







# SECTION 1

Introduction

ARB Region

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Sacramento

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## **1. INTRODUCTION**

The California Department of Water Resources (DWR) broadly defines integrated water management as "...a philosophy and practice of coordinating the management of water and related resources for the purpose of maximizing economic and societal benefits while maintaining the sustainability of vital ecosystems" (DWR 2012d). An Integrated Regional Water Management Plan (IRWMP), then, is the application of this concept within a region with a breadth and focus defined locally by stakeholders. The stakeholders identify major water and related resource management issues, develop goals and objectives for addressing these issues and, ultimately, implement projects that help meet these goals and objectives. The stakeholders would also monitor and evaluate the region's progress in meeting those goals and objectives set in their IRWMP. For the past two decades, stakeholders dependent on the natural resources of the greater Sacramento region have been engaged in planning and implementing regional plans and projects to meet water supply demands and protect our environment. This 2013 update of the 2006 American River Basin (ARB) IRWMP represents the latest iteration of our ongoing effort to achieve this balance between sustainable water resources and related ecosystems.

## 1.1. Background and Purpose

The greater Sacramento region has long recognized the need to better integrate water resources planning and development with consideration of protection of the natural environment. For decades, attempts to further develop water resources on the lower American River resulted in divisive litigation. In 1993, a diverse group of stakeholders recognized the need for regional solutions and began discussions to address long-term reliable water supplies for urban, agricultural, environmental, and recreational water needs. Following a nearly 7-year facilitated effort, the Water Forum Agreement (WFA) was signed in April 2000. The WFA serves as the foundation of regional integrated planning and has more than 40 signatories representing citizens groups, business interests, environmental groups, and public agencies. The WFA includes seven integrated management elements needed to meet the co-equal objectives of: (1) providing a reliable water supply for planned development to the year 2030, and (2) protecting and preserving the lower American River (from Folsom Dam to the confluence with the Sacramento River).

In July 2001, water suppliers in the greater Sacramento region formed the Regional Water Authority (RWA) as a joint powers authority, in part, to help implement elements of the WFA on a regional basis. In April 2004, RWA began an effort to develop an IRWMP, which resulted in the May 2006 adoption of the first ARB IRWMP. RWA has continued to improve and refine the elements in the 2006 ARB IRWMP and associated tools used to analyze regional management issues with support from DWR under

#### History Leading to the 2013 ARB IRWMP Update



Proposition 50 and Proposition 84 planning grants, and from the U.S. Department of the Interior, Bureau of Reclamation, WaterSMART grant program.<sup>1</sup> In November 2009, RWA held the first of many stakeholder and work group meetings to officially begin the process of updating this 2013 version of the ARB IRWMP. This 2013 version relied on extensive stakeholder input to comprehensively revise and update the previous goals and objectives and adds many new stakeholder-derived considerations, such as vision and principles, to the IRWMP. During development of the 2013 ARB IRWMP, the breadth of stakeholders was expanded well beyond the original WFA. For example, stakeholders representing small watersheds in western Placer County and southern Sacramento County that were not part of the original Water Forum process have been active in the 2013 update effort.

The primary purpose of this 2013 ARB IRWMP is to present the most current understanding of major water resources-related management issues of the ARB Region and to document the vision, goals, objectives, and strategies to help address these issues. The ARB IRWMP is a "living document" that provides for flexibility and embraces adaptive management practices. In keeping with the living document concept, this ARB IRWMP identifies a process through which strategies, projects, and other plan components can evolve through time without the need for readopting the plan. A secondary purpose of this ARB IRWMP is to comply with IRWMP

<sup>1</sup> This was a 2010 System Optimization Grant award to San Juan Water District on behalf of the ARB Region.

standards set forth by DWR in the 2012 IRWMP Guidelines.

This comprehensive update to the 2006 ARB IRWMP includes the following new information:

- 1. Updates to all basic water-related, environmental, and socioeconomic data.
- 2. Development of vision and goals, principles, objectives, and strategies for meeting water resource management needs.
- 3. A summary of regional climate change vulnerabilities and adaptation measures.
- 4. Addressing issues associated with a reliable and safe water supply for disadvantaged communities.
- 5. Documentation of increasingly extensive stakeholder outreach, including the development of a Web-based interface to ensure ongoing collaboration and communication beyond plan adoption.
- 6. A comprehensively updated project prioritization method and project list.
- 7. Updated details on financing and implementation.

### 1.2. Document Organization

The 2013 ARB IRWMP is organized into the following sections:

- Section 1 Introduction. This section introduces the 2013 ARB IRWMP and details how it meets the DWR 2012 IRWMP Guidelines.
- Section 2 Region Description. This section describes the Region's institutional, water resources, and environmental setting. It also describes the Region's vulnerabilities to impacts of climate change as well as the adaptation and mitigation actions to those impacts. This section concludes with a description of the technical analysis used in developing this IRWMP.
- Section 3 Planning Coordination and Integration. This section describes the process by which RWA coordinates and interacts with its stakeholders, the public, and disadvantaged communities. This section also includes the IRWMP's relation to local water and land-use planning, neighboring planning efforts, and state of California and federal agencies.
- Section 4 IRWMP Governance. This section provides an overview of the Planning Forum, Advisory Committee, Management Committee, and RWA as the Regional Water Management Group. These elements of the governance structure evolved throughout the planning process. This section also explains the process of IRWMP adoption.

- Section 5 IRWMP Framework. This section describes how the 2013 ARB IRWMP was developed. It details the vision, goals, principles, objectives, and strategies that guide implementation. It also describes how implementation projects were identified and prioritized.
- Section 6 IRWMP Implementation. This section describes how the 2013 ARB IRWMP will be implemented, including options for financing, performance monitoring, and data management. It describes the potential impacts and benefits of implementation, and how the 2013 ARB IRWMP will be adopted and adapted to future situations.
- Section 7 References. This section lists the references used and cited throughout the IRWMP document.

### **1.3. IRWMP Standards**

**Table 1-1** lists the required components of an IRWMP (per DWR's 2012 Guidelines) and indicates the section(s) of the 2013 ARB IRWMP in which each component is addressed.

Description Location in 2013 A		Location in 2013 ARB IRWMP
Α.	Governance	
1.	Description of RWMG responsible for development and implementation of the plan.	Section 4.2.4
2.	The RWMG and individual project proponents who adopted the plan.	Section 4.3
3.	Description of IRWM governance structure.	Section 4.2
4	Description of how chosen governance addresses and ensures the following:	
4a.	Public outreach and involvement processes.	Sections 3.1, 4.2
4b.	Effective decision making.	Section 4.2
4c.	Balanced access and opportunity for participation in the IRWM process.	Sections 3.1, 4.2
4d.	Effective communication both internal and external to the IRWM region.	Sections 3, 4
4e.	Long-term implementation of the 2013 ARB IRWMP.	Sections 4.2.4, 6.6
4f.	Coordination with neighboring RWMG efforts and state and federal agencies.	Sections 3.5
4g.	Collaborative process used to establish 2013 ARB IRWMP objectives.	Sections 3.1, 5
4h.	How interim changes and formal changes to the 2013 ARB IRWMP will be performed.	Sections 5.6, 6.6
4i.	Process for updating or amending the 2013 ARB IRWMP.	Sections 5.6, 6.6

#### Table 1-1. Location of 2013 ARB IRWMP Components

	Description Description I 2013 ARB IRWMP Components (contd.) IRWMP		
В.	Region Description		
1.	Description of watersheds/water system.	Sections 2.6, 2.8	
2.	Description of internal boundaries within the region.	Section 2.2	
3.	Water supply and demand projections for a minimum 20-year planning horizon.	Section 2.9	
4.	Current and future water quality conditions.	Section 2.6	
5.	Description of the social and cultural makeup of the regional community and the identification of important cultural or social values.	Section 2.5.7	
6.	Description of economic conditions and important trends within the region.	Section 2.5	
7.	Description of major water-related objectives and conflicts.	Section 5	
8.	Explanation of how the IRWM regional boundary was determined.	Section 2.1	
9.	Identification of neighboring or overlapping IRWM regions.	Section 2.4	
10.	Explanation of how plan will help reduce dependence on the Sacramento-San Joaquin Delta for water supply.	Section 2.3	
C.	Objectives		
1.	Description of measureable regional planning objectives.	Sections 5.5, 5.6	
2.	Description of objective development process.	Sections 3.1, 5	
3.	Objective prioritization process.	Section 5.5	
D.	Resource Management Strategies		
1.	Description of RMS consideration process.	Section 5.6	
2.	Consideration of the effects of climate change in the RMS.	Section 5.6	
3.	Range of RMS considered to meet the IRWM objectives.	Section 5.6	
3.	Description of RMSs incorporated into 2013 ARB IRWMP.	Section 5.6	
E.	Integration		
1.	Description of stakeholder/institutional integration.	Section 3	
2.	Description of resource integration.	Sections 3.1, 5, 6.4	
3.	Project Implementation integration.	Sections 3.1, 5.7, 6.5	
F.	Project Review Process		
1.	Procedures for submitting a project to the RWMG.	Section 5.7	
2.	Procedures for review of projects considered for inclusion into the 2013 ARB IRWMP.	Section 5.7	
3.	Procedures for displaying the list of selected projects.	Section 5.7	

#### Table 1-1. Location of 2013 ARB IRWMP Components (contd.)

Table 1-1. Location of 2013 ARB IRWMP Components (contd.)		
	Description	Location in 2013 ARB IRWMP
G.	Impacts and Benefits	
1.	Discussion of potential impacts and benefits within the region from 2013 ARB IRWMP implementation.	Section 6.5
2.	Discussion of benefits and impacts between regions.	Section 6.5
3.	Impacts and benefits directly affecting disadvantaged communities.	Section 6.5
4.	Impacts and benefits directly affecting environmental justice concerns.	Section 6.5
5.	Impacts and benefits directly affecting Native American tribal communities.	Section 6.5
Н.	Plan Performance and Monitoring	
1.	Group(s) responsible for IRWM implementation evaluation.	Section 6.3
2.	Frequency of evaluating project implementation performance.	Section 6.3
3.	Tracking via DMS.	Sections 6.3, 6.4
4.	Description of process for using "lessons learned."	Sections 6.3, 6.6
5.	Responsibility for development of project-specific monitoring plans and activities.	Section 6.3
6.	Stage of project development that a project-specific monitoring plan will be prepared.	Section 6.3
7.	Typically required contents of a project-specific monitoring plan.	Section 6.3
I.	Data Management	
1.	Overview of data needs.	Section 6.4.1
2.	Description of typical data collection techniques.	Section 6.4.2
3.	Description of stakeholder data contributions to a DMS.	Section 6.4.2
4.	Entity responsible for maintaining data in the DMS.	Section 6.4.2
5.	Description of the validation or QA/QC measures.	Section 6.4.2
6.	Explanation of how data collected for project implementation will be transferred or shared between members of the RWMG and other interested parties.	Section 6.4.2
7.	Explanation of how the DMS supports the RWMG's efforts to share collected data.	Section 6.4.2
8.	An outline of how the data saved in the DMS will be distributed and remain compatible with state databases.	Section 6.4.2
J.	Finance	
1.	List of known, as well as, possible funding sources, programs, and grant opportunities for the development and ongoing funding of the IRWMP.	Section 6.1
2.	List of funding mechanisms for projects that implement the IRWMP.	Section 6.2
3.	Explanation of the certainty and longevity of known or potential funding for the IRWMP and projects.	Section 6.2
4.	Explanation of how O&M costs for projects that implement the IRWMP would be covered and the certainty of O&M funding.	Section 6.2

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	Table 1-1. Location of 2013 ARB IRWMP Components (contd.)		
	Description	Location in 2013 ARB IRWMP	
Κ.	Technical Analysis		
1.	Description of the technical information sources and data sets used to develop the water management needs in the IRWMP.	Section 2.11	
2.	Description of studies, models, or other technical methodologies used to analyze the technical information and data sets.	Section 2.11	
L.	Relation to Local Water Planning		
1.	List of local water plans used in the 2013 ARB IRWMP.	Section 3.2, Appendix F	
2.	Discussion of how the 2013 ARB IRWMP relates to planning documents and programs established by local agencies.	Section 3.2	
3.	Description of the dynamics between the IRWMP and local planning documents.	Section 3.2	
М.	M. Relation to Local Land-Use Planning		
1.	Description of current relationship between local land-use planning, regional water issues, and water management objectives.	Section 3.3	
2.	Description of future efforts to establish a proactive relationship between land use planning and water management.	Sections 3.3, 5.5	
Ν.	N. Stakeholder Involvement		
1.	Description of the public process that provides outreach and an opportunity to participate in IRWMP development and implementation to the appropriate local agencies and stakeholders.	Sections 3.1, 4.2	
2.	The process used to identify, inform, invite, and involve stakeholder groups in the IRWM process during development and implementation of the 2013 ARB IRWMP.	Sections 3.1, 4.2	
3.	A discussion on how the RWMG will identify and involve DACs and Native American tribal communities in the IRWM planning effort.	Section 3.1.3, Appendix E	
4.	Description of the decision making process, including IRWM committees, roles, or positions that stakeholders can occupy and how a stakeholder goes about participating in those committees, roles or positions, regardless of their ability to contribute financially to the IRWMP.	Sections 3.1, 4.2	
5.	Discussion regarding how stakeholders are necessary to address the objectives and resource management strategies of the IRWMP.	Sections 4.2, 5.5, 5.6	
6.	Discussion of how collaborative processes will engage a balance of interest groups in the IRWM process regardless of their ability to contribute financially to the IRWMP's development or implementation.	Section 3.1	

#### Table 1-1. Location of 2013 ARB IRWMP Components (contd.)

Description Location in 2013 AR		Location in 2013 ARB IRWMP
0.	Coordination	-
1.	Process for coordination of projects and activities with local participants and stakeholders.	Sections 3.1, 5.7
2.	Identification of neighboring IRWM efforts and description of coordination between efforts.	Section 3.4
3.	Discussion of any ongoing water management conflicts with adjacent IRWM efforts.	Section 3.4
4.	Discussion of state, federal, and local agencies important to the development of the IRWMP and implementation of projects.	Sections 3.1, 3.5
Ρ.	Climate Change	
1.	Discussion of the IRWM region's vulnerabilities to the effects of climate change.	Section 2.10, Appendix C
2.	Discussion of potential adaptation responses.	Section 2.10, Appendix C
3.	Process that considers GHG emissions when choosing between project alternatives.	Section 5.7.2
4.	List of prioritized vulnerabilities based on the vulnerability assessment and the IRWM's decision making process.	Section 2.10.1, Appendix C
5.	Description of plan for further data gathering and analysis.	Section 2.10

#### Table 1-1, Location of 2013 ARB IRWMP Components (contd.)

DAC = disadvantaged community DMS = data management system GHG = greenhouse gas

IRWM = Integrated Regional Water Management IRWMP = Integrated Regional Water Management Plan

NA = not applicable O&M = operation and maintenance QA/QC = quality assurance/quality control RMS = resource management strategy RWMG = Regional Water Management Group state = state of California