

## 6. IMPLEMENTATION

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*This section identifies specific actions, projects, and studies, ongoing or planned, by which the ARB IRWMP will be implemented. In doing so, this section: 1) identifies the responsible agencies; 2) identifies timelines for all active or planned projects, 3) identifies linkages between documents; 4) demonstrates economic and technical feasibility on a programmatic level; 5) identifies the current status of each element of the plan; and 6) identifies the institutional structure that will ensure successful implementation of the ARB IRWMP.*

### 6.1. Agencies Responsible for Implementation

The RWA/FRWA signed a program agreement with each participating agency for the development and implementation of the ARB IRWMP. Regular monthly meetings of the RWA, FRWA, group members and associate members, and consultants to develop the IRWMP will continue for coordinating the implementation of the ARB IRWMP as a Management Committee and Technical Working Group. Through these larger Management Committee and Technical Working Group meetings and smaller meetings between individual agencies, staff, and their consultants, specific implementable projects and programs are being identified and prioritized within the context of this IRWMP. The actions, projects and plans that are incorporated in the ARB IRWMP are described with the agency responsible for each project in **Section 4** and shown in **Table 6.1**.

### 6.2. Implementation Timelines

The ARB IRWMP will be implemented through short and long-term projects and programs designed to achieve the regional objectives described herein. The prioritization strategy in **Section 5** is used to stage the progression of the projects and programs identified in the ARB IRWMP. Through short- and long-term regional project implementation, the planning agencies will begin to achieve the regional objectives. The implementation schedule for each prioritized project and program in the ARB IRWMP is included in **Table 6.1**. Table 6.1 also includes the entity responsible for implementing a project or program.

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Table 6.1 Implementation Schedule

Projects and Programs	Responsible Entity(ies)	Project Start	Implementation Date
Habitat Conservation Plans (HCPs) -- Placer Legacy, Natomas Basin, South Sacramento	Various agencies	On-going	On-going
Water Efficient Landscape (WEL) Garden Program	Various water purveyors	On-going	On-going
Regional Water Authority American River Basin Conjunctive Use Program (ARBCUP)	Participating Water Purveyors	On-going	2007
Sacramento River Pioneer Reservoir Sites	SAFCA	On-going	Summer 2006
Capital Improvement Plans (CIPs)	Water Purveyors	On-going	On-going
IGSM Hydrologic Model Refinement	SGA, SCWA, SSCAWA	On-going	2006
Wellhead Treatment for Arsenic Removal	RLECWD	2007	2010
Western Placer County Groundwater Storage Study	PCWA	On-going	On-going
City of Roseville Dry Creek Corridor Plan	City of Roseville	On-going	On-going
Recycled Water Program Expansion	City of Roseville	On-going	2015
Dry Creek Project	City of Roseville	On-going	2008
Water Distribution Facilities - North Central Specific Plan Area	City of Roseville	On-going	2008
Western Placer County Groundwater Management Plan (Revision)	City of Roseville, PCWA, City of Lincoln	On-going	2006
PCWA Watershed Study	PCWA	On-going	2012
American River Water Supply Project	PCWA	On-going	2009
City of Roseville Water Recycling Program and Projects	City of Roseville	On-going	On-going
Foothill 2 Water Treatment Plant Construction Project	PCWA	On-going	2008
Zone 40 Groundwater Management Plan	SCWA	On-going	On-going
El Dorado Water and Power Authority Projects/Programs/Activities	El Dorado Water and Power Authority	On-going	On-going
Stone Lake Wildlife Refuge	Various local/regional agencies	On-going	On-going
Initial Fisheries and In-Stream Habitat (FISH) Management and Restoration Plan for the Lower American River	Water Forum Successor Effort	On-going	On-going
"Be Water Wise" Program	RWA, The Sacramento Bee	On-going	On-going
SGA Data Management System (DMS)	SGA	On-going	On-going
West Roseville Specific Plan (Annexation Area) - 4 Wells	City of Roseville	2006-2009	2007-2010
HP Well	City of Roseville	2008	2009
Del Webb Well	City of Roseville	2009	2010
Folsom Dam Outlet Modifications	U.S. Bureau of Reclamation, SAFCA, local sponsors	On-going	Undetermined (construction start may be 10+ years in future)
"Mr. Leaky"	RWA	On-going	On-going
Sacramento Stormwater Quality Partnership	County of Sacramento; Cities of Sacramento, Citrus Heights, Elk Grove, Folsom, Galt, and Rancho Cordova	On-going	On-going
Peterson Water Treatment Plant Improvements	SJWD	On-going	2010
Poppy Ridge Groundwater Treatment Plant	SCWA	On-going	2006
Water Agreement between SSWD and RLECWD	SSWD, RLECWD	On-going	On-going
Storage Tank	RLECWD	2005	2010
Regional Pipeline for Surface Water	RLECWD	2010	2015
Replace Existing Wells/Install New Wells	RLECWD	2006	2035
American River Parkway Plan	County of Sacramento	On-going	2006
East Bank Levee Widening Project at RM 78.1	SAFCA	On-going	Undetermined (may be 5+ years in future)

Table 6.1 (continued) Implementation Schedule

Projects and Programs	Responsible Entity(ies)	Project Start	Implementation Date
Pocket Area Levee Underseepage	SAFCA	On-going	Undetermined (may be 5+ years in future)
Meter Retrofitting Program & Activities (e.g., meter installation)	City of Roseville	On-going	2011
Meter Retrofitting Program & Activities (e.g., meter installation)	City of Sacramento	On-going	2011
Meter Retrofitting Program & Activities (e.g., meter installation)	PCWA	On-going	2011
South Sacramento Streams Group Levee Project	SAFCA	On-going	Undetermined (may be 5+ years in future)
SRCS&D Recycled Water Program Expansion - Delta Shores	SRCS&D, City of Sacramento	On-going	2008
Anatolia Groundwater Treatment Plant	SCWA	On-going	2008
Folsom Dam Mini-Raise	U.S. Army Corps of Engineers, SAFCA	On-going	2012
Bajamont Water Treatment Plant Expansion	CWD	On-going	September 2007
Bond Groundwater Treatment Plant	SCWA	On-going	2015
Pocket Area - Sacramento River Erosion Sites	SAFCA	On-going	Summer 2006
Carriage/Lauppe Transmission Main Project	CHWD	On-going	2011
Central Sacramento County Groundwater Management Plan	SCWA	On-going	On-going
Lincoln Recycled Water Distribution Pipeline Expansion - Western Placer County	City of Lincoln	2010	On-going
Stoneridge Zone 2 Storage Tank	City of Roseville	On-going	2009
West Roseville Specific Plan Storage Tank	City of Roseville	On-going	2008
Northeast Storage Tank	City of Roseville	On-going	2013
North Industrial Storage Tank	City of Roseville	On-going	2018
Rosemont Conjunctive Use Pipeline	City of Sacramento	On-going	August 2007
Vineyard-Florin Gap Conjunctive Use Pipeline	City of Sacramento	On-going	2009
Cosumnes and Mokelumne Rivers Floodplain Integrated Resources Management Plan	SSCAWA	December 2004	June 2007
Cosumnes River Fish Passage Project	SSCAWA	October 2003	July 2005
Cosumnes River Flow Augmentation Project	SCWA	On-going	Undetermined (may be 5+ years in future)
SSWD Demand Management Study	SSWD	On-going	Undetermined (may be 5+ years in future)
Cosumnes River Blvd. Transmission Main	City of Sacramento	On-going	2008
Panhandle Transmission Main	City of Sacramento	On-going	2010
Fairbairn Water Treatment Plant-Florin Connector (South Cross Tie)	City of Sacramento	On-going	2008
El Centro Transmission Main	City of Sacramento	On-going	2009
North Cross Tie	City of Sacramento	On-going	2010
South City Reservoir and Pump Station	City of Sacramento	On-going	2008
Fairbairn Intake Pump to serve City of Sacramento and SCWA Zone 40	City of Sacramento	On-going	2008
Recycled Water Program Storage Reservoir	EID	On-going	On-going
Ethan Way/Silica Avenue Conjunctive Use Pipeline	City of Sacramento	On-going	2009
City of Galt Wastewater Treatment Facilities Plan	City of Galt	On-going	On-going
Gardenland Flood Management, Habitat Restoration, and Recreation Project	SAFCA	On-going	September 2008
Sacramento River Water Reliability Study (SRWRS)	City of Sacramento, City of Roseville, SSWD, PCWA	On-going	2008
Laguna Creek Watershed Assessment	SCWA	On-going	On-going

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Table 6.1 (continued) Implementation Schedule

Projects and Programs	Responsible Entity(ies)	Project Start	Implementation Date
SGA Contaminant Committee	SGA	On-going	On-going
Mariposa/Madison Transmission Main Project	CHWD	On-going	2011
Memorandum of Agreement for the Management for Water and Environmental Resources Associated with the Lower Cosumnes River	SSCAWA	March 2005	On-going
Mesa Verde Groundwater Production Well	CHWD	On-going	2011
Mitchell Farms Blending and Storage Facility	CHWD	On-going	2011
City of Sacramento (POU) North Vineyard - Storage and Booster Pump	SCWA	On-going	2006-2011
American River Basin Cooperating Agencies (ARBCA) Regional Water Master Plan (RWMP)	Participating Water Purveyors	1998	On-going
Palm Avenue Blending and Storage Facility	CHWD	On-going	2011
TNC River Management and Conjunctive Management Opportunities of the Cosumnes River	TNC	July 2006	June 2009
Sacramento River Corridor Planning Forum	SAFCA	On-going	On-going
Franklin Groundwater Treatment Plant	SCWA	On-going	2008
Lincoln Recycled Water Distribution System Expansion - Southwest Placer County	City of Lincoln	On-going	May 2007
Wildhawk Groundwater Treatment Plant	SCWA	On-going	2006
Groundwater Production Well Project	SSWD	On-going	September 2008
Verner Storage Tank and Pump Station Project	SSWD	On-going	September 2008
Federal Groundwater Contamination Cleanup Efforts	Federal agencies (e.g., U.S. Air Force, U.S. EPA)	On-going	On-going
Eastern Sacramento County Replacement Water Supply Project	SCWA	On-going	2008
Freeport Regional Water Project	FRWA	On-going	November 2008
County of Sacramento Low Flow Drainage Project	County of Sacramento	On-going	August 2009
Big Horn Groundwater Treatment Plant	SCWA	On-going	2008
Groundwater Production Well Project	OVWC	On-going	2010
Fair Oaks Boulevard Groundwater Production Well	CHWD	On-going	2010
Old Auburn Road Groundwater Production Well	CHWD	On-going	2009
Woodcreek North Aquifer Storage and Recovery Project	City of Roseville	On-going	June 2007
Groundwater Production Well Improvement Project	OVWC, SJWD	On-going	April 2007
Cosumnes River Preserve Management Plan	TNC	May 2005	June 2007
Lower Sacramento Regional Project	SAFCA	On-going	On-going
River Corridor Management Plan	Water Forum Successor Effort	On-going	On-going
PCWA Water Supply Infrastructure Plan (WSIP)	PCWA	2002	On-going
RMCS D Water Recycling Program	RMCS D	On-going	On-going
Sacramento Stormwater Management Program & Activities	City of Sacramento, SCWA	On-going	On-going
Roseville/Citrus Heights Pipeline Interconnection	CHWD	On-going	2010
Roseville Water Treatment Plant Expansion	City of Roseville	On-going	December 2008
North Area Round Table	SAFCA	On-going	On-going
RWA Training Program	RWA	On-going	On-going
Sacramento Area Council of Governments (SACOG) Blueprint	SACOG	On-going	On-going
SRWRS Elverta Diversion	Various water purveyors and agencies/organizations	On-going	2012

Table 6.1 (continued) Implementation Schedule

Projects and Programs	Responsible Entity(ies)	Project Start	Implementation Date
SGA Groundwater Management Plan (GMP)	SGA	On-going	On-going
Sheldon Road Storage	SCWA	On-going	2020
South Sacramento County Basin Groundwater Management Plan	SSCAWA	On-going	December 2006
SRCSO Water Recycling Master Plan	SRCSO	On-going	2007
Water Forum Agreement (WFA) State of the River Report	Water Forum Successor Effort	2005	On-going
SSWD Water Resources Strategic Plan	SSWD	On-going	Undetermined (may be 2+ years in future)
Sunrise Douglas (Suncrest) Groundwater Treatment Plant	SCWA	On-going	2010
Lower American River Task Force	SAFCA	On-going	On-going
Twin Oaks Avenue Groundwater Production Well	CHWD	On-going	2011
Mayhew Drain Levee	SAFCA	On-going	Undetermined (may be 5+ years in future)
Vineyard Surface Water Treatment Plant	SCWA	On-going	2019
Water Accounting Framework	SGA	On-going	On-going
Water Forum Successor Effort	Water Forum Successor Effort	On-going	On-going
Water Purveyor Implementation of Best Management Practices (BMPs)	Water Forum Successor Effort, Water Purveyors	On-going	On-going
Water Loss Reduction Project	EID	On-going	On-going
RWA Water Efficiency Program (WEP)	RWA	On-going	On-going
Laguna Ridge (Whitelock) Groundwater Treatment Plant	SCWA	On-going	2012
North Delta Flood Control Studies	SAFCA	On-going	Undetermined (may be 5+ years in future)
PCWA Federal Energy Regulatory Commission Re-Licensing	PCWA	On-going	2013
PCWA East Loomis Basin Project	PCWA	On-going	2007
The Lower American River Habitat Management Plan	Water Forum Successor Effort	On-going	On-going
EID Water Recycling Program	EID	On-going	On-going
Aquifer Storage and Recovery (ASR) -- City of Roseville	City of Roseville	On-going	On-going
Woodcreek West Aquifer Storage and Recovery Project	City of Roseville	2007	2009
Mission Avenue Pipeline Interconnection - Sacramento Suburban	CWD	On-going	2009
Cosumnes River Watershed Inventory and Assessment	Sloughhouse Resource Conservation District and Cosumnes River Task Force	On-going	On-going
Groundwater Monitoring Wells for Contaminant Plume Containment	CWD	On-going	2008
PCWA/SSWD Pipeline Interconnection	PCWA	On-going	2010
Sunset Industrial Area Groundwater Supply Improvements	PCWA	On-going	July 2007
East Elk Grove Groundwater Treatment Plant	SCWA	On-going	2008
Indian River/Flaming Arrow Conjunctive Use Pipeline	SSWD	On-going	2009
Rio Linda/Elverta Groundwater Recharge Project	RLECWD	On-going	2008
SRCSO Water Recycling Betterment and Expansion Project (Phase II Project & Bartley Cavanaugh Golf Course)	SRCSO, City of Sacramento	On-going	May 2009
Mayhew Floodplain Environmental Enhancement Project	SAFCA	On-going	Undetermined (may be 5+ years in future)
Mission Avenue Pipeline Interconnection - Citrus Heights	CWD	On-going	2009
Sacramento County Stormwater Quality Program, 2003 Stormwater Quality Improvement Plan, & Activities	County of Sacramento	On-going	On-going

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Table 6.1 (continued) Implementation Schedule

Projects and Programs	Responsible Entity(ies)	Project Start	Implementation Date
Urban Water Management Plans (UWMPs)	Water Purveyors	On-going	Years ending in 5 and 0
Water Supply Master Plans	Water Purveyors	On-going	On-going
Zone 50 Infrastructure	SCWA	On-going	2009
Steelhead Creek Wetland Improvement Project	SAFCA	On-going	2009
City of Folsom Sphere of Influence Water Supply Investigation	City of Folsom	On-going	prior to 2009
City of Folsom Water Management Strategy for Dry-year Reliability	City of Folsom	On-going	prior to 2009
Fairbairn Water Treatment Plant Intake Pump to serve Cal-Am/Rosemont and Parkway service areas	City of Sacramento	On-going	2008
SGA Measuring and Monitoring Program	SGA	On-going	On-going
City of Sacramento Transmission Main	SSWD	n/a	2005
Environmental/Community Organization Interests and Activities	Various organizations	On-going	On-going
PCWA Integrated Water Resources Plan	PCWA	On-going	On-going
SRCS D Water Recycling Project (Phase I Project)	SRCS D, City of Sacramento	n/a	2004
Placer County Stormwater Quality Program, Plan, and Activities	Placer County	On-going	On-going
City of Sacramento Stormwater Quality Improvement Program	City of Sacramento	On-going	On-going
City of Folsom Stormwater Quality Program and Activities	City of Folsom	On-going	On-going
City of Elk Grove Stormwater Quality Program and Activities	City of Elk Grove	On-going	On-going
City of Roseville Stormwater Management Program and Activities	City of Roseville	On-going	On-going
Upgrade Water Main	City of Roseville	On-going	On-going
Northridge Water Line	City of Roseville	On-going	2006
Water System Security	City of Roseville	July 2003	2008
West Side Tank and Pump Station Project	City of Roseville	On-going	June 2008
Water System Rehabilitation Program	City of Roseville	On-going	October 2007
Pleasant Grove Wastewater Treatment Plant Expansion	City of Roseville	On-going	2008
City of Lincoln Regional Wastewater Treatment and Reclamation Facility Expansion	City of Lincoln	On-going	Undetermined (may be 10+ years in future)
Sunrise Side-Channel Enhancement Project	Water Forum Successor Effort	On-going	Undetermined (may be 5+ years in future)
Water Supply Strategy Sierra Vista and Creek View Specific Plans	City of Roseville	On-going	2008
SRCS D Water Recycling Program	SRCS D	2003	On-going
Water Forum Agreement (WFA)	Water Forum	1993	On-going
Aquifer Storage and Recovery (ASR) Program -- SSWD	SSWD	On-going	On-going
General Plans	Various agencies	On-going	On-going
ARB IRWMP Implementation	RWA, FRWA	On-going	On-going
SSCAWA Groundwater Management Plan	SSCAWA	On-going	December 2006

### 6.3. Linkages between Projects and Programs

The projects included in the ARB IRWMP have either recently been completed, are in progress, or are slated to begin soon or in the future. Some of the projects have a long or short timeline for implementation while others are on-going. Linkages exist between most of the projects and programs, and are described herein.

Other regional projects also provide linkages that include benefits between the projects. For example, the projects described on the Cosumnes River are all related, and provide synergistic benefits between the projects. Flow monitoring and modeling will provide data that can be used to protect riparian habitat in the river corridor. Better understandings of life sustaining flows will enhance not only the fisheries habitat, but also vegetation and wetlands resources. This environmental enhancement will benefit endangered species in the region. **Table 6.2** presents the linkages between the projects and programs in the ARB IRWMP, grouped by project type.

**Table 6.2 Linkages between Project and Program Types**

Regional Planning Objectives	Water Supply	Stormwater and Flood Plain Management	Groundwater Management	Ecosystem Restoration	Recycled Water	Water Quality
Water Supply			X		X	X
Stormwater and Flood Plain Management			X	X		X
Groundwater Management	X				X	X
Ecosystem Restoration		X			X	X
Recycled Water	X		X	X		X
Water Quality	X	X	X	X	X	

### 6.4. Economic and Technical Feasibility

This ARB IRWMP consists of projects, programs and planning activities that local and regional planners have found to be economical and technically feasible based on pilot studies, technical analysis, and data assessment. **Table 6.3** presents the economic and technical feasibility of the projects on a programmatic level for each planning objective. Specific projects and programs associated with each planning objective are noted in **Section 4**.

**Table 6.3 Economic and Technical Feasibility Determination**

Objective	Economic and Technical Feasibility Determination
<b>Water Supply</b>	Feasibility defined in master planning documents using conventional technologies meeting defined levels of service (reliability) at costs commensurate with regional economic benefits.
<b>Stormwater and Floodplain Management</b>	Stormwater Management feasibility defined through implementation of Best Management Practices implemented in compliance with NPDES Permit. Flood Management feasibility defined through providing sufficient flood protection to justify local and federal benefit; cost ratios.
<b>Groundwater Management</b>	Feasibility defined using conventional technologies and developing/preserving water resources at competitive unit cost targets (\$/AF)
<b>Ecosystem Restoration</b>	Feasibility defined primarily in habitat management documents vetted in stakeholder processes, using conventional technologies, at prices per acre that are fundable with public, private and grant funding sources.
<b>Recycled Water</b>	Feasibility defined as with water supply reliability along with meeting new water supply unit price (\$/AF) targets. SRCSD will conduct business case evaluations and pilot plant testing of treatment technologies.
<b>Water Quality</b>	Feasibility defined using conventional technologies (or by demonstration testing of new technologies) at unit production costs meeting unit cost (\$/AF) or (\$/MG) for wastewater thresholds.
<b>Other</b>	Feasibility defined by ARB IRWMP Management Committee for strategy and management efficiency type projects.

### 6.5. Current Status of Each Element

The projects and programs in the ARB IRWMP have been prioritized using a number of criteria as discussed in **Section 5**. There are projects identified as short-term priorities for implementation that have completed or will complete the following elements within a year or less in order to meet their operational date of December 2008 or sooner:

- Project budgeted, with funding sources identified
- Preliminary design/environmental documentation complete (if applicable)
- Land acquisitions, right-of-way, and easements complete (if applicable)
- Permits and regulatory approvals complete (if applicable)

The projects identified as long-term priorities are generally in the earlier stages of planning and have not completed and do not expect to complete the elements listed above in the short-term.

## **6.6. Institutional Structure to Ensure IRWMP Implementation**

As described elsewhere in this document, the Regional Water Authority (RWA) is a Joint Exercise of Powers Authority<sup>1</sup> (JPA), formed in July 2001. The Freeport Regional Water Authority (FRWA) was created in February 2002 by a Joint Powers Agreement of SCWA and EBMUD. The RWA and FRWA have statutory powers under the Government Code similar to those of a County Water District. Thus, each member agency of the RWA and FRWA have agreed to share its respective legal powers in common to the extent described in the JPA. Furthermore, when executing a specific project or program, participating agencies execute a Project Agreement to accomplish a specific, focused activity which may involve some or all of the member agencies (Participants<sup>2</sup>). Program Agreements enumerate the objective or effort to be accomplished, along with necessary terms and conditions related to the effort. In the instance of the ARB IRWMP effort, the Participants have obligated themselves financially to the successful conduct and implementation of the work. While the Project Agreement contains participant withdrawal provisions, it would be virtually impossible for the RWA, FRWA or a Participant to withdraw from the Agreement without purposefully onerous repercussions. It is on this basis that upon executing the Project agreement, that the RWA and FRWA have the full force of intention and authority; legally and otherwise to ensure the successful completion and implementation of the Project.

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<sup>1</sup> Joint Exercise of Powers Agreement forming the Regional Water Authority, July 1, 2001

<sup>2</sup> Regional Water Authority Project Agreement, Regional Water Master Plan and Operational System Program, April, 22, 2004

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