

**Madera Region IRWMP
Attachment 6 – Program Preferences**

PROGRAM PREFERENCES

Following is a discussion on how the updated IRWMP will satisfy the California Program Preferences as listed in the Planning Grant Proposal Solicitation Package and described in Proposition 84 and 1E Integrated Regional Water Management Guidelines (August 2010). The updated IRWMP will satisfy all 15 Program Preferences. **Table 6.1** shows where each Program Preference will be addressed in the updated IRWMP.

Table 6.1 – Locations of Program Preferences in Updated IRWMP

No.	Program Preference	Ch. 1 - Introduction	Ch. 2 - Governance	Ch. 3 - Region Description	Ch. 4 - DACs	Ch. 5 - Goals and Objectives	Ch. 6 - Resources Mang.	Ch. 7 - Project Review	Ch. 8 - Impacts and Benefits	Ch. 9 - Monitoring	Ch. 10 - Data Management	Ch. 11 - Financing	Ch. 12 - Technical Analysis	Ch. 13 - Local Planning	Ch. 14 - Stakeholder Inv.	Ch. 15 - Climate Change	Appendix H - Project List
1	Regional Project/Programs		•		•	•		•		•	•				•		•
2	Defined Hydrologic Region			•											•		
3	Resolve Water Conflicts		•		•	•	•		•		•			•	•		
4	Bay-Delta Program Objectives						•										
5	Disadvantaged Communities			•	•	•		•				•			•		
6	Integrate Water/Land Use Planning					•	•			•				•	•		•
7	Stormwater Planning					•	•	•						•		•	
8	Drought Preparedness			•		•	•		•	•			•			•	•
9	Water Efficiency					•	•		•	•							•
10	Climate Change Response					•	•	•		•			•			•	
11	Environmental Stewardship					•	•	•	•								•
12	Integrated Flood Management			•		•	•			•							•
13	Protect Water Quality			•		•	•			•	•						
14	Improve Tribal Resources			•	•	•			•						•		
15	Equitable Distribution of Benefits		•		•	•		•							•		

1. Include regional projects or programs

The updated IRWMP will include a strong focus on developing regional projects and programs. The RWMG is already engaged in several regional projects funded with an IRWMP implementation grant awarded in 2011, and several regional water management programs such as the Madera County Water Advisory Committee and Madera-Chowchilla Basin Regional Groundwater Monitoring Group. The RWMG recognizes the value of regional projects and will incorporate them into the IRWMP as follows: 1) The new goals and objectives defined in Chapter 5 will address sub-goals and priorities needed to develop regional projects within the Madera Region and with neighboring IRWMPs; 2) the Project Review Process will be revised so that the regional nature of projects is an important factor in ranking projects; 3) Chapter 10 – Data

Madera Region IRWMP

Attachment 6 – Program Preferences

Management will evaluate the best options for a region-wide data collection and storage system; and 4) the RWMG will identify regional projects through stakeholder outreach efforts including monthly IRWMP meetings, IRWMP Update Committee Meetings, newsletters, the IRWMP website, and outreach to DACs and Native American tribes.

2. Effectively integrate water management programs and projects within a hydrologic boundary identified in the California Water Plan, RWQCB region, or DWR.

The Existing IRWMP covers the entirety of Madera County. This boundary was selected by the local stakeholders and was accepted as an IRWMP region through the DWR Region Acceptance Process on June 6, 2011. The IRWMP boundary has a firm hydrologic basis according to the following:

- On the Valley floor, the region is surrounded on the south and west by the San Joaquin River and on the north by the Chowchilla River. These rivers create natural hydrologic boundaries that form a distinct groundwater system. This area comprises the entirety of the Madera Groundwater sub-basin and portions of the Chowchilla and Westside Groundwater sub-basins. These three groundwater basins are all within the larger San Joaquin Valley Groundwater Basin.
- The upper reaches of the Plan area include watersheds of the Fresno, San Joaquin and Chowchilla Rivers, the three main surface water sources in the Region.
- The Region has been divided into two main study regions in recognition of the hydrogeologic differences. The relatively flat-lying western third of the Region, which overlies the San Joaquin Groundwater Basin, is referred to as the Valley Floor. The eastern two-thirds of the Region, located in the foothills and mountains of the Sierra Nevada, is referred to as the Foothills and Mountains. Although there are hydrogeologic differences between the two regions, there are opportunities to develop projects, programs, and policies that will improve water supply reliability with mutual benefit to both. Since water management in the upper watershed impacts water quality and quantity in the lower watershed, there is a recognized benefit to contiguous inclusion and regional management of the two regions. The IRWMP boundary recognizes and addresses the hydrological and political connections between the two.

Additional justifications for selecting the County boundary as the RWMG boundary include the following:

- Madera County is the largest member of the RWMG and often takes a lead role in regional water management programs.
- The water agencies represented in the IRWMP have been interacting with each other and Madera County for many years and have already addressed many

serious policy issues. These pre-existing relationships and policy discussions can be leveraged by the RWMG.

- All of the Plan area falls within a single region of the State Water Quality Control Board (Central Valley Region or Region 5F).

3. Effectively resolve significant water-related conflicts within or between regions.

The IRWMP update process will be an important tool for resolving water-related conflicts. The region does not currently have major water conflicts, but recognizes the need to prevent or be prepared to address major conflicts in the future. For instance, this could be accomplished by examining the impact of upstream activities on downstream water supply. Some activities could include meadow restoration to preserve extended run-off periods and vegetation management to decrease evapotranspiration and increase useable water. These and other topics will be addressed in Chapter 5 – Goals and Objectives, Chapter 6 – Resource Management Strategies, and Chapter 13 – Relation to Local Water and Land Use Planning. The updated IRWMP will also provide a governance structure for resolving water related conflicts (Chapter 2). Pertinent sections in Chapter 2 will cover conflict resolution, decision making, equal opportunity for participation, and coordinating with neighboring IRWMPs. Coordination between RWMG regions is already taking place. The RWMG has signed MOUs with six neighboring RWMG groups including the Southern Sierra, Yosemite/Mariposa, Merced, Inyo-Mono, Westside-San Joaquin, and Kings Basin RWMGs. These MOUs set a firm foundation for future cooperation and efforts to resolve inter-regional water conflicts. These relationships will be further developed during the IRWMP update process.

4. Contribute to attainment of one or more of the objectives of the CALFED Bay-Delta Program.

The four CALFED Bay-Delta objectives include: Water Quality, Levee Integrity, Water Supply Reliability and Ecosystem Restoration. The Region meets their local water demands exclusively with local water supplies, and does not impose any demand on Delta water or Delta conveyance capacity.

5. Address critical water supply or water quality needs of disadvantaged communities within the region.

The updated IRWMP will include a renewed and more focused effort to engage and support disadvantaged communities (DACs). Specific issues addressed in DACs will include critical water supply needs, out-of-date and/or poorly performing water supply infrastructure, water quality, water treatment facilities, and upstream water quality. This will be accomplished through the following:

Madera Region IRWMP

Attachment 6 – Program Preferences

- A new IRWMP chapter devoted entirely to DACs (Chapter 4)
- Preparation of a DAC Outreach Plan
- Special DAC outreach meetings led by a professional facilitator
- Prioritization of local DACs based on income and water related problems
- Stakeholder Involvement (Chapter 14)
- Engagement of NGOs whose mission is to assist DACs

Please refer to the later section entitled 'Disadvantaged Communities' for a detailed discussion on these programs.

6. Effectively integrate water management with land use planning.

The updated IRWMP will include a chapter devoted exclusively to integrating water management and land use planning (Chapter 13). These are two separate standards in the IRWMP guidelines, but will be combined in this Plan to allow for a multidisciplinary and integrated approach to long-term planning throughout the Region. Water and land use planners often do not coordinate efforts, leading to conflicts and less-than-optimal management of land and water resources. In the Madera Region, land use planning in the upper watershed is especially important since it impacts water quality in the lower watershed where most of the population and water demands are located. The chapter on land and water use planning will include: 1) An updated list of local land use and water plans; 2) The relationship between the IRWMP and local planning documents; and 3) Possible future collaborations between land use and water planners.

7. Integrate Stormwater Resource Plan requirements into the IRWMP.

The RWMG supports the Stormwater Resource Planning Act as described in Water Code Section 10560-10564. This act views stormwater as a resource rather than a nuisance. The existing plan includes an entire chapter devoted to stormwater and flood control (Chapter 7). The IRWMP update will describe the Stormwater Resource Planning Act, and describe local stormwater management plans. The IRWMP will also promote a multi-disciplinary approach to stormwater management that includes augmenting water supply, preventing floods, mitigating stormwater pollution, creating green space, and enhancing wildlife habitat. In addition, stormwater will be addressed in several resource management strategies (discussed in Chapter 6) including urban runoff management, pollution prevention, flood risk management, and ecosystem restoration. Lastly, Chapter 15 – Climate Change, will address how climate change may reduce snowmelt and modify stormwater timing and volumes.

8. Drought preparedness.

Drought preparedness will be a cardinal component of the updated IRWMP. Most new water projects in the area are focused on dry-year water supplies or increasing resiliency to droughts. This will remain a main focus of the RWMG for the foreseeable future. Several drought preparedness strategies will be addressed including water conservation, groundwater banking, backup water supplies, water transfers, system inerties, and meadow restoration. Chapter 3 - Region Description will be updated to include more information on historical droughts, current drought contingency plans, and resiliency to droughts. Drought Preparedness will also be a primary consideration in revising the RWMG's goals and objectives in Chapter 5. The benefits of developing drought response measures will be discussed in detail in Chapter 8 - Impacts and Benefits of Plan Implementation. Climate change can also impact the frequency and severity of droughts. As a result, the region's vulnerability, adaptation, and resiliency to climate-change induced droughts will be discussed (Chapter 15).

9. Use and Reuse Water More Efficiently.

The efficient use of water is important to the Madera Region since they have a finite water supply. The region uses both urban and agricultural water, and maintaining high efficiencies in both water use sectors is critical given the that the aquifer underlying the Valley region has been declining for decades. The existing IRWMP discusses water use efficiency in Section 8.1.2 - Water Demand Reduction Measures. This topic will also be addressed in several sections of the updated IRWMP. Chapter 6 - Resource Management Strategies, will discuss agricultural water use efficiency, urban water use efficiency, water conservation, low-impact development, stormwater re-use, and recycled water. Chapter 8 – Impacts and Benefits, will discuss the regional benefits from improving water use efficiency. Lastly, Chapter 9 – Plan Performance and Monitoring, will outline a plan to monitor and evaluate changes in water use efficiency.

10. Climate Change Response Actions.

Climate change is an emerging science. The RWMG recognizes the need to gain a better understanding of its potential impacts and, more importantly, how the Region can adapt to potential changes in climate. This is especially important since the Region's water supplies, and much of the Region's natural groundwater recharge, originate in mountainous terrain. The updated IRWMP will include a new chapter devoted entirely to climate change impacts, adaptation, and resiliency (Chapter 15). To assist with these efforts the RWMG will retain Dr. Roger Bales, a noted climate change and mountain hydrology expert from the University of California at Merced. Dr. Bales has performed research on local climate change in the Sierra Nevada Mountains, and has assisted other regional water management groups. Further, the climate change analysis will be primarily based on DWR's *Climate Change Handbook for Regional Water Planning* published in November 2011. Other relevant documents in the DWR Climate Change Clearinghouse will also be review.

Madera Region IRWMP

Attachment 6 – Program Preferences

Several other sections in the updated IRWMP will also address climate change, including:

- Chapter 5 – Goals and Objectives, will evaluate how each goal and objective in the updated Plan could be affected by climate change, and how each fits into the overall AB 32 strategy for greenhouse gas reduction.
- Chapter 6 – Resource Management Strategies, will consider the impacts of climate change on the effectiveness of water management strategies, and will also promote strategies that reduce energy consumption (i.e. increasing water use efficiency or using recycled water); and
- Chapter 7 – Project Review Process, will consider greenhouse gas emissions in the revised project review process.

Since climate change is an evolving science, the updated IRWMP will include a flexible and adaptable approach that can be modified based on the results of new research, publications, or guidelines.

11. Expand Environmental Stewardship

Environmental stewardship is important for the RWMG because much of the Region includes wildland watersheds that are the ultimate source of most of the area's surface and groundwater. Topics that will be added or expanded include meadow restoration to regulate flows, forest land management, forest fire management, invasive vegetation control, and enhancement of floodplains, streams, and wetlands. Watershed management is already discussed in section 9.1.6 of the existing IRWMP. In addition, the Region is already implementing watershed management and invasive vegetation projects through an IRWMP Implementation grant and plans to identify other similar projects in the updated Plan. Environmental stewardship will also be an important factor in evaluating Resource Management Strategies (Chapter 6) and in the new Project Review Process (Chapter 7).

12. Practice Integrated Flood Management

Integrated Flood Management (IFM) involves a shift from the traditional, fragmented, localized approach of flood management and encourages a regional approach across an entire river basin. The RWMG has already practiced IFM, but will further promote it in the IRWMP. Flood control is an important issue in the Region and the existing IRWMP includes an entire chapter devoted to the topic. Chapter 7 – Flood Control Planning, discusses current flood control programs, flooding problems, and potential programs and projects. These discussions will be expanded to address integrated, regional management of flood waters. The Plan will promote flood control projects that provide multiple benefits including, but not limited to, water quality improvements, ecosystem benefits, reduction of in-stream erosion and sedimentation, and groundwater

recharge. Integrated flood management will also be discussed as one of the Resource Management Strategies (Chapter 6) and considered in the Goals and Objectives (Chapter 5). The potential impacts of climate change on the frequency, duration and magnitude of flooding will also be evaluated in Chapter 15 – Climate Change.

13. Protect Surface Water and Groundwater Quality

Protecting both surface and groundwater quality is a principal goal for the RWMG since they have finite water supplies. The RWMG plans to address potential threats to water quality, public health, environmental health, and agricultural productivity by developing safeguards and protective mechanisms. This topic is discussed in several areas of the existing IRWMP, which includes an entire chapter devoted to water quality (Chapter 6). Specific topics include wastewater effluent, failing septic systems, legacy pesticides, watershed management, stormwater management and agricultural drainage management. The existing IRWMP also discusses water quality improvement opportunities (Section 8.3). This section will be reviewed, updated, and incorporated into the new section on Resource Management Strategies (Chapter 6). Salt/nutrient management plans will also be discussed in Chapter 6. The new IRWMP will also include metrics for monitoring water quality (Chapter 9).

14. Improve Tribal Water and Natural Resources

The updated IRWMP will include a focused effort to engage local tribes in the RWMG. There are two federally-recognized Indian Tribal Reservations, or Rancherias, in the Region: Picayune Rancheria of the Chukchansi Tribe and the North Fork Mono Rancheria of the Mono Tribe. The Mono Tribe is already an RWMG member. The Chukchansi tribe will be directly contacted and encouraged to join the RWMG. In addition, each tribe has a Tribal Conservation District which aim to conserve, enhance, and encourage the wise use of natural resources on tribal lands. These Districts are separate entities that will also be encouraged to join the RWMG.

Several RWMG members have already worked on projects with one of the Tribal Conservation Districts. As part of Chapter 14 – Stakeholder Involvement, the Chukchansi Tribe and the two Tribal Conservation Districts will be directly contacted and invited to participate in the RWMG. In addition, their water resources, natural resources and water management challenges will be documented in Chapter 3 – Region Description. Lastly, they will be invited to submit projects to the RWMG's project list for funding consideration.

15. Ensure Equitable Distribution of Benefits

The updated IRWMP will include several measures to help ensure the equitable distribution of benefits throughout the Region. This will first be accomplished by

Madera Region IRWMP Attachment 6 – Program Preferences

increasing the participation of DACs, Severely Disadvantaged Communities (SDACs), tribal communities, and other stakeholders that have not previously participated in the RWMG. This will be achieved through newsletters, the IRWMP website, RWMG meetings, committee meetings, and direct contact with stakeholders. Although public outreach will have a special focus on DACs, no groups will be ignored, and all potential stakeholders in the region will be considered important. This topic will also be addressed in the Chapter 2 - Governance, through discussions on decision making and communication. The Project Review Process in Chapter 7 will be revised so that it provides an equitable method for indentifying which projects should be funded. Lastly, Chapter 8 – Impacts and Benefits, will first identify the benefits of plan implementation and then evaluate the anticipated distribution of the benefits to the different types of stakeholders.