

Drinking Water Quality 10-Year Finance Plan Straw Proposal

Background

The Drinking Water Quality Program (DWQP) is constructed around the concept of providing an “equivalent level of public health protection” (or ELPH) to the CALFED Record of Decision numeric targets for disinfection by-product precursors in the Delta. This concept recognizes that there exist opportunities to improve water quality between source and tap, and has resulted in the need to develop regional water quality management plans (regional plans) to both identify and prioritize those opportunities. These regional plans, which are the highest short-term priority for the program, will shape the program and its long-term funding needs. This 10-Year Finance Plan is therefore more accurate for the short-term, and will require revisiting as regional plans develop.

As noted in several of the finance meetings and BDPAC subcommittee meetings, there are activities and projects in other program elements (specifically ERP and Conveyance) that have significant water quality benefits. It has been suggested that it may result in a more effective water quality program if these projects were managed as part of the DWQP – and as a result the DWQP would be focused on all actions with the potential to improve water quality. Two of these projects, Franks Tract and Old River/Rock Slough Drainage Management, have been moved into this budget.

Funding and Performance History

During the program’s initial four years of activity, funding for the DWQP (not including Franks Tract and Old River /Rock Slough projects) has averaged about \$23 million per year (ranging from a low of \$10 million to a high of \$40 million). However, funding has been limited to a subset of the DWQ activities due to funding constraints under the bond funds, 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.

Franks Tract studies have received a small amount of funding (\$1.8 million) through the Ecosystem Restoration Fund, on the basis of fishery benefits. This resulted in the discovery of potential significant water quality benefits. Old River/Rock Slough Water Quality Improvement Projects (including Phase I of the Contra Costa Canal Encasement Project) have been funded primarily through state bond and state water user funding.

The DWQP is currently pursuing two efforts to evaluate its progress. One is a review of the status of all projects which have received funding to date and the other is the creation and initial assessment of program performance measures. These two efforts will combine to give us a more complete picture of what the program has accomplished in its first four years. This information is expected to be available in December 2004 and will be used to guide future funding decisions and program priorities. Specifically, the proposed funding targets and priorities will be adjusted as performance information becomes available.

[More detail to on performance to be added based on the preliminary survey information within the next month]

Proposed 10-Year Finance Plan

The DWQP proposes a funding target of \$373 million (in year 2005 dollars) for 205-2014. This 10-year cost estimate is not based on continuing historic funding trends, but is built upon the activities identified in the Year 5-8 Multiyear Program Plan for the DWQP as needed for a successful program. The DWQP fully expects that these cost estimates could significantly change once the regional water quality management plans are completed and able to inform the program.

The funding target is broken down by component:

- Regional ELPH planning (\$12.6 million)
- Source improvement (\$302 million: \$100 million for directed actions, \$91.6 million for augmenting non-point source programs, and \$94.4 million for Conveyance projects that yield source improvement)
- Treatment (\$34.4 million)
- Science, monitoring, & assessment (\$15.7 million)
- Program management & oversight (\$7 million)

A more complete description of these categories is attached.

The DWQP is considering construction of other projects but at this point it is premature to develop cost allocations until more information on costs and benefits is available. For these Potential Capital Projects, a future timeframe and check in point, and a process for developing cost allocations when it is timely, will be included in the 10 year finance plan. These potential capital projects include: construction of the North Bay Aqueduct Alternative Intake, the Old River/Rock Slough Canal Encasement Phase II, relocation of the CCWD Old River Intake (if Franks Tract is unsuccessful), and Treatment Technology Implementation. The estimates above do not include the funding for the potential capital projects (approximately \$265 mill).

Regional ELPH Planning (\$12.6 million): The Drinking Water Subcommittee (DWS) has recently made the completion of regional ELPH plans their top priority for the DWQP. The DWQP is currently funding three pilot regional planning efforts, and has funded the Bay Area Water Quality/Water Supply Reliability Project.

The funding target for Regional ELPH planning is \$12.6 million. This estimate is based on the Drinking Water Subcommittee's recommendation of \$2 million per plan, for five regions, and the cost of coordinating these efforts. Because of the priority to complete these plans soon in order to influence future priorities, the \$12.6 million is proposed to be scheduled in the first 3 years (Years 5 - 7). The DWS supports this estimate and schedule. The proposed funding allocation for this component is 50% public (state/federal) funding and 50% local cost share. The rationale for a 50% public (state/federal) share is that this funding will provide the necessary incentives to regions to work together to develop plans sooner. A local cost share is appropriate because of the benefit to regions to complete regional plans (improving their ability to compete for implementation funding).

At this time it is likely although not certain that the public share can be provided from existing state bond funds through Proposition 50 Chapter 8 (Integrated Regional Water Management Planning). It is uncertain what that amount will be, as no specific amount is dedicated to regional water quality planning per se. The first round of decision for Proposition 50 Chapter 8 grants is expected to be made in July 2005. If the necessary public share (\$6.6 million) is not provided from Prop 50 funding for this activity, the options are to request General Fund dollars, wait until Year 8 when the next State bond funding may be available, or fully fund the regional plans at the local water agency level.

Source Improvement-Directed Actions (\$100 million): Specific water quality actions were identified in the Delta Improvements Package Implementation Plan (DIP), a high priority for the CALFED program and for the DWS. The DIP water quality actions included in this 10-year finance plan are implementation of the San Joaquin River Water Quality Management Plan (Drainage Strategy, Salt Load Management and Reduction, Operational Improvements/San Joaquin River Recirculation, and Real-time water quality monitoring) which is estimated to cost \$10 million per year over the 10 years. The DWS supports this estimate and schedule. At this time, a specific funding allocation is not being proposed for this activity. The DWS generally indicated support for funding to be shared between state, federal and local sources but the allocation needs further discussion by the DWS before a proposal is developed.

Possible state funding sources that may be available for this component include Proposition 50 Chapters 4, 5, 6, 7 or 8. For example, the first round of decisions for the Proposition 50 Chapter 5 Agricultural Water Quality Grant Program is expected to be made in Year 5. If the necessary public share is not provided from Prop 50 funding for this activity, the options are to request Federal appropriations, General Fund dollars, wait until Year 8 when the next State bond funding may be available, or fully fund activities at the local water agency level.

There are other source improvement directed actions included in the CALFED Record of Decision – improvements to the water quality within the California Aqueduct and other conveyances, and regional water quality exchange programs. The DWS has recommended no additional funding for these actions pending: a) a feasibility study on water quality improvement in the California Aqueduct – estimated at \$2 million in Years 5 and 6, and b) the conclusion of feasibility studies and demonstration projects under the currently funded Southern California-San Joaquin Regional Water Quality Exchange Project. The DWS supports this estimate and

schedule. At this time, a specific funding allocation is not being proposed. The DWS has not discussed the allocation of the \$2 million in unmet needs.

Source Improvement-Grants (\$91.6 million): Source improvement also includes augmenting existing programs addressing non-point source water quality impairment to address constituents of particular concern to drinking water, a concept supported by the CALFED ROD (which contains several milestones related to coordinated BMP implementation). While regional plans are being developed to determine the relative importance of such actions, the DWS has recommended limiting funding in the first 2 years to \$3 million per year, and increasing the amount to \$10 million per year starting Year 7.

At this time, a specific funding allocation is not being proposed. The DWS generally indicated support for funding to be shared between state, federal and local sources but the appropriate allocation needs further discussion. In the past, source improvement projects have been publicly funded with an approximate 25% local cost share. The level of public (state/federal) benefits needs to be evaluated further. Local and public contributions may need to vary by on a project by project basis in order to follow a benefits-based approach. While there is general support for a public contribution, the level of public funding should be proposed considering the following:

- Where projects are not locally cost-effective yet provide broad public benefits, public funding should be commensurate with the degree of public benefits (for example, research and pilot studies or feasibility studies where benefits are unknown),
- Where projects are locally cost-effective, but require public funding to overcome significant financial or institutional barriers, or
- Where public funding will result in project modifications yielding broad public benefits.

In addition Environmental Justice is addressed through both the 0% cost match requirement for disadvantaged and small communities within these types of grants, and through the availability of low interest loans to address the drinking water quality challenges of disadvantaged communities.

Possible state funding sources that may be available for the public share may include Proposition 50 Chapters 5 Agricultural Water Quality Grant Program, with the first funding decisions expected in Year 5.

Source Improvement-Conveyance (\$94.4 million total; \$15.2 million phase 1): The DWS requested that two Conveyance projects (Franks Tract and Old River & Rock Slough Water Quality Improvement) be moved to the DWQP finance section, based on the purposes of the projects and the perceived benefit to water quality. The current estimate to complete Franks Tract is \$92 million, but the DWS recommends pursuing a phased approach, with the first phase – focusing on water quality improvement - costing \$15.2 million, and then evaluating the need for future phases. Although still in the early feasibility stage, the primary benefits expected from this project are improved export water quality for SWP & CVP M&I water users. However, the benefits will depend on the operation agreements. Other significant benefits that may result from

this project include ecosystem and water supply benefits. The benefits of this project, and the overall allocation of costs, will have to be reevaluated between project phases.

For Phase 1, there is general consensus among CVP and SWP water users that M&I contractors should contribute funding for this project. State bond funds (\$1.8 million) are currently available, leaving \$13.6 million in unmet needs. This project is included in the proposed federal authorization bill and may be eligible for other Prop 50 bond funds; such as Chap 7 (b), but a decision on the use of those bonds funds needs further review because of competing demands from the conveyance, water quality, and ecosystem programs.

The Old River & Rock Slough Water Quality Improvement Projects are estimated to complete construction by the end of 2006, and have received \$1.5 million in Proposition 13 funds and \$710,000 from SWP users. The Contra Costa Canal Encasement Phase I project has received \$7.3 million from Proposition 13, and is not anticipated to require additional funding.

Treatment: The DWQP and its implementing agencies have invested \$2 million in public funding for four treatment technology demonstration projects, three of which have concluded or are in the process of concluding. A S.F. Bay Area project has recently begun, and has only received public funding for Phase 1 of a two-phase demonstration project. The DWS and implementing agencies support the use of a science panel to determine the future direction of this activity. Should the activity continue, the DWS has recommended 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 on contaminants of the most concern to the program. This finance plan does not envision funding full-scale implementation of treatment technology, which is left to the existing state and federal programs. The cost estimate of a rolling grant program is \$3.4 million/year. The DWS generally indicated support for funding to be shared between state, federal and local sources but the appropriate allocation needs further discussion. In the past, treatment demonstration projects have been publicly funded with an approximate 40% local cost share. The level of public (state/federal) benefits needs to be evaluated further.

Possible state funding sources that may be available for the public share may include Proposition 50 Chapters 4 and 6, with the first funding decisions expected in Year 5.

Science, Monitoring and Assessment (\$15.7 million): The DWQP needs to include science, monitoring and assessment elements over the next ten years. The DWQP has invested \$17 million in research studies, with an average 30% local cost match, through grant funding. The DWQP has not been able to directly fund a science, monitoring and assessment program, such as proposed for the next ten years. The cost of a directed program is approximately \$1.6 million per year. The DWS agrees with the content and cost of this element. This activity is appropriately supported with public funds because the benefits are broad and diffuse—following a 50-50 cost share between state and federal sources consistent with the proposed allocation in the science program

Program Management & Oversight (\$7 million): Budget estimates in this category are generally for labor to complete the above-mentioned tasks, in both the CBDA and the implementing agencies. This finance plan estimates \$700,000 per year for program management and oversight activities. The DWS and implementing agencies agree with this cost estimate. This activity is appropriately supported with public funds —following a 50-50 cost share between state and federal sources consistent with the proposed allocation in the other programs.

Drinking Water Quality Program Straw Proposal - Funding Allocation (\$ in millions) September 21, 2004														
Program Year	Funding Targets ¹	Available Funding						Unmet Needs	Proposed Funding for Unmet Needs ⁴					
		State			Federal				Total Available	State	Federal	Local Match	Water Users	
		GF	Prop 204	Prop 13	Prop 50	Approps.	SWP ²						CVPIA RF ³	SWP
Regional ELPH Planning	\$12.6	\$0.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.9	\$11.8					
Year 5								\$0.9	\$0.2					
Year 6	\$6.3							\$0.0	\$6.3					
Year 7	\$5.3							\$0.0	\$5.3					
Year 8	\$0.0							\$0.0	\$0.0					
Source Improvement - Directed Actions - SJ River Salinity Mgmt Plan, including Recirculation	\$100.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$100.0					
Source Improvement - Directed Actions - California Aqueduct Watershed Actions	\$2.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2.0					
Year 5	\$1.0							\$0.0	\$1.0					
Year 6	\$1.0							\$0.0	\$1.0					
Source Improvement - Grants - Upstream Source Improvement BMPs	\$91.6	\$0.0	\$0.0	\$4.7	\$5.0	\$0.0	\$0.0	\$9.7	\$81.9					
Year 5	\$3.6			\$1.8				\$1.8	\$1.8					
Year 6	\$3.6			\$3.4				\$3.4	\$0.2					
Year 7	\$10.6			-\$0.5				-\$0.5	\$11.1					
Year 8	\$10.6							\$0.0	\$10.6					
Year 9	\$10.6							\$0.0	\$10.6					
Year 10	\$10.6							\$0.0	\$10.6					
Year 11	\$10.6							\$0.0	\$10.6					
Year 12	\$10.6							\$0.0	\$10.6					
Year 13	\$10.6							\$0.0	\$10.6					
Year 14	\$10.6							\$0.0	\$10.6					
Source Improvement - Conveyance	\$94.4	\$0.0	\$0.0	\$12.2	\$0.0	\$0.0	\$0.0	\$12.2	\$82.2					
Year 5	\$18.3			\$12.2				\$12.2	\$6.1					
Year 6	\$5.5							\$0.0	\$5.5					

Drinking Water Quality Program Straw Proposal - Funding Allocation (\$ in millions) September 21, 2004														
Program Year	Funding Targets ¹	Available Funding						Unmet Needs	Proposed Funding for Unmet Needs ⁴					
		State			Federal				State	Federal	Local Match	SWP	CVP	
		GF	Prop 204	Prop 13	Prop 50	Approps.	SWP ²							CVPIA RF ³
Program Management & Oversight	\$7.0	\$1.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Years 5-9	\$192.4	\$2.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Year 5	\$44.3	\$1.4												
Year 6	\$30.8	\$0.3												
Year 7	\$40.9	\$0.3												
Year 8	\$38.1													
Year 9	\$38.3													
Years 10-14	\$160.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Year 10	\$39.2													
Year 11	\$44.3													
Year 12	\$25.2													
Year 13	\$28.8													
Year 14	\$22.7													
Total, Years 5-14	\$352.4	\$2.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0

Notes:

Drinking Water Quality Program

Description of Categories/Tasks and 10-Year Funding Targets

The Drinking Water Quality Program is structured around the concept of an “equivalent level of public health protection” (ELPH). The Bay-Delta Public Advisory Committee’s Drinking Water Subcommittee (DWS) has developed a diagram outlining the various areas in which work can be done to improve drinking water quality. The ten-year cost estimates are 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. The cost estimates also encompass activities described in the 2004 Multi-Year Program Plan for the Drinking Water Quality Program (DWQP).

Regional Water Quality Management Planning

The DWQP will use 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. The DWS has made this its highest priority, and estimates that plans will cost \$2 million/region. The DWS has also requested that regional plans be developed in Years 6 and 7, so the cost estimates are for 5 regional plans at \$2 million and the funding of a planning coordinator. This 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. The project is close to completion and will most likely transition to a larger Bay Area effort regarding water management. No future needs are estimated for implementation of activities identified through this project.

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

The DWS has agreed to include this in the DWQP, and the cost estimates for this program are \$10 million/year.

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 DWS estimates \$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. Sacramento Watershed
2. Irrigated Lands Conditional Waiver
3. Actions identified by the Central Valley Drinking Water Policy
4. Actions prioritized by Regional ELPH Plans
5. 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 cost estimates and funding availability information are from the Conveyance Program.

Treatment

The DWS 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. The DWS also recommends 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. The cost estimates is 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 cost estimates also 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, the cost estimates include 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 funded Central Valley Drinking Water Policy is assessing the status of drinking water quality monitoring in the Delta and its tributaries, as well as developing conceptual models of drinking water constituents. The cost estimates build off of this effort, 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 program 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 program 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.

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. Cost estimates are for labor to complete the above-mentioned tasks, in both the CBDA and the implementing agencies - \$700,000 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. The program 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.