

Section A

Introduction

Section A - Introduction

This section describes the purpose of the Tule River Basin Integrated Regional Water Management Plan (IRWMP) and the regulatory guidelines that motivate the contents of the plan. This section describes how the IRWMP meets the 2016 California Department of Water Resources (DWR) Guidelines, and requirements for DWR approval.

A.1 Purpose of the IRWM Plan

The purpose of an Integrated Regional Water Management Plan (IRWMP) is to document and detail the approach of participants within a watershed as to their methodologies for coordinating and integrating management of available water resources. The IRWMP is to detail how an area's management methodologies will improve available water supplies, manage flood and drought related events, document existing water quality and methods to improve that water quality, conserve and enhance habitat and detail how efforts related to land use planning will be coordinated with water resources planning. In addition to providing written documentation of a region's water management goals and implementation procedures, the development of a written plan is in satisfaction of the requirements of funding programs which are designed to assist in the implementation of policies and projects seeking to improve water management.

One of the principal purposes of the IRWMP is to provide a flexible water management system which takes into account the ever changing hydrologic and governance parameters within the Tule River Basin. These changes not only include periodic significant changes in cropping patterns, but also changes in water quality objectives, agricultural to urban development trends and regulatory and environmental changes impacting the quantities of available surface and groundwater supplies.

A.2 IRWM Plan Benefits

Water is a critical resource that is essential to the activities of every person, industry, ecosystem, and agency. For this reason, effective water management is indispensable. IRWM planning contributes to effective water management by bridging gaps between industry and governing agencies to develop cohesive, mutually beneficial solutions. Development and Implementation of an IRWMP provides multiple benefits to a region.

- Identifies regional water resources problems from a variety of stakeholder groups
- Identifies strategies to address problems
- Encourages communication and collaboration between neighboring land use agencies
- Provides opportunities to develop diverse and integrated solutions to water resource problems
- Establishes monitoring plans to measure progress
- Makes a concerted effort to include the entire community in water resources planning, including Tribal and disadvantaged communities, through an inclusive planning process
- Is updated regularly to reflect new water management issues

A.3 2016 IRWM Grant Program Guidelines

The 2016 State Guidelines specify the requirements and the standards of review that must be included in the plan prior to the State’s acceptance and approval of the plan. The requirements under Proposition 1, the Water Quality, Supply, and Infrastructure Improvement Act of 2014, differ slightly from those in previous legislation. In addition to items required under previous legislation, Proposition 1 requires that an IRWMP address the following:

1. Region description
 - a. Climate Change Impacts on Region.
2. Plan Objectives
 - a. Adapting to changes in variability of runoff and recharge.
 - b. Consider effects of sea level rise.
 - c. Reducing energy consumption.
 - d. Consider strategies adopted by CARB in its AB 32 Scoping Plan to meet IRWM plan objectives.
 - e. Consider options for Carbon Sequestration and using renewable energy.
3. Resource Management Strategies
 - a. Update according to California Water Plan 2013 version including sediment management, Outreach and engagement, and water and culture.
 - b. Consider effects of climate change towards resources management strategies in the region.
4. Project Review Process
 - a. Further details in chapter on climate change adaption (Section O – Climate Change).
 - b. Reducing energy consumption and GHG emissions.
5. Plan Performance and Monitoring
 - a. Specific benefits to critical water issues for Native American Tribal communities.
 - b. Policies and procedures that promote adaptive management and adjustments to IRWM plan when deemed necessary.
6. Local Water Planning
 - a. Process to incorporate stormwater resources plans per Water Code § 10562 (b)(7)(i.e. SB985).
 - b. Incorporate management issues and climate change adaptation and mitigation strategies form local plans in to the IRWM Plan.
7. Local Land Use Planning
 - a. Information sharing and collaboration with regional land use planning.
8. Stakeholder Involvement
 - a. Outreach and opportunity to participate in the IRWM Plan. Specifically directed towards Native American Tribes.

9. Climate Change

- a. Vulnerability evaluation must be equivalent to vulnerability assessment in the Climate Change Handbook for Regional Water Planning, Section 4 and Appendix B.
- b. List of prioritized vulnerabilities including feasibility of RWMG to address the vulnerability.
- c. Adapting to changes in variability of runoff and recharge.
- d. Areas served by Sacramento-San Joaquin Delta of other costal aquifers must consider effects of seal level rise on water supply conditions and identify adaption measures.

A.3.1 Meeting the 2016 IRWM Plan Guideline Requirements

This document was developed in order to meet all requirements identified in the 2016 IRWMP State Guidelines. The sections of this document are intended to be highly integrated, thus the requirements are addressed in several sections throughout the document. However the following table (Table A-1) summarizes these requirements and identifies where they are most specifically addressed in the IRWMP.

Table A-1: Summary of IRWMP Requirements

	Requirement	Section	Page
Governance	RWMG Responsible for Development and Implementation of Plan.	B	B-2
	RWMG and Individual Project Proponents.	B	B-1
	IRWM Governance Structure. <ul style="list-style-type: none"> • Public Outreach and Involvement. • Effective decision making. • Access and Opportunity for participation in IRWM. • Effective Communication (internal and external). • Long term implementation of the IRWM Plan. • Coordination with neighboring IRWM groups and State/Federal agencies. • Collaborative Process to establish plan objectives. • Process for changes to IRWM Plan. • Updating or amending the IRWM Plan. 	B	B-2
Region Description	Watershed Description	C	C-4
	Internal boundaries	C	C-14, C-17
	Water Supplies and Demand (20 year min. planning horizon)	D	D-13
	Current and future water quality conditions.	C	C-18
	Social and cultural makeup of region.	C	C-28
	Water related objectives and conflicts.	E	E-1, E-6
	IRWM regional boundary (explanation).	C	C-1
	Climate Change Impacts on Region.	O	O-3
Objectives	Describe process used to develop objectives	E	E-1

	Requirement	Section	Page
	RWMG's must consider the objectives in the appropriate basin plan or plans and strategies to meet applicable water quality Standards	E	E-3, E-5
	Identify quantitative or qualitative metrics and measurable objectives	E	E-12
	Explain how objectives are prioritized or reason why objectives are not prioritized	E	E-14
	Adapting to changes in variability of runoff and recharge.	E	E-9
	Consider effects of sea level rise.	E	E-9
	Reducing energy consumption.	E	E-10, E-11
	Consider strategies adopted by CARB in its AB 32 Scoping Plan to meet IRWM plan objectives.	E	E-10, E-12
	Consider options for Carbon Sequestration and using renewable energy.	E,	E-9 – E-11
Resource Management Strategies	Identify RMS incorporated in the IRWM Plan: Consider all California Water Plan RMS Criteria.		F-1 – F-22
	Demonstrate effects of climate change factor in to resource management.	F	F-3 – F-22
	Reducing energy consumption.	F	F-7 – F-8
	Update according to California Water Plan 2013 version including sediment management, Outreach and engagement, and water and culture.	F	F-11, F-12, F-21
	Address which RMS will be implemented in achieving IRWM Plan Objectives	F	F-23
Integration	Process to develop and foster integration.		
Project Review Process	Procedures for submitting a project to the RWMG.	G	G-2
	Procedures for reviewing projects to include in the IRWM Plan. <ul style="list-style-type: none"> • How Project contributes to IRWM plan objectives. • How project is related to resource management strategies. • Technical feasibility of project. • Specific Benefits to Disadvantaged Communities (DAC) water issues (water supply or quality). • Environmental justice (EJ) considerations. • Project costs and financing. • Economic feasibility. • Project Status. • Strategic considerations for IRWM Plan Implementation. • Contribution of project to effects of climate change. • Contribution of project to reducing CHG emissions. • Whether project proponent has adopted IRWM Plan. 	G, Appendix H	G-1 – G-4

	Requirement	Section	Page
	<ul style="list-style-type: none"> How project will reduce reliance on Sacramento- San Joaquin Water Supply (if applicable). 		
	<p>Climate Change Considerations</p> <ul style="list-style-type: none"> Effects of climate change on region/ whether adaptations to water management system are necessary. Contribution of project to adapting to identified system vulnerabilities to climate change effects on region. Changes in amount, intensity, timing, quality, and variability of runoff and recharge. Effects of SLR on water supply conditions, identify suitable adaptation measures. Contribution of project to reducing GHG emissions compared to project alternatives. Projects ability to reduce GHG emissions to IRWM Region over 20 year plan horizon. Reduce energy consumption (especially energy embedded in water use). 	G, Appendix H	G-5
	Procedures for displaying list of approved projects.	G	G-6
Impact and Benefit	<p>Discussion of potential impacts and benefits of Plan implementation.</p> <ul style="list-style-type: none"> Within IRWM Region. Between IRWM Region. To DAC, EJ concerns, and Native American Tribal communities. 	H	H-1 – H-6
Plan Performance and Monitoring	IRWM plan performance measures.	I	I-2
	Monitoring Methods of RWMG’s ability to meet objectives/ implement projects in IRWM plan.	I	I-2
	Specific benefits to critical water issues for Native American Tribal communities.	I	I-4
	Policies and procedures that promote adaptive management and adjustments to IRWM plan when deemed necessary.	I	I-1
Data Management	Process of data collection, storage, and dissemination to participants, stakeholders, public, and the state.	J	J-2 – J-8
Finance	Plan for financing/ implementation of identified projects and programs.	K	K-1
	<p>Financing for implementation of IRWM Plan.</p> <ul style="list-style-type: none"> List of known and potential funding sources, programs, grant opportunities. List of funding mechanisms including; water enterprise funds, rate structures, and private financing options for IRWM plan projects 	K	K-1 – K-4

	Requirement	Section	Page
	<ul style="list-style-type: none"> How operation and maintenance costs for IRWM Plan projects will be paid for. 		
Technical Analysis	Documentation of data/ technical analysis used in development of the plan.	L	L-1
Relation to Local Water Planning	Discuss how IRWM Plan relates to planning documents and programs established by local agencies.	M	M-3
	Dynamics between IRWM Plan and local planning documents.	M	M-3
	Incorporation of water management issues and climate change adaption and mitigation strategies from local plans into the IRWM Plan.	M	M-6
	Process to incorporate stormwater resources plans per Water Code § 10562 (b)(7)(i.e. SB985).	M	M-5
Relation to Local Land Use Planning	Relationship between local land use planning, regional water issues, and water management objectives.	M	M-1
	Plan for collaborative relationship between land use planners and water managers.	M	M-1
	Demonstrate information sharing and collaboration with regional land use planning in order to manage multiple water demands throughout the state, adapt water management systems to climate change, and potentially offset climate change impacts to water supply in California.	N	N-6
	Information sharing and collaboration with regional land use planning.	N	N-3
Stakeholder Involvement	Public Outreach process to promote participation in IRWM Plan development and implementation with stakeholders/ agencies including the following: <ul style="list-style-type: none"> Native American Tribes Wholesale and retail water purveyors Wastewater agencies Flood control agencies Municipal and county governments and special districts Electrical corporations Self-supplied water users Environmental stewardship organizations community organizations Industrial organizations State, federal, and regional agencies or universities DAC members 	N	N-2
	Process to identify, inform, invite, and involve stakeholder groups in the IRWM process.	B	B-3
	How RWMG will endeavor to involve DACs in the IRWM planning effort.	N	N-2

	Requirement	Section	Page
	Decision making process including IRWM committees, roles, or positions that stakeholders can occupy.	B	B-3
	Necessity of stakeholder involvement to address objectives and resources management strategies of the IRWM plan.	N	N-1
	Discussion on Collaborative process of groups listed above in IRWM Process.	B	N-1 – N-7
	Outreach and opportunity to participate in the IRWM Plan. Specifically directed towards Native American Tribes.	N	N-3
Coordination	Process to coordinate water management projects and activates of participation local agencies and local stakeholders to avoid conflicts and promote efficiencies.	N	N-1
	Cooperation and coordination with neighboring IRWM Group efforts to address conflicts or similar goals.	N	N-3
	Identification of areas where a State agency or other may be able to assist in communication, cooperation, or implementation of IRWM Plan components, processes, and projects or where State or federal regulatory decisions are required before implementing the projects.	N	N-5
Climate Change	Address adaption to effects of climate change	O	O-14
	Mitigation of GHG emissions	E, G, P	O-16
	Address climate change in multiple various IRWM Plan components along with general discussion	O	O-1–O-16
	Vulnerability evaluation must be equivalent to vulnerability assessment in the Climate Change Handbook for Regional Water Planning, Section 4 and A	O	O-7
	List of prioritized vulnerabilities including feasibility of RWMG to address the vulnerability.	O	O-13
	Adapting to changes in variability of runoff and recharge.	O	O-14
	Areas served by Sacramento-San Joaquin Delta or other costal aquifers must consider effects of sea level rise on water supply conditions and identify adaption measures.	O	O-6, O-15

A.3.2 Addressing Comments from 2015 IRWMP Submission.

A previous IRWMP was submitted in November of 2015 for this IRWM planning area. It was found that the plan was consistent with the 2012 IRWMP Guidelines, however it was inconsistent with the new 2016 IRWM Guidelines. This document aims to improve upon the previous IRWMP submission and comply with all applicable legislation regarding regional water management planning.

A number of comments were made by the California Department of Water Resources during the previous IRWMP review process which identified the document’s shortcomings. The following table iterates these comments, summarizes how they are addressed in the document, and identifies where they are addressed.

Table A-2: Summary of Improvement from Previous IRWMP Submission

DWR Comment	How Comment is Addressed	Section	Page
No description in the IRWM plan to reduce dependence on the Delta supply regionally was found.	Section D – Water Supply, Demand, and Water Budget identifies ways to reduce dependence on the Delta, including conjunctive use practices, expanding surface water storage, and expanding policies to promote efficient water use. This is also discussed in Section C, which describes how IRWMP objectives support efforts to reduce dependence on the Delta.	C, D	C-13, D-16
A 20-year analysis of the regions water supply and demand was not presented.	Regional water supplies and demands were predicted through 2040. This analysis was based on predicted population growth, crop trends, and climate change impacts.	D	D-13
No information was found regarding cultural makeup and there is no text regarding tribal community’s water challenges. However, there is a description of the rural and disadvantaged communities and their water supply challenges.	The cultural, social, and economic profile of the is discussed in Section C – Region Description. The Agricultural, Latino, and Tribal communities were found to be the most distinguishing cultural influences within the planning area. The Section also describes each group’s primary goals and challenges related to water.	C	28
Impacts and benefits to tribes were not found in the IRWM plan. The only tribal reference is the Santa Rosa Tachi Tribe as a member of the IRWMP Stakeholders Advisory group.	The process by which projects will be evaluated based on their benefits and impacts to tribal communities is described in section H – Benefits and Impacts.	H	H-6
Information regarding QA/QC measures was not found in the IRWM plan.	Quality Assurance and Quality Control Measures were developed to increase consistency regarding data management and collection.	J	J-7
No information on the certainty and longevity of the plan was found.	The certainty and longevity of program-level and project-level funding sources is evaluated in Section K – Financing Strategies.	K	K-1 - K-3
No explanation of how O&M will be covered was found. O&M is listed as an item in the minimum project monitoring element list.	Project proponents are required to identify funding opportunities for project operation and maintenance costs as a part of the project Monitoring and Reporting Plan.	I	I-5

A.4 Point of Contact

Questions and comments on this IRWM Plan can be directed to:

David Duda, AICP
(805) 904-4394
david.duda@4-creeks.com

David De Groot, PE
(559) 802-3052
davidd@4-creeks.com

Molly McDonnel, Assistant Planner
(805) 904-4394
mollym@4-creeks.com

4-Creeks, Inc.
P.O. Box 7593
Visalia, CA 93291