

Drinking Water Quality Program CALFED 10 Year Finance Plan Background and Issues

Background

During the program's initial four years of activity, funding has averaged about \$23 million per year (ranging from a low of \$10 million to a high of \$40 million). However, funding has been mostly limited to bond funds for specific activities, leaving large parts of the program with little or no funding. For example, approximately 53% of the funding for the DWQP was for non-point source control projects managed by the SWRCB, and approximately 21% (\$20 million) was for San Joaquin Valley/Southern California Water Exchange. Roughly 91% of the funding has been provided by State funds (bonds and General Funds), with the remainder provided by grant matching through local, federal, and water user sources. This amount does not include the costs of drinking water quality activities carried out by other public and private organizations, independent of the CALFED Bay-Delta Program.

Issues

1. *Funding target:* The estimated funding target for the DWQP is approximately \$178 million over 10 years (not adjusted for inflation), averaging about \$17.8 million per year for 5 program categories:

- Source improvement (\$108 million)
- Treatment (\$34 million)
- Science, monitoring, & assessment (\$15 million)
- Regional ELPH planning (\$14 million)
- Program management & oversight (\$7 million)

Is this a reasonable estimate of DWQP costs for each program category?

2. *Source Improvement:* What are the public and private benefits associated with a source improvement program? Is continued public funding justified? Should the DWQP augment existing grant programs to include a drinking water quality emphasis, or include a separate DWQP PSP? Should a specified cost share requirement be included as part of a PSP? Is it appropriate for the DWQP to shift to a loan program as more requirements come into place for non-point source? Should a review of the program be built in during the 10-year period to identify if a shift to a loan program is appropriate?

3. *Treatment:* Treatment demonstration projects to date have been publicly funded with a 17-33% cost share. Should pilot scale projects emphasizing new technologies be funded entirely as grants with public funds, or should a cost-share be required?

4. *Regional and Local Actions:* The Record of Decision included a number of projects which, under the ELPH concept, would be considered regional or local projects. What is the appropriate criteria to determine if and when regional or local projects (for example, SWP Watershed Actions or the San Joaquin-Southern California Water Exchanges) receive public funding? How do we best account for local contributions/cost-shares in the program?
5. *Funding options:* There is no agreement at this point on how to allocate the costs of the DWQP. The agencies generally support some mix of public and water user funding. Should federal funding pick up the same cost share as state funding?
6. *Water User contributions:* Water users have suggested that the water user share for the DWQP should come from cost shares or grant/loan contributions, rather than fees. Should water user contributions be in the form of fees, or cost sharing arrangements on a project-by-project basis? Are there broad water user benefits that result from any DWQ projects such that the only method of providing contributions is from a fee?
7. *Proposition 50 Funding:* Prop 50 includes \$585 million for water quality in chapters 4, 5, & 6. It is expected that a portion of this funding will meet the needs of the CALFED DWQP, although none of this funding is specifically ear-marked for the CALFED DWQP. In addition, funding from chapter 8 could benefit the water quality program, and potentially help fund regional ELPH plans. Should a portion of Prop 50 be used for the CALFED DWQP, and contribute towards the State share?
8. *Relationship between Conveyance and DWQ projects?:* There are a number of conveyance projects which have potential (but still undetermined) benefits to water quality, how should they be addressed by the DWQP Budget? (For example: Franks Tract, San Luis Low Point, and Old River/Rock Slough)
9. *Strategic Plan:* At what point in the development of a strategic plan should the finance plan be revisited? Should there be a linkage between strategic plan review and finance plan review (or should the finance strategy become an element of the strategic plan)?

**Drinking Water Quality Program
10-Year Funding Targets & Unmet Needs**
(\$ in millions)
August 25, 2004

Program Component/Project	Funding Targets		Available Funding				Total Available	Unmet Needs
	2005 Dollars	Adjusted for Inflation	State			Federal ³		
			GF	Prop 13	Prop 50	Approps.		
Source Improvement	\$107.6	\$121.8						
Treatment	\$34.4	\$38.1						
Science, Monitoring & Assessment	\$15.2	\$17.2	\$2.3	\$4.7	\$0.0	\$0.0	\$7.0	\$192.6
Regional ELPH Planning	\$13.6	\$15.5						
Program Management & Oversight	\$7.0	\$7.0						
Total	\$177.8	\$199.6	\$2.3	\$4.7	\$0.0	\$0.0	\$7.0	\$192.6

Drinking Water Quality Program
New Categories/Tasks & 10-Year Funding Targets
(\$ in millions)
August 17, 2004

Category/Task	10-Year Funding Target	Comments
Source Improvement - Directed Actions		
		\$2.00
1. San Joaquin River Salinity Management Plan		
a. Drainage Strategy		
b. Salt Load Management and Reduction		
c. Operational Improvements/San Joaquin River Recirculation		
d. Real-time water quality monitoring		
2. SWP Watershed Actions	\$2.00	
3. SJ-SoCal Water Quality Exchanges	\$0.00	Using Prop 13 money through year 9
Source Improvement - Grants		
		\$105.60
1. Upstream Source Improvement BMPs	\$100.00	Early estimate of \$10 million/year
<i>Funding provided as a cost-share to the following programs for projects that have an identified benefit to drinking water, includes:</i>		
Available Funding	\$2.90	
Agricultural Water Quality Grant Program		
San Joaquin River Water Quality Management Program		
Irrigated Lands Conditional Waiver		
Actions identified by the Central Valley Drinking Water Policy		
Areas identified through Science, Monitoring, and Assessment		
2. Grant Funding Coordination	\$5.60	3 PY at Implementing Agencies, 1 PY at CBDA
Source Improvement - Conveyance		
1. San Luis Low Point Project		This placeholder is here as some of these projects may be determined to have wq benefits that would justify their incorporation into the DWQP
2. Franks Tract		
3. DCC/TDF		
Treatment		\$34.36
1. Technology Workgroup Coordination	\$0.10	
2. Science Panel on Technology	\$0.24	
3. Technology Demonstration	\$34.02	
a. Bay Area UV Treatment Study	\$4.02	
b. Rolling Grant Program	\$30.00	
Science, Monitoring & Assessment		\$15.22
1. Central Valley Drinking Water Policy	\$1.94	
a. Technical Studies	\$1.38	
b. Basin Plan Amendment	\$0.56	
2. Coordinated Monitoring & Performance Measurement	\$8.20	
3. Modeling Evaluation	\$1.68	
4. Science Board	\$2.00	
5. Science Workshops/Panels/Coordination	\$1.40	
Regional ELPH Planning		\$13.64
1. Coordination and Facilitation of Regional Plans	\$12.55	
a. RFP for Regional Plans	\$11.35	
b. Development/Coordination of Regional Planning Framework	\$1.20	
2. Bay Area Water Quality/Water Supply Reliability Program	\$1.09	
Program Management & Oversight		
		\$7.00
1. General Administration, including Planning, Implementation, Coordination	\$7.00	3 PY at Implementing Agencies, 2 PY at CBDA
Total, Years 5-14		\$177.82
Potential Capital Projects		
		\$264.41
1. NBA Construct Alternative Intake	\$175.0	All projects are full cost estimates.
2. Relocation of CCWD Old River Intake	\$70.4	this proceeds only if Franks Tract unsuccessful
3. OR/RS Canal Encasement Phase II	\$19.0	

Drinking Water Quality Program
New Categories/Tasks & 10-Year Funding Targets
Description

The Drinking Water Quality Program is structured around the concept of an “equivalent level of public health protection.” The Bay-Delta Public Advisory Committee’s Drinking Water Subcommittee has developed a diagram outlining the various areas in which work can be done to improve drinking water quality. This ten-year budget is structured loosely around this diagram, breaking out activities into the categories of Source Improvement and Treatment, but also including the broader range of categories like Regional Planning, Science, and Management. This budget also centers about activities described in the 2004 Multi-Year Program Plan for the Drinking Water Quality Program.

This is proposed to become part of the 10-Year Finance Plan of the California Bay-Delta Authority (not the Finance Options Report).

Source Improvement – “Directed Actions”

“Directed Actions” refer to specific known or described projects or activities, from either the Delta Improvements Package Water Quality Actions or the Record of Decision.

1. San Joaquin River Salinity Management Plan

This action is described in the Delta Improvements Package, and includes a number of activities which have the potential to either contribute to, or be leveraged to contribute to, the goals of the Drinking Water Quality Program. These activities are:

- a) Drainage Strategy
- b) Salt Load Management and Reduction
- c) Operational Improvements/San Joaquin River Recirculation
- d) Real-time water quality monitoring

Because the degree to which these activities might benefit the DWQP is unknown, this ten-year budget does not identify costs associated with these activities. Instead, this ten-year budget includes a grant program for source improvement which could supplement these activities to promote drinking water benefits.

2. State Water Project Watershed Actions

This action is described in the Record of Decision, and includes water quality improvements to the California Aqueduct through both structural changes and nonpoint source pollution control activities. The ten-year budget includes \$2 million to conduct a study to determine the existing water quality problems and identify potential structural and non-structural solutions. Additional funding may be appropriate pending the outcome of the study.

3. Southern California – San Joaquin Water Quality Exchanges

This action is described in the Record of Decision. It was funded with \$20 million from Proposition 13 through 2009. Additional funding may be appropriate pending the outcome of this initial phase.

Source Improvement – “Grants”

The intent of the DWQP is to identify opportunities to improve drinking water quality through currently existing or developing programs. These programs are generally on a regional scale, such as the San Joaquin River Water Quality Management Program or the Water Coalitions operating in compliance with the Central Valley Conditional Agricultural Waiver, and are generally not focused on drinking water quality. The DWQP will work with such programs to identify the opportunities to fund or cost-share in projects of high benefit to drinking water quality. The initial estimates for the ten-year budget is \$10 million/year, because these programs are in the early stages of development and the scope of interaction is unknown. This estimate may change when more information is known about the programs and when the DWQP Strategic Plan is finalized.

At this point, the DWQP intends to focus on the following areas and/or programs:

1. Agricultural Water Quality Grant Program
2. Sacramento Watershed
3. San Joaquin River Water Quality Management Program (and TMDL implementation)
4. Irrigated Lands Conditional Waiver
5. Actions identified by the Central Valley Drinking Water Policy
6. Areas identified through Science, Monitoring, and Assessment

Source Improvement – Conveyance

These are projects which traditionally have been associated with the Conveyance Program, but currently are considered to have the most potential to benefit drinking water quality. The budget estimates are from the Conveyance Program.

The Rock Slough/Old River Drainage Management Project is not included as its entire funding has been allocated and the project will conclude in the summer of 2005.

Treatment

The DWQP and its implementing agencies have funded a number of treatment technology demonstration projects, many of which have concluded or are in the process of concluding. This budget proposes a rolling grant program in the area of treatment technology demonstration, focusing on projects which have a high degree of transferability (i.e. the resulting information can be used by a large number of utilities) and are focused on contaminants of the most concern to the program. This budget also includes periodic convening of a science panel to assess the completed projects and advise on the future direction of DWQP as it relates to treatment technology. This budget does not include funding of full-scale implementation of treatment technology, which is left to the existing state and federal programs. It averages out to approximately \$3.4 million/year.

Regional treatment technology demonstration could occur in the Sacramento Region, the Southern California Region, the San Joaquin Region, and the Bay-Delta Region. The budget does include \$2.71 million in years 5 and 6 to complete the current Bay-Area Treatment Technology study. Contaminant or source-specific treatment technology demonstration could

occur for groundwater sources, or for emerging contaminants such as perchlorate and arsenic. Demonstration Projects are estimated at \$6 million over 4 years.

Per the strategic planning discussions, this budget also includes funding for coordinating a quarterly work group to keep current with the status of treatment technology.

Science, Monitoring and Assessment

The DWQP needs to include science, monitoring and assessment elements over the next ten years. The Central Valley Drinking Water Policy is doing some work in assessing the status of drinking water quality monitoring in the Delta and its tributaries. This budget anticipates building off of this work, establishing a coordinator and a forum for the various monitoring programs to share information and using this forum to determine how to best fill identified monitoring gaps. Building off of this monitoring, the budget anticipates assessing data through directed funding of experts, supplementing monitoring to fill in the gaps through funding of additional monitoring within existing programs, and development/tracking of performance measurements for the program.

The budget also supports the DWQP share of the Water Management Science Board, which will be created this year, and the scientific foundation of the program, including outreach through workshops, the periodic use of science panels, and close coordination with the Science Program and the Independent Science Board.

Regional Water Quality Management Planning

The DWQP anticipates using Regional Water Quality Management Plans as a tool to determine what actions are best implemented at state, regional, and local levels. In 2004, the DWQP released an RFP to pilot test the concept of regional water quality management plans, and will use the three funded studies to develop guidelines for future regional plans. It is possible that regional plans could become a requirement for projects applying for public funding. Once this pilot phase is completed, the DWQP will have a better idea of the cost of planning and the utility of regional plans in achieving its goals. This budget estimates \$1.5 to \$3 million every other year for the development of regional water quality management plans. It does not include the implementation of projects identified through the management plans – those are considered under Source Improvement and Treatment categories.

The Bay Area Regional Water Quality /Water Supply Reliability Project was the first regional water quality project funded by the DWQP. It is close to completing its work and will most likely transition to a larger Bay Area effort regarding water management. No future funding is assumed in this budget for implementation of activities identified through this project.

Program Management & Oversight

The keys to a successful DWQP are coordination and communication. Management and oversight of the DWQP requires close coordination with its implementing agencies, other CBDA Programs, stakeholders and project managers. It also requires the completion of a strategic plan, to focus and prioritize its efforts, and the development of performance measures, to ensure it progresses towards its goal. Budget estimates in this category are generally for labor to complete

the above-mentioned tasks, in both the CBDA and the implementing agencies. This budget estimates \$2 million per year for program management and oversight activities.

Potential Capital Projects

There are a small number of capital projects which are currently associated with the Drinking Water Quality Program. This budget assumes their financing will be negotiated on a project-by-project basis, and be largely funded by the beneficiaries of the projects.

1. North Bay Aqueduct Intake Relocation: The feasibility study estimates a cost of up to \$175 million with the project beginning in 2010. The North Bay Aqueduct currently experiences problems with total organic carbon and turbidity, largely due to the location of its intake.
2. Old River Intake Relocation: This project is an alternative in the Delta Improvements Package. Should Franks Tract fail to improve drinking water quality as currently estimated, this project would improve water quality for CCWD. It is estimated to cost \$62.8 million.
3. Contra Costa Canal Encasement Project, Phase II: This project would encase a portion of the currently earthen-lined Contra Costa Canal in the vicinity of both local development and the proposed Dutch Slough Tidal Marsh Restoration Project. Costs associated with this project may be more appropriate in the Ecosystem Program as mitigation of drinking water quality impacts.

Draft Drinking Water Quality Program Budget
Detailed Spreadsheet

Red numbers were funded in years 1-4, spent in upcoming years															
Drinking Water Quality Program Budget (\$ in Millions)	Funded to Date	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Total: 5-9	Total: 10-14	Total: 5-14	All Total
Source Improvement-"Directed Actions"	22.50	1.00	1.00	0.00	2.00	0.00	2.00	24.50							
1. San Joaquin River Salinity Management Plan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
a. Drainage Strategy															
b. Salt Load Management and Reduction															
c. Operational Improvements/San Joaquin River Recirculation															
d. Real-time water quality monitoring															
2. SWP Watershed Actions	2.50	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	4.50
3. SJ-SoCal Water Quality Exchanges	2.00	2.00	4.00	4.00	4.00	4.00	0.00	0.00	0.00	0.00	0.00	18.00	0.00	18.00	20.00
Source Improvement "Grants"															
DWQP Cost-Share to other Programs	61.70	10.56	10.56	10.56	10.56	10.56	10.56	10.56	10.56	10.56	10.56	52.80	52.80	105.60	167.30
Available Funding	61.70	2.60	0.10	0.10	0.10							2.90	0.00	2.90	64.60
Agricultural Water Quality Grant Program															
San Joaquin River Water Quality Management Program (and TMDL implementation)															
Irrigated Lands Conditional Waiver															
Actions identified by the Central Valley Drinking Water Policy															
Areas identified through Science, Monitoring, and Assessment															
Grant Coordination and Project Management (3 PY at Agencies, 1 PY at CBDA)		0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56				
Source Improvement - Conveyance															
San Luis Low Point Project			<i>Placeholder Only</i>												
Franks Tract			<i>Placeholder Only</i>												
DCC/TDF			<i>Placeholder Only</i>												
Treatment	5.70	7.98	2.07	6.07	0.07	6.01	0.01	6.01	0.07	6.07	0.01	22.19	12.17	34.36	40.06
Technology workgroup coordination		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.05	0.10	0.10
Science Panel on Technology				0.06	0.06				0.06	0.06		0.12	0.12	0.24	0.24
Technology Demonstration	0.20	7.97	2.06	6.00	0.00	6.00	0.00	6.00	0.00	6.00	0.00	22.02	12.00	34.02	34.22
Bay Area UV Treatment Study (break out local share)	0.20	0.45	0.87									1.31	0.00	1.31	1.51
Bay Area UV Treatment Study (microfiltration)		1.52	1.19									2.71	0.00	2.71	2.71
Rolling Grants:															
Grant 1		6.00						6.00				6.00	6.00	12.00	12.00
Grant 2				6.00						6.00		6.00	6.00	12.00	12.00
Grant 3						6.00						6.00	0.00	6.00	6.00
Science, Monitoring and Assessment	0.99	1.46	1.38	1.88	1.70	1.70	1.42	1.42	1.42	1.42	1.42	8.12	7.10	15.22	16.21

Draft Drinking Water Quality Program Budget
Detailed Spreadsheet

Drinking Water Quality Program Budget (\$ in Millions)	Funded to Date	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Total: 5-9	Total: 10-14	Total: 5-14	All Total
Central Valley Drinking Water Policy	0.75	0.46	0.46	0.46	0.28	0.28						1.94	0.00	1.94	2.69
Technical Studies (Prop 50)		0.32	0.32	0.32								0.97	0.00	0.97	0.97
Technical Studies (EPA)		0.10	0.10	0.10			Increase source improvement PSPs to allow for DAs resulting from finalization					0.30	0.00	0.30	0.30
Technical Studies (Local Cost Share)	0.75	0.04	0.04	0.04								0.11	0.00	0.11	0.86
Basin Plan Amendment (2 PY at RWQCB)					0.28	0.28						0.56	0.00	0.56	0.56
Coordinated Monitoring & Performance Measurement - 3 PY +		0.42	0.42	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	3.60	4.60	8.20	8.20
Modeling Evaluation	0.24	0.24	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.88	0.80	1.68	1.92
Science Board		0.2	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	1.00	1.00	2.00	2.00
Science Workshops/Panels/Coordination		0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.70	0.70	1.40	1.40
Regional Water Quality Management Planning	0.47	1.41	0.56	2.06	0.20	3.10	0.10	3.10	0.10	3.00	0.00	7.34	6.30	13.64	14.11
Coordination and Facilitation of Regional Plans												0.00	0.00	0.00	0.00
RFP for Regional Plans (coordinate with Prop 50 Ch 8)		0.85		1.50		3.00		3.00		3.00		5.35	6.00	11.35	11.35
Development/Coordination of Regional Planning Framework		0.20	0.20	0.20	0.20	0.10	0.10	0.10	0.10			0.90	0.30	1.20	1.20
Bay Area Water Quality/Water Supply Reliability Program	0.47	0.36	0.36	0.36								1.09	0.00	1.09	1.56
Phase I	0.11											0.00	0.00	0.00	0.11
Phase II	0.36	0.36	0.36	0.36								1.09	0.00	1.09	1.45
Phase III - part of other CBDA programs															
Program Management & Oversight		0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	3.50	3.50	7.00	7.00
General Administration-(3 PY at Agencies, 2 PY at CBDA)-includes Planning, Implementation and Coordination Activities		0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	3.50	3.50	7.00	7.00
Program Funding Total		23.11	16.27	21.27	13.23	22.07	12.79	21.79	12.85	21.75	12.69	95.95	81.87	177.82	269.18
Projected Needs Estimate															
Original ROD Estimate	\$311.00	\$120.00	\$128.00												
Potential Capital Projects	0.19	4.00	12.94	9.67	4.60	30.20	35.75	23.75	75.25	57.75	10.50	61.41	203.00	264.41	264.59
NBA Construct Alternative Intake	0.19						12.25	19.25	75.25	57.75	10.50	0.00	175.00	175.00	175.19
Relocation of CCWD Old River Intake (if Franks Tract unsuccessful)					4.60	30.20	23.50	4.50				34.80	28.00	62.80	62.80
Relocation of CCWD Old River Intake - Local Share		4.00	3.60									7.60	0.00	7.60	7.60
OR/RS Canal Encasement Phase II - CBDA			8.60	8.90								17.50	0.00	17.50	17.50
Canal Encasement Phase II - Local Share			0.74	0.77								1.51	0.00	1.51	1.51
TOTAL COSTS (not including Conveyance actions):	0.19	27.11	29.21	30.94	17.83	52.27	48.54	45.54	88.10	79.50	23.19	157.35	284.87	442.22	533.77
WQ Actions Listed in the DIP that are not DWQP related															
Vernalis Flow Objectives (not DWQP)															
d. Water Transfers/Purchases															

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Detailed Spreadsheet

Drinking Water Quality Program Budget (\$ in Millions)	Funded to Date	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Total: 5-9	Total: 10-14	Total: 5-14	All Total	
Projects that are finished or fully allocated:																
NBA Alternative Intake Study/NBA Watershed Mgmt	2.25	3.79	7.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.72	0.00	11.72	13.97	
Watershed Management	0.40											0.00	0.00	0.00	0.40	
Rock Slough and Old River Drainage Management Program/Canal Encasement	0.00	0.00	0.00	0.00								0.00	0.00	0.00	0.00	
1. Rock Slough - CBDA	1.30	0.67	0.24									0.91	0.00	0.91	2.21	
2. Old River - CBDA	0.54	1.32	0.36									1.67	0.00	1.67	2.21	
3. Canal Encasement Phase I - CBDA		1.48	6.02									7.50	0.00	7.50	7.50	
Canal Encasement Phase I - Local Share		0.33	1.32									1.65	0.00	1.65	1.65	