

10. FINANCING

This section describes the financial aspects of the ARB IRWMP, including beneficiaries of the ARB IRWMP implementation, potential funding/financing for implementation of the ARB IRWMP and its priority programs and projects, ongoing support for operations and maintenance of implemented projects, and the financial components of a water accounting framework that equitably distributes costs and proceeds from the implementation of regional projects that generate outside revenues.

10.1. Financing Challenges

The financing of projects has always proven to be a major obstacle for the ARB IRWMP Management Committee agencies, often preventing projects from proceeding to implementation. As demands on the agencies' limited funds continue to increase, construction costs continue to rise, the need to replace existing, aging infrastructure, and state legislation that could potentially shift substantial property tax revenues away from special districts to the state general fund, the challenge of balancing costs associated with supplying water for new growth, ensuring the highest standards of water quality and supply reliability for existing customers, protecting and enhancing the sensitive regional ecosystems, and minimizing costs incurred by end-users becomes increasingly difficult. In the case of projects that benefit the environment but do not provide new water or a measurable improvement to water supply reliability and/or water quality, this challenge becomes further intensified, as funding vehicles become more limited. Without new development and/or ratepayers to fund a project, project viability depends wholly upon public assistance for implementation.

10.2. Financing Agencies

The agencies within ARB IRWMP region recognize the importance of maintaining the highest standards of cost-effectiveness for projects considered for priority implementation. Implementation of specific programs or completion of planning documents are treated differently than projects in that they can be funded through new development fees and grant programs targeted specifically to these types of needs. Perhaps the most significant concern of the regional stakeholders is a means for protecting ratepayers from increasing water rates. To this end agencies have explored a variety of potential funding vehicles, including the State Revolving Fund, Proposition 50 and other State and Federal grant programs, and local bond measures. Each of the priority projects identified for inclusion in this Plan has been demonstrated to

be both technically and economically feasible. However, in some cases limited funding at the local level threatens to prevent project implementation. As a result, alternative potential funding vehicles have been evaluated for the majority of the projects included for priority project implementation.

Estimated costs are developed in **Table 10.1** for each project and identification of “likely” funding sources without additional local, state, or federal grant monies have been identified. If a project is not fully funded, an un-funded amount is calculated. It is recognized that each of the implementing agencies has a unique set of revenue and financing methods and sources as described in **Table 10.1** and that this IRWMP does not serve as an exhaustive presentation of all the funding sources available.

Each project has gone through a cost estimation process based on input from the implementing agency and using best engineering practices. In some cases the estimate is based on an 80 percent or higher level of design. Where there is little project definition, or where the project fits into a much larger program, the cost is reflective of the estimated need that exists over the next five years. The last column identifies the projects that are best situated in terms of their purpose, regional and/or state benefits, level of design, cost estimate, and region-wide support for application towards the Proposition 50 grant.

Projects that are shown to be fully funded without the support of Proposition 50 grant funds indicate that there is a 100 percent level of commitment through local funding sources to construct the project. If grant monies are awarded for the identified projects, local monies could either be re-budgeted or expected fee and rate increases could be deferred. The definitions of the various funding sources shown in **Table 10.1** are provided below.

10.2.1. New Development Fees

Development fees are used by water agencies almost universally as a measure to achieve and maintain equity among its past, present and future customers. For a growing water agency, development fees can represent more than half of the total revenue in any given year, and as such are very important to existing as well as future customers. Development fees are typically charged per connection, measured in equivalent dwelling units (“EDUs”). A single connection may encompass more than one EDU. In addition to the connection fee aspect of development fees, water agencies may also assess other fees: e.g. Commercial Acreage Fee (per acre) and Other Service Fee (per acre).

In some cases, if a developer builds a water pipeline or large water facility required by a water agency as a condition of development, then as partial or full payment for the water facility, a water agency may give fee credits to the developer in lieu of the developer paying fees. If the value of the water facility exceeds

Table 10.1 Affected Agencies with Revenue and Financing Methods

Project Name	Agency	Funding Source(s)							Costs and Needed Funding				Projects Applying for Prop 50 Grant Dollars
		Development Fees	User Fees	User Rates	Property Tax	Bonded Debt Financing	Contributions	Local, State, Federal Grants	Total Estimated Cost	Amount Currently Funded through Local Dollars	Amount Funded through Existing Grants	Unfunded Portion	
0 Environmental/Community Organization Interests and Activities ⁽¹⁾	Various organizations					X		X	\$5,000,000	\$5,000,000	\$ -	\$ -	N
1 Freeport Regional Water Project	FRWA			X					\$292,449,396	\$281,662,767	\$ -	\$10,786,629	Y
2 Gardenland Flood Management, Habitat Restoration, and Recreation Project	SAFCA				X			X	\$5,706,981	\$3,743,301	\$1,483,680	\$480,000	Y
3 SRCSD Water Recycling Betterment and Expansion Project (Phase II Project & Bartley Cavanaugh Golf Course)	SRCSD		X	X					\$49,606,349	\$47,478,930	\$ -	\$2,127,419	Y
4 SRCSD Water Recycling Project (Phase I Project)	SRCSD, SCWA			X					\$18,600,000	\$18,600,000	\$ -	\$ -	N
5 Dry Creek Project	City of Roseville	X						X	\$280,000	\$180,000	\$100,000	\$ -	N
6 Groundwater Production Well Project	SSWD	X		X					\$3,000,000	\$2,250,000	\$ -	\$750,000	Y
7 Eastern Sacramento County Replacement Water Supply Project	SCWA	X							\$49,243,676	\$49,243,676	\$ -	\$ -	N
8 Pleasant Grove Wastewater Treatment Plant Expansion	City of Roseville	X				X			\$60,000,000	\$60,000,000	\$ -	\$ -	N
9 Regional Water Authority American River Basin Conjunctive Use Program (ARBCUP)	Participating Water Purveyors			X				X	\$43,394,000	\$21,697,000	\$21,697,000	\$ -	N
10 SRCSD Recycled Water Program Expansion - Delta Shores	SRCSD, City of Sacramento	X							\$13,075,000	\$ -	\$ -	\$13,075,000	N
11 Rosemont Conjunctive Use Pipeline	City of Sacramento	X						X	\$2,200,000	\$126,000	\$750,000	\$1,320,000	Y
12 Woodcreek North Aquifer Storage and Recovery Project	City of Roseville	X				X			\$1,763,000	\$1,403,000	\$ -	\$360,000	Y
13 Bajamont Water Treatment Plant Expansion	CWD			X					\$1,750,000	\$1,750,000	\$ -	\$ -	Y
14 Roseville Water Treatment Plant Expansion	City of Roseville	X				X			\$39,000,000	\$32,970,000	\$ -	\$6,030,000	Y
15 TNC River Management and Conjunctive Management Opportunities of the Cosumnes River	TNC						X		\$400,000	\$237,088	\$ -	\$162,912	Y
16 Mission Avenue Pipeline Interconnection - Citrus Heights	CWD			X					\$300,000	\$300,000	\$ -	\$ -	N
17 Vineyard-Florin Gap Conjunctive Use Pipeline	City of Sacramento	X						X	\$5,700,000	\$ -	\$ -	\$5,700,000	N
18 Mission Avenue Pipeline Interconnection - Sacramento Suburban	CWD			X					\$250,000	\$ -	\$ -	\$ -	N
19 Ethan Way/Silica Avenue Conjunctive Use Pipeline	City of Sacramento	X						X	\$6,700,000	\$ -	\$ -	\$6,700,000	N
20 PCWA/SSWD Pipeline Interconnection	PCWA	X							\$18,000,000	\$ -	\$ -	\$18,000,000	N
21 Foothill 2 Water Treatment Plant Construction Project	PCWA	X				X			\$75,000,000	\$15,000,000	\$ -	\$60,000,000	N
22 Fairbairn Water Treatment Plant Intake Pump to serve Cal-Am/Rosemont and Parkway service areas	City of Sacramento	X						X	\$150,000	\$150,000	\$ -	\$ -	N
23 Groundwater Production Well Improvement Project	OVWC, SJWD			X					\$1,020,000	\$612,000	\$ -	\$408,000	Y
24 Old Auburn Road Groundwater Production Well	CHWD			X					\$1,480,270	\$880,270	\$ -	\$600,000	Y
25 Rio Linda/Elverta Groundwater Recharge Project	RLECWD	X		X					\$66,000,000	\$1,200,000	\$ -	\$64,800,000	N
26 West Roseville Specific Plan (Annexation Area) - 4 Wells	City of Roseville	X							\$4,000,000	\$4,000,000	\$ -	\$ -	N
27 Anatolia Groundwater Treatment Plant	SCWA	X							\$2,328,750	\$2,328,750	\$ -	\$ -	N
28 East Elk Grove Groundwater Treatment Plant	SCWA	X	X						\$724,500	\$724,500	\$ -	\$ -	N
29 Wildhawk Groundwater Treatment Plant	SCWA	X	X						\$17,652,500	\$17,652,500	\$ -	\$ -	N
30 Franklin Groundwater Treatment Plant	SCWA	X	X						\$7,302,500	\$7,302,500	\$ -	\$ -	N
31 Big Horn Groundwater Treatment Plant	SCWA	X	X	X		X			\$13,052,500	\$13,052,500	\$ -	\$ -	N
32 Poppy Ridge Groundwater Treatment Plant	SCWA	X	X						\$13,052,500	\$13,052,500	\$ -	\$ -	N
33 Groundwater Monitoring Wells for Contaminant Plume Containment	CWD			X					\$185,000	\$185,000	\$ -	\$ -	N
34 Sacramento County Stormwater Quality Program, 2003 Stormwater Quality Improvement Plan, & Activities	County of Sacramento	X		X					\$3,964,990	\$3,964,990	\$ -	\$ -	N

Table 10.1 (continued) Affected Agencies with Revenue and Financing Methods

Project Name	Agency	Funding Source(s)							Costs and Needed Funding				Projects Applying for Prop 50 Grant Dollars
		Development Fees	User Fees	User Rates	Property Tax	Bonded Debt Financing	Contributions	Local, State, Federal Grants	Total Estimated Cost	Amount Currently Funded through Local Dollars	Amount Funded through Existing Grants	Unfunded Portion	
35	Sunset Industrial Area Groundwater Supply Improvements	PCWA	X					X	\$3,000,000	\$2,250,000	\$ -	\$750,000	Y
36	County of Sacramento Low Flow Drainage Project	County of Sacramento						X	\$1,485,000	\$ -	\$ -	\$1,485,000	Y
37	Fairbairn Intake Pump to serve City of Sacramento and SCWA Zone 40	City of Sacramento	X					X	\$150,000	\$ -	\$ -	\$150,000	N
38	Fairbairn Water Treatment Plant-Florin Connector (South Cross Tie)	City of Sacramento	X					X	\$25,000,000	\$500,000	\$ -	\$24,500,000	N
39	Placer County Stormwater Quality Program, Plan, and Activities	Placer County						X	\$300,000	\$ -	\$ -	\$300,000	N
40	City of Sacramento Stormwater Quality Improvement Program	City of Sacramento			X			X	\$1,500,000	\$ -	\$ -	\$1,500,000	N
41	City of Folsom Stormwater Quality Program and Activities ⁽¹⁾	City of Folsom							\$1,000,000	\$1,000,000	\$ -	\$ -	N
42	City of Elk Grove Stormwater Quality Program and Activities ⁽¹⁾	City of Elk Grove			X				\$1,000,000	\$1,000,000	\$ -	\$ -	N
43	City of Roseville Stormwater Management Program and Activities	City of Roseville		X				X	\$600,000	\$ -	\$ -	\$ -	N
44	Water System Rehabilitation Program	City of Roseville			X				\$750,000	\$750,000	\$ -	\$ -	N
45	Cosumnes River Blvd. Transmission Main	City of Sacramento	X		X			X	\$3,200,000	\$ -	\$ -	\$3,200,000	N
46	El Dorado Water and Power Authority Projects/Programs/Activities ⁽¹⁾	El Dorado Water and Power Authority							\$5,000,000	\$5,000,000	\$ -	\$ -	N
47	Northridge Water Line	City of Roseville	X					X	\$7,000,000	\$4,900,000	\$2,100,000	\$ -	N
48	Lincoln Recycled Water Distribution System Expansion - Southwest Placer County	City of Lincoln	X	X				X	\$4,325,000	\$3,550,000	\$ -	\$770,000	Y
49	Stone Lake Wildlife Refuge ⁽¹⁾	Various local/regional agencies	X			X			\$2,000,000	\$2,000,000	\$ -	\$ -	N
50	Sacramento Stormwater Management Program & Activities	City of Sacramento, County of Sacramento	X	X	X	X			\$1,572,094	\$1,572,094	\$ -	\$ -	N
51	Zone 50 Infrastructure	SCWA	X	X					\$14,145,000	\$14,145,000	\$ -	\$ -	N
52	Water Distribution Facilities - North Central Specific Plan Area	City of Roseville	X					X	\$7,200,000	\$7,200,000	\$ -	\$ -	N
53	Upgrade Water Main	City of Roseville		X					\$250,000	\$250,000	\$ -	\$ -	N
54	Mayhew Drain Levee	SAFCA						X	\$9,000,000	\$675,000	\$8,325,000	\$ -	N
55	City of Roseville Meter Retrofitting Program & Activities (e.g., meter installation)	City of Roseville		X				X	\$1,500,000	\$1,000,000	\$500,000	\$ -	N
56	City of Sacramento Meter Retrofitting Program & Activities (e.g., meter installation)	City of Sacramento			X			X	\$345,000,000	\$5,000,000	\$ -	\$340,000,000	N
57	Placer County Water Agency Meter Retrofitting Program & Activities (e.g., meter installation)	PCWA	X					X	\$2,982,000	\$735,500	\$ -	\$ -	N

⁽¹⁾ Estimate

the amount of credits, a reimbursement agreement is typically executed authorizing payment to the developer of the remaining amount owed over a period of time (this does not typically exceed a defined time period).

10.2.2. User Fees

Monthly user fees are assessed by some water agencies where a nexus can be made that new facilities are directly benefiting the existing customers. This is especially true for water agencies that are developing conjunctive use water systems where the existing customers may have paid for the groundwater component when they paid the development fee (through the purchase of the home). The surface water and/or recycled water component is a new water supply for a water agency that is needed for conjunctive use with groundwater supplies. Income from this monthly revenue source is used in many cases to pay debt service on debt financed assets.

10.2.3. User Rates

User Rates pay for the operations and maintenance of a water agency or public utility's system. Within the user rate for a water agency there is a fixed cost component that does not vary with the amount of supplied water, such as labor and overhead expenses, and a variable cost component, such as the electrical and chemical costs, that are based on the amount of pumping and applied chemicals to meet the water demands of the customers. A customer of a water agency pays a monthly fixed rate and a variable rate based on the metered usage. In cases where billing is not based on a metered usage, a single monthly flat rate is assessed that is the combined average of the fixed and variable rates.

10.2.4. Property Taxes

Property taxes are now rarely used to fund new capital expenses unless voters have agreed to be assessed for payment of bonds through some form of assessment district or certificates of participation. In the ARB IRWMP region, this form of revenue rarely pays for new capital projects because of the nexus argument that new growth should pay for new improvements. Where tax dollars can be used are for studies (and projects) that benefit the region as a whole. This IRWMP is a good example of a study that looks at the region as a whole understanding that past and future users of the water resources in the region benefit from its completion and implementation.

10.2.5. Bonded Debt Service (Revenue Bonds)

Issuance of revenue bonds to pay for new capital is done in cases where a large facility is needed to support current and future growth. In this way, a large facility can be paid for by bonded debt service at the time of construction with repayment of the debt service over a 20 to 30 year timeframe. This is a preferred approach to paying for high cost facility because it avoids the perceived over-collection of fees from past customers that go towards facilities that serve past and future customers. The downside to bonded debt is that it cannot be accomplished with development fees alone due to the variability and uncertainty of new development over time. A user fee or rate is needed as a bond document covenant in the event that development fees are not adequate to make the required annual payment for the debt service.

10.2.6. Volunteer Contributions

Volunteer contributions are typically associated with non-profit organizations or interest group organizations that work toward a given cause. There are many of these organizations acting within and acting as stakeholders in the ARB IRWMP region. This revenue source is typically not reliable in terms of paying for capital projects or long term operations. Volunteer contributions are best used for preservation of native land and implementation of public outreach programs. Both are examples where the cost is incurred only if there are sufficient funds to support the activity.

10.2.7. Local, State, and Federal Grant Programs

Grant programs at either the local, state, or federal level are available to the region from time to time. In the past, the ARB IRWMP Management Committee members have applied for and obtained state and federal funding for studies and projects benefiting the region. These monies typically require that a local matching amount be available to obtain the grant that typically comes from one or more of the funding sources above or from another grant. The matching requirement shows a local commitment to promoting and completing the study or project. A grant is typically administered and contracted by a single agency within the region that works directly with the state or federal granting agency. There is typically a higher administration cost for grants in that a small portion of the grant also pays for administration of the grant by the state or federal agency.

10.3. IRWMP Project Implementation Beneficiaries

Multiple beneficiaries are expected to result from project implementation of the ARB IRWMP. These beneficiaries include:

- Municipal and Industrial (M&I) water and wastewater ratepayers throughout the region, including those in disadvantaged communities;
- All water resource related agencies in the region;
- Environmental beneficiaries, within the region and outside of the region along the lower Sacramento River and the Delta;
- Agricultural water users in neighboring regions relying on related water resources;
- Residents and workers in the Sacramento and American River floodplains; and
- Recreational users of the American River Parkway, Upper American River watershed, and other regional waterways/parkways.

Projects that will be implemented in the region may be of benefit to the entire population of the area, or may be geared toward benefiting those that fall within a sub area. Sub areas may include those that comprise a particular watershed, utility service area, income sub-group, etc.

In the case of those projects identified for priority implementation, benefits may extend outside the boundary of the ARB IRWMP such as residents of the East Bay with construction of projects that have partnership organizations like EBMUD. Other beneficiaries may include residents in San Joaquin County with implementation of projects benefiting the South Sacramento groundwater basin.

Priority stormwater projects will directly benefit the American River watershed. Similarly, the recycled water project will serve a vast area in central Sacramento County and secondary benefits to downstream Sacramento River and Delta regions. Finally, TNC projects have benefits not only to the Cosumnes River watershed but also could lead to future projects that if successful will improve regional groundwater conditions north and south of the Cosumnes River.

10.4. Potential Funding/Financing for IRWMP Implementation

In the past, the region has actively sought external funds for regional projects and programs. Examples of past sources of funding include:

- Federal Funding (Corps, Reclamation)
- State Funding (Proposition 204, AB303, Proposition 13, CALFED)
- Local Funding (Development impact fees, user rates, tax assessments)

These efforts are expected to continue, and may escalate, to fund implementation of the projects and programs developed in the ARB IRWMP. The rationale for seeking external funding for projects identified in the ARB IRWMP is that local projects typically provide not only local, but statewide water supply benefits, improve and protect local and Delta water quality, and provide environmental and recreational benefits which are of value to more than just local residents.

10.5. Ongoing Support and Financing for Operation and Maintenance of Implemented Projects

Ongoing support and financing for operation and maintenance (O&M) of projects implemented from the ARB IRWMP is expected to come from many of the same sources as it has previously. Support and financing comes primarily from local sources, including user rates, fees and assessments. Since the regional projects and programs usually involve multiple partner agencies, this broadens the range of local sources available. The details of the financing for multiple partner projects and programs in an equitable fashion is typically very involved, and beyond the scope of this plan. However, in general, large multi-purpose projects typically adhere to standard cost accounting and cost of service principles which are typically described and codified in the agreements for ownership, operation and maintenance of facilities that are typically assembled as part of a project financing package. Where local projects are aggregated to create a regional benefit, some form of accounting framework is generally employed by the regional governance agency (e.g. SGA) which seeks to account for investments that are made in the region and to ensure that agencies receiving benefit from projects participate financially in the project. A Water Accounting Framework is currently being developed by SGA in parallel with this IRWMP, to accomplish these regional equity issues. Other regional governance entities in the Central Basin and Placer County are contemplating these same concepts and intend to develop accounting frameworks which are similar, at least in principle.

Cost associated with the O&M of projects proposed for implementation must be evaluated as part of determining the overall viability of a particular project effort. Any project that is advanced for implementation consideration based on the methodology of prioritization must include an analysis to determine its affordability from an O&M perspective.

Projects that are designed to serve as a water supply sources should account for estimated O&M costs over the useful life of the individual projects. The annual fiscal impact on user rates, and further, the willingness of ratepayers to accept any increased cost of service as may be required for project implementation must be accounted for. The need for water and the economic hardship impacts that

would fall on this same group should this source not be available may also be considered as part of the feasibility equation. Any benefits derived from replacing and/or updated existing systems can also be factored into this financial analysis.

For certain projects, operation and maintenance costs were considered as part of the ranking assessments performed during the EIR development (i.e., FRWA diversion and pipeline project). Similarly, the cost of not having this source was also included as a factor. Synergies associated with having shared facilities (e.g., those staff and maintained as part of a joint / regional partnership) help to spread the costs to those multiple agencies that will benefit from the project.

Recycled water production costs, using strict cost of service principles, can be considerable (including O&M costs), and cost recovery is primarily a function of an agency's ability to charge user fees for the recycled water use and the degree of treatment required for a particular application. The perceived benefits of the customers (i.e., large water users) to consider the use of recycled water are often factored into the costs for the water. The project proposed by SRCSD for implementation of recycled water has factored the above detailed costs. Facility operations are designed to minimize, as much as possible, the need for expensive maintenance activities as well as the requirement for significant operational expenses. These costs considerations are balanced against a desire to encourage the growth in the use of recycled water by those in the region than can take the best advantage of the resource.

Projects aimed at watershed improvements, such as the effort underway by TNC on the Cosumnes River, are designed in an effort to minimize to the maximum degree possible the need for ongoing operation and maintenance expenses. For example, it is hoped that a pre-wetting program for the Cosumnes River can be identified for the river reach that allows for habitat and riparian restoration to occur in a natural manner (e.g., one that does not require significant mechanical means to result in the desired watershed benefit). The systems required to deliver the water to the streams and associated wetland/riparian environments could potentially be a part of on-going operations of existing water users and/or agencies and as such be a part of their anticipated and hence budgeted operational and maintenance expenses. Costs associated with monitoring and/or staff support as needed to track and implement efforts such as those spearheaded by TNC can to a degree be covered via membership contributions as well as via grants and other non-profit funding vehicles not necessarily available to governmental agencies.

Projects geared toward providing water quality benefits, such as the effort identified to capture low-flow runoff and direct the runoff to some form of treatment prior to stream discharge must be designed based on when and where it is possible to employ a process that allows for ease and low cost operation and

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maintenance. For example, whenever possible, gravity means should be used to direct flow into a treatment delivery system vs. having to pump (thus lowering operation costs). Debris build-up (and hence the need for its removal) must be a consideration in the system design. Agencies in the region are also directed to work together to minimize associated O&M costs.