to Plan (Ch. 2).

The current IRWM Plan goals for all water users in the Kaweah River IRWM area are:

- To improve the drought preparedness;
- To maintain existing and expand groundwater recharge capabilities;
- To improve flood protection; and
- To sustain and improve groundwater quality.

These regional goals have been pursued through efforts to promote conjunctive use of surface and groundwater, reduce groundwater overdraft, develop projects that mitigate surface water supplies lost to environmental restoration or lawsuits, and to encourage the conservation of as much wet year water as possible through groundwater recharge. However, the current goals in the IRWM Plan were established with a view of the Region that had greater water resources and were established by only a portion of the total number of Regional water management entities. The second chapter of the current IRWM Plan will be revised to include updated regional goals if the evaluations and planning produce different regional goals.

5.2.5.3.3 Subtask 3.3 – Responsible Entities, Major Infrastructure and Water Supplies (Ch. 5).

The current IRWM Plan depicts a Region where six water management entities receive regular contract supplies from the Friant Division CVP, two water management entities are diverters of surplus water supplies from the Friant Division CVP, many different private water right holding

companies and water management entities to the west of the Region that are being supplied fairly reliable surface water through State Water Project contracts. With the advent of the Wanger Decisions and the San Joaquin River Restoration Settlement, this regional description is no longer accurate. Average annual estimates of irrigation demand from crops continues to be reasonably accurate, but with reductions in surface water availability, the amount of groundwater pumping to meet irrigation demand has increased significantly. This in turn has led to greater annual groundwater overdraft within the Region. The fifth chapter of the current IRWM Plan will be revised to include the current understanding of water supply reliability in the Region in light of recent water supply reductions. The new water supply reliability described here will come from research into recent annual SWP reliability reports, previous estimates of average annual surface water contract impacts to Friant Division CVP contractors and historic average annual local river supplies (that will be assumed to be unchanged). Also any recent available groundwater modeling of the region will be taken into account in the evaluation³. These alterations to available water supply will be summarized and compared against potential means to offset them (i.e. acres of additional groundwater recharge basins, acre-feet of additional surface water storage facilities, quantity of additional conveyance capacity necessary, etc.) to provide perspective on the issue. This information will be summarized in a document that will be used by the IRWMP Update Committee to begin planning discussions on how to potentially address the issue depending on the magnitude of the impacts. The information developed for the summary document will also be used to revise the regional description contained in Chapter 5 of the IRWM Plan.

5.2.5.3.4 Subtask 3.4 – Key Issues, Plan Objectives, Regional Priorities and Water Management Strategies (Ch. 8).

The eighth chapter of the current IRWM Plan contains information on key Region wide and watershed specific issues, IRWMP Objectives, Regional Priorities, Water Management Strategies and their integration with Objectives and Regional Priorities. This region has well established water management strategies to address the Region's key issues. However, it is expected that new water management strategies will have to be considered if the water reduction impacts indicate that the amount of groundwater overdraft anticipated in the near future would approach an unsustainable annual amount or that the existing plan objectives

³ Kaweah Delta WCD has developed a groundwater model of their service area that has recently been used in conjunction with the City of Visalia to model various development scenarios and their impacts on local groundwater resources.

may need to be reprioritized depending on how significant the considered issues are. Many of the water management entities in the Region have groundwater management authority through groundwater management plans, as well as other municipal entities that have adopted Urban Water Management Plans that consider the reliability and availability of local groundwater resources. This section of the IRWM Plan will be revised to include the current understanding of water supply reliability in the Region in light of recent water supply reductions and any new water management strategies that are developed as part of the planning effort by the IRWMP Update Committee. As with the current IRWM Plan, this chapter will include a critical review of the entire palette of 32 resource management strategies included in the 2009 California Water Plan Update. For any new objectives included in this chapter, objective metrics will be developed and related to Regional goals. The metrics will be selected so that they are practical, data will be readily available to inform the metric, and the metric will be useful in evaluating progress toward achieving related goals.

5.2.5.3.5 Subtask 3.5 – Water Resources Management Framework (Ch. 10).

The tenth chapter of the current IRWM Plan includes information on the Region’s planning framework and the water management and monitoring process. Generally, the current and historic water management in the Region has been framed by:

- Established water rights and their associated places of use;
- Operational criteria of surface water storage facilities (Terminus and Millerton);
- Established contracts for imported water supplies and their associated places of use;
- Operational criteria for the surface water conveyance system within the Region;
- Agreements and relationships between water management entities;
- Groundwater Management Policies and Plans;
- Agricultural Water Management Policies and Plans;
- Urban Water Management Policies and Plans.

Some of these agreements are based on importing surface water supplies from outside of the Region, like the contracts between Friant Division CVP contractors and the Bureau of Reclamation. The Bureau contracts recently were modified as part of the San Joaquin River Restoration Settlement and changed from water supply contracts (9e) to repayment contracts (9d). Also the anticipated yield from these contracts has been significantly reduced and therefore less imported water to the Region will offset Regional water demand. At the same time, the River system supplies that are held by water right holders within the Region have generally remained the same. Due to this, contractual obligation between water management agencies will increasingly rely on river system supplies to transform available resources into

more regulated supplies usable while there is demand or exchange for additional amounts of wet year water that will be conserved through groundwater recharge and banking.

Also the framework of water management within the Region is made up of the water management plans and groundwater management plans that water management entities in the Region have, as well as other municipal entities that hold Urban Water Management Plans that consider the reliability and availability of local groundwater resources. For most ag districts the general monitoring of water management in this region is made up of water delivery measurements and records, groundwater level monitoring and groundwater contour evaluations, surface water quality testing, and crop mapping so that estimates of ag demand can be developed. For municipalities in this Region monitoring involves water delivery measurements made to groundwater recharge facilities, groundwater pumping measurements and records, water delivery measurements and records of water quality test results.

The proposed effort will revise this chapter to reflect changes to pieces of the Regional water management framework that are modified through deliberations by the IRWMP Update Committee. An example of this would be if an outcome of the IRWMP Update Committee's deliberations was that Kaweah Delta WCD decided to make policy changes to its groundwater management plan. Another example would be if the IRWMP Update Committee's deliberations influenced the City of Visalia's General Plan efforts regarding the amount of justifiable development over the next 5 years. These water management framework issues would be summarized from discussions and conclusions at the monthly IRWMP Update Committee meetings and incorporated into a revised version of this chapter.

5.2.5.3.6 Subtask 3.6 – Stakeholder Involvement and Coordination (Ch. 11).

The eleventh chapter of the current IRWM Plan includes information on how cooperating IRWM partners function within the IRWM Group and outlines the current public stakeholder outreach efforts. The existing RWMG previously performed significant public outreach while preparing the current IRWM Plan. As a result, many of the major stakeholders and DACs in the region are already involved. However, there are many private ditch or canal companies, some water management districts, and disadvantaged communities that are not involved.

This chapter will be revised to reflect the modified governance structure that has been adopted for the Region. It will also include a description of a focused effort to reach out to new stakeholders in addition to existing RWMG members.

5.2.5.3.7 Subtask 3.7 – Strategic Approach for Plan Implementation (Ch. 12).

The twelfth chapter of the current IRWM Plan currently contains information on the Region's strategic approach to water management, the Region's criteria for project solicitation/selection/prioritization, as well as descriptions of the Region's current high priority projects. It is anticipated that as new water supply reliability information is considered, as a new governance structure is developed and as statewide regulatory programs are considered, these planning efforts may prompt changes to the Region's project screening and prioritization criteria. Therefore, this chapter will be revised to reflect any changes to project prioritization due to the investigations and updates to regional priorities. Also, participants of the IRWM Group will be asked to update their current lists of projects given any modified project criteria so that the information in the IRWM Plan can be as up to date as possible.

5.2.5.3.8 Subtask 3.8 – Compliance with Statewide Priorities, Benefits and Impacts from IRWMP Implementation (Ch. 13).

The thirteenth chapter of the current IRWM Plan contains information on compliance with Statewide priorities, the overall benefits of the IRWM Plan, resource-specific impacts, possible obstacles to IRWM Plan implementation, on-going support and financing, and the IRWM Plan's role in future planning efforts.

Since it is planned that the governance and financing structure of the IRWM Group will be modified, it is also planned that this modification would be reflected in this chapter. Although the modified governance structure would mostly be discussed in Chapter One, it would be viewed that the new financial structure connected to the modified governance would mostly be discussed in this chapter.

Also, if the Region's strategic approach to water management is modified in any way from the current plan, then the impacts and benefits of the IRWM Plan and the water management strategies will be reconsidered and revised impacts and benefits included in this chapter. Further, two state mandated water quality programs will be considered as part of this IRWM Plan update, so it is anticipated that information on CV-SALTS , the ILRP and the Basin Plan amendment efforts will be incorporated into this section as well.

5.2.5.3.9 Subtask 3.9 – Plan Performance, Data Management and Ongoing Coordination (Ch. 14).

The fourteenth chapter of the current IRWM Plan includes information on the topics included in its title. This Region already has developed data management procedures, a regional data

management system in place, and a management plan for the monitoring program. The purpose of these pieces of the Plan is to consolidate the available Regional water management information through a reliable system so that Regional water managers can use this information to make the best decisions possible when considering how to use their limited resources in relation to local water and land use planning. It is not viewed that these pieces of the IRWM Plan will need to be updated.

This chapter will be revised to include a “book end” analysis of water supply reduction impacts from the San Joaquin River Restoration Settlement and the Wanger Decisions that is the basis for the planning discussion on water supply reductions of the IRWMP Update Committee. Also this section will update the current list of available groundwater quality data sources and identify any additional needed data necessary for water managers to consider as an outcome from the consideration of CV-SALTS, the ILRP and the Basin Plan amendment efforts. Lastly, this section will be revised to include on-going coordination for the new governance structure for the IRWM Group and revised Plan performance metrics if beneficial.

This section will also include recommendations on how future updates will be considered. To include updates, it is anticipated that an annual report will be prepared. A concise annual report would include:

- Annual updates to the Project List
- Summary of Activities, Meeting Notes, and Public Awareness Activities
- Modifications or Updates to the IRWM Plan

5.2.5.3.10 Subtask 3.10 – Climate change (Ch. 15)

The fifteenth chapter of the current IRWM Plan contains information on the Region’s evaluation of and approach to addressing climate change through water management strategies. Part of the proposed analyses of water supply impacts will also include consideration of published information on impacts to the major Regional surface water supplies by climate change. As new information is being made available all the time on climate change for various Regional water supplies (SWP annual reliability reports, new San Joaquin Valley Basin Study funded by USBR, etc.), the various sources considered in the analysis of the range of water supply reductions to the Region that relate to climate change will be considered in terms to potential modifications to the IRWM Plan chapter on climate change. New information will need to be included in the modified IRWM Plan Chapter 15 to update the evaluation of climate change impacts to the Region that feed back into the water management strategies to address the impacts. Therefore this chapter will be revised to reflect any new

climate change information that is evaluated through the water supply reduction planning effort.

5.2.5.3.11 Subtask 3.11 – Plan Appendix on Governance Structure Update.

This Appendix would include the Initial Starting document suggesting three alternative governance and financial structures for the KRB IRWM Group. This appendix would include how issues like population, average annual surface water delivery, service acreage, groundwater recharge activities/authority, and groundwater pumping were viewed by the IRWMP Update Committee in the development of the new governance structure. Also, the Appendix would include how potential metrics that could be used to establish what MOU Signatory Participants (RWGM members) would financially contribute to the on-going IRWM Group's annual budget were viewed by the IRWMP Update Committee in the development of this new structure. Finally, this Appendix would include the final governance structure selected by the IRWMP Update Committee and the record of how this structure was received and adopted by the larger IRWM Group and the Kaweah Delta WCD Board of Directors. Meeting minutes of the IRWMP Update Committee that related to this topic would be included in this Appendix as well.

5.2.5.3.12 Subtask 3.12 - Presentation of Draft IRWM Plan Update.

Upon completion of the Draft IRWM Plan, a summary presentation will be conducted. The meeting will be open to all members and interested parties, and will be scheduled at either a regular IRWM Governing Board meeting or Plan Update Workgroup meeting. The intent of the meeting is to provide an overall summary of the IRWM Plan changes to familiarize members and interested parties with the changes prior to providing final comment. The meeting will be publicized via email and KDWCD's website. At the meeting, copies of the Draft IRWM Plan will be provided, and an appropriate comment period (30-45 days) initiated.

5.2.5.4 Task 4 – Preparation of Final IRWM Plan

5.2.5.4.1 Subtask 4.1 - Summary of Comments Received.

Following the comment period, all comments received will be summarized in a document and prepared for consideration by the IRWM Update Committee. The summary document will include recommendations on how to respond to any 'significant' comments in the final IRWM Plan update. The summary and recommendations will be presented to the IRWMP Update Committee.

5.2.5.4.2 Subtask 4.2 - Prepare Final IRWM Plan.

Upon reaching consensus on comment responses, the Final IRWM Plan will be prepared. Hard copies and CDs of the final document will be prepared and made available to the RWMG. A digital copy of the updated Final IRWM Plan and its appendices will be added to the KDWCD website.

5.2.5.4.3 Subtask 4.3 - IRWM Highlight Document.

A highlight document summarizing the updated IRWM Plan will be prepared. The document will be similar in format to the California Water Plan 2009 Update Summary Document.

5.2.5.4.4 Subtask 4.4 – IRWM Governing Board Adoption of Updated Final IRWM Plan.

The updated Final IRWM Plan will be presented to the IRWM governing body for approval at a regular scheduled IRWM meeting. A summary of the final Plan changes will be presented to the governing body.

5.2.5.5 Task 5 - Grant Assistance Reporting

5.2.5.5.1 Subtask 5.1 - Quarterly Progress Reporting and Reimbursement Requests.

Preparation of Quarterly Progress Reporting and Reimbursement Requests, tracking expenses.

5.2.5.5.2 Subtask 5.2 - Draft IRWM Plan Update Report.

Prepare a draft DWR Grant Report documenting the work completed in preparing the IRWM Plan and how it relates to current DWR IRWM Plan Standards and the proposed planning grant work plan. This report will follow the outline and format requested by DWR and will discuss work plan, budget, schedule, problems encountered and any other contractual issues. This report will not be the updated IRWM Plan, but rather an administrative report documenting the work performed in updating the IRWM Plan. Stakeholders will be given an opportunity to review the draft report. One hard copy and one electronic copy will be sent to the DWR for review and comments.

5.2.5.5.3 Subtask 5.3 - Final IRWM Plan Report.

The draft and final IRWM Plan updates will be submitted to DWR pursuant to their requirements.

5.3 Additional IRWM Plan Work

If there is work that will be performed in addition to the grant scope of work to produce a standards compliant IRWM Plan, applicants must give a brief description of the additional work. This description must include:

- *Short summary or listing of work to be completed*
- *Approximate timing of work to be completed including an anticipated finish date*
- *Anticipated funding source(s)*

The work described in this section along with the work described in the grant work plan must be consistent with the information in the Status of Meeting IRWM Plan Standards section so that reviewers understand how the applicant will arrive at a standards compliant IRWM Plan.

If no additional work is needed to arrive at a compliant IRWM Plan, the applicant should include a statement in the Work Plan Content section described above that clearly states, no additional work is needed to arrive at a standards compliant IRWM Plan.

5.3.1.1 Task 7 - KDWCD Updated Water Resource Investigation

KDWCD encompasses almost the entire IRWM Region. In 1972 and 2003, KDWCD conducted previous Water Resource Investigations that documented water balance conditions within subregions of KDWCD. The study entitled Updated Water Resources Investigation for KDWCD will add recent information to the base period and analysis in previous reports generated by Fugro West, Inc. (Fugro) on the water budget within KDWCD. This effort is funded by KDWCD and is expected to be accomplished by the end of 2013.

5.3.1.1.1 Subtask 7.1 - Data Compilation, Analysis and Base Period Selection.

KDWCD's geotechnical consultant, Fugro, will prepare annual groundwater level and potentiometric head contour maps and delineate groundwater flow direction. Contour maps depicting groundwater elevations, groundwater depths, and difference in groundwater elevation will be prepared. Trends in groundwater elevations will be presented as a series of hydrographs for key wells. Well logs, including all recently completed District dedicated and depth dependant monitoring wells will be reviewed relative to specific yield values used in the storage change calculations.

5.3.1.1.2 Subtask 7.2 - Groundwater Level Conditions and Storage Changes.

The water level data, various contour maps, and previously determined specific yield values will be used to estimate the seasonal changes of groundwater in storage for each of the six hydrologic units and for KDWCD as a whole. The annual storage will be tabulated and current storage conditions compared to prior periods. Developed information will include an analysis

and tabulation of subsurface inflow and outflow across KDWCD boundaries and hydrologic units for subsequent use in water budget.

5.3.1.1.3 Subtask 7.3 - Hydrologic Budget.

Water budgets will be prepared for each year between 2000 – 2008 by assessing each component of inflow and outflow from KDWCD, by hydrologic unit, and calculate annual changes of groundwater in storage for the period of 2000 – 2008 using the inventory method. Water demand for urban uses will be based on municipal water purveyor records. Water demands for non-urban residential and rural lands will be base on water duty factors and land use information. Agricultural water demand will be based on an analysis of land use, crop type, assumed or actual irrigation efficiency, and CIMIS data. DWR land use maps will be digitized with straight line interpolation of crop type and acreage between earlier surveys.

5.3.1.1.4 Subtask 7.4 – Safe Yield Determination and Final Report.

From the previous analysis and tabulations, the annual hydrologic unit water balances for 2000-2008 will be calculated and annual changes of groundwater in storage will be determined. In the final report findings and conclusions of a safe yield determination and appropriate recommendations will be provided.

5.3.1.2 Task 8 – Tulare County Groundwater Quality Study

This study is a general investigation of domestic groundwater quality throughout Tulare County and the development of a data management system to help organize the available information for entities that use this information to protect the resource. The IRWM Group will incorporate the analysis of groundwater quality within the Region from this study into the Region’s Data Management System and reference it under the Technical Analysis section of the IRWMP. This effort is funded by a grant from DWR and is anticipated to be accomplished by the end of 2013.

5.3.1.3 Task 9 – Southern Central Valley DAC Study

This effort is a large project that is studying the quality and availability of safe drinking water, and adequate wastewater systems for disadvantaged communities within the Tulare Lake Basin Region. It is anticipated there will be pilot projects and studies developed with recommendations for enabling the communities with a regional program to move forward with upgrades to physical water and wastewater facilities, as well as sustaining operations, funding, and governance of those facilities. This project requires coordination between the counties of Kings, Kern, Fresno and Tulare and numerous cities, communities and small districts located

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within this 16,414 square mile basin. This effort is funded by a grant from DWR and is anticipated to be accomplished by the end of 2013.