

What are we proposing to do with the final assessment? Essentially, we are proposing to evaluate drinking water quality at a system-wide level (with the Delta as the nexus). We still believe the ELPH conceptual model encompasses the appropriate actions, and that solutions may physically lie outside of the Delta. This is different than the initial assessment, which evaluated the benefits of CALFED-funded projects toward CALFED targets.

Functions

What do we want to get out of our (Stage I) Final Program Assessment?

1. Through-Delta Conveyance Projects: The ROD basis conveyance decisions (Delta Cross Channel, 4,000 cfs diversion at Hood, and Franks Tract) on water quality and fish evaluations. Our proposal is to provide the broader context on drinking water quality so that the benefits and costs of Through-Delta Conveyance Projects can be compared to all other potential “ELPH” actions. We would increase coordination with DWR team so that results of both projects can be compared. At this point, we are proposing that our implementing agencies make the recommendation on TDC Projects to the BDPAC/Authority process (or whatever decision making process takes its place). Any science panel evaluation would have to be funded through the CALFED Science Program.

There is still some question as to what exactly this decision is (my guess is that it is a “do we continue” question, rather than “do we build”) – critical studies on the TDC actions will commence in the fall of 2007 and won’t be completed by December 2007.

2. Inform Stage 2 Actions (Develop an ELPH Strategy or a revised Conceptual Model of ELPH): The CALFED Water Quality Program has long struggled to develop a strategic implementation plan. Up to the end of last year, we had proposed gaining a lot of information through regional plans (and we did get some from our pilot plans). The final assessment would prioritize actions based on what we learn about their potential benefits and estimated costs. The final assessment would become the basis for a strategic implementation plan and for future funding priorities.

To clarify water quality in the current End of Stage 1/Stage 2 efforts (“next steps”): CBDA is scheduled to release a draft proposal at the end of December 2006, that report will be informed as much as possible by the work done by the final assessment up to that date and contain a generic description of potential water quality actions. The December 2006 report kicks off a year-long public process, during which we will fold in water quality information as it is developed, bring the final assessment information fully into the End of Stage I/Stage 2 report by the time it is completed in December 2007.

3. Set baselines/ assess status of drinking water quality: Assembling, synthesizing and analyzing available information on drinking water quality would be a valuable foundation for our future efforts, including informing performance measures and monitoring plans. The Independent Science Board is charged with reviewing performance measures.
4. Compare water quality strategy to potential future conditions: Once actions are prioritized, we will want to evaluate how durable they appear in the face of changes in climate, sea level, population, etc.
5. Inform other efforts:
 - a. Central Valley Drinking Water Policy: The CVDWP is pursuing technical studies to support potential regulatory protections for drinking water quality through a

Basin Plan Amendment process. CBDA staff have been working closely with this project, for the mutually beneficial development of constituent conceptual models and other products. We propose to continue our close connection, and use products to inform performance measures, monitoring, final assessment and program strategy.

- b. Delta Vision Process: The Delta Vision Process proposes to determine a future strategy for prioritizing and providing benefits within and from the Delta. Although the Delta Vision Process outline does not now address water quality, the information developed in the final assessment could inform this process, should the effort choose to look at water quality.
- c. Delta Risk Management Strategy: The DRMS project is evaluating the risks to Delta levees, the potential costs of levee failures when exposed to these risks, and the potential strategies/costs for reducing these risks/losses. The final assessment could both provide a broader context for looking at DRMS results and for developing risk reduction strategies.
- d. State of the Science Report (not final title): The CALFED Science Program is proposing to develop a report on the status of the latest science in key areas by the end of 2007. The final assessment could provide information to this report.
- e. Performance Measures/(Comprehensive) Monitoring Plan: CALFED agencies have been developing a Phase I report on performance measures to document status and report on workplans and schedules for performance measure development. In another effort, agencies have been discussing development of a comprehensive monitoring plan. The water quality program has been working within these processes to assist in synthesizing technical information and describing targets.

Schedule (DRAFT ONLY)

September 2006:	-Contract with consultant to support Final Assessment
December 2006:	-End of Stage 1/Stage 2 proposal/report released -Drinking Water Subcommittee meeting -Consultant work on Final Assessment concluded/ reported -Progress on TDC projects reported -Connection with EoS1/S2 discussed
January 2007:	-DRMS Phase 1 report released
March 2007:	-Drinking Water Subcommittee meeting -Progress on Final Assessment discussed -Results of DRMS discussed -Completed/Refined CVDWP conceptual models discussed
June 2007:	-Drinking Water Subcommittee meeting -Initial draft of Final Assessment released/presented -Performance Measures report
September 2007:	-Public Process on EoS1/S2 winding down, draft final report released -DWS recommendations to agencies on Final Assessment
December 2007:	-Make recommendations on EoS1/S2

Key Outline

1. Objectives/Targets of Program, Program Implementation Approach, Goals of Final Assessment
2. Current source water quality and opportunities for improvements at Delta intakes and upstream
3. Current (representative) treated water quality and opportunities for improvements “downstream” of Delta intakes, (to the tap or at compliance points in distribution system?)
4. Other considerations (i.e. sensitivity to future conditions)
5. Recommendations for stage 2 and conveyance decisions

Objectives/Targets of Program, Program Implementation Approach, Goals of Final Assessment

QUESTIONS:

Are the CALFED drinking water quality targets still relevant?

Should treated water targets be stated?

How are we interpreting the multiple barrier approach to drinking water quality protection (better statement of commitment to ELPH and how we interpret redundancies)?

PROPOSED APPROACH:

Implementing agencies will hold workshops to discuss and determine the answers to these questions. This section will include:

- History and background of targets
- Interpretation of “equivalent level of public health protection”
- National Approach to Drinking Water protection
- Evaluation Criteria for this “Assessment of Progress”

DWS will be informed of determinations and invited to comment/debate.

Current source water quality and opportunities for improvements at Delta intakes and upstream

QUESTIONS:

What do we know about the sources and fate of constituents of concern in the Delta watershed?

Where and what are the priorities for non-point source improvement upstream and within the Delta?

What are the known costs and benefits of such actions?

What remains unknown? What are the priorities to fill gaps?

What do we know about the role of the Delta (e.g. hydrodynamics, sources) in intake water quality?

Where and what are the priorities for improving Delta water quality through changes to Delta conveyance, addition of upstream storage, and or levee protection?

What are the known costs and benefits of these actions?

PROPOSED APPROACH:

Complete data analysis of upstream tributaries building off of conceptual models, USGS work on hydrodynamics and DWR fingerprint and San Joaquin River modeling. Prioritize watershed by load weighting if adequate data (ambient and source water quality data).

- Staff continues work with CVDWP and USGS

Investigate effectiveness and economics of nonpoint source improvement

- Build off of Joint Study on Sacramento area
- Use Reclamation consultant to expand this study to San Joaquin and Delta watersheds, and to compile and evaluate information from CALFED-funded and other studies

Describe the role of the Delta in drinking water quality.

- Staff will synthesize information from Conceptual Models, USGS and DWR modeling, the Delta Risk Management Strategy studies, and the Through-Delta Conveyance projects (Delta Cross Channel, Franks Tract, 4,000 cfs diversion at Hood) studies.
- Staff working with agencies early to assure study results fit into larger drinking water description.

**Current (representative) treated water quality and opportunities for improvements
“downstream” of Delta intakes, (to the tap or at compliance points in distribution system?)**

QUESTIONS:

What do we know about the how Delta source water quality translates into treated water quality?

What types of treatment processes are meeting CUWA expert panel benchmarks?

Where are upgrades planned that will allow plants to meet benchmarks?

What are the costs and benefits of treatment?

What do we know about the specific water quality impacts of conveying and storing raw water?

Where and what are the priorities for improving conveyance and storage of Delta raw water from the Delta to treatment plants?

What are the known costs and benefits of such actions?

What remains unknown? What are the priorities to fill gaps?

PROPOSED APPROACH:

Develop CALFED solution area representative statistics on where Central Valley surface waters are used as drinking water, including populations served, locations of treatment plants and surface water intakes, types of treatment and disinfection employed, typical treated and raw water quality, and census economic information (in GIS system).

- Staff working with DHS and CVDWP to develop this information

From statistics determine percentage of plants currently meeting CALFED benchmarks and determine the characteristics of plants not meeting benchmarks. Select a representative number of these treatment plants (7-10) and determine a) if plans exist to upgrade plant in such a way as benchmarks will be met and b) what processes/upgrades would be needed to enable plants to meet benchmarks (and comparable order-of-magnitude costs thereof), based on existing information, demonstration studies, and discussions with plant representatives.

- Staff, DHS, and CVDWP developing initial statistics and list

- Use Reclamation contractor to work with selected plants, building off of Delta Treatment Report and CALFED studies where appropriate CVDWP may build off of this work

Identify water quality issues associated with specific constituents of concern within conveyance systems and intermediate reservoirs.

- Work with DHS, DWS workgroup, and project proponents to identify initial list of issues.
- Find expertise, as appropriate, to further explore/describe these issues.
- Work with representative treatment plants and utility planners to identify actions addressing these issues, as well as associated benefits and costs (hopefully within existing plans)

Other considerations (i.e. sensitivity to future conditions)

QUESTIONS:

What is the vulnerability of Delta drinking water quality to potential future conditions in the Delta?

PROPOSED APPROACH:

Evaluate/Summarize the vulnerability of Delta drinking water quality to potential future conditions, using descriptions and/or results from Delta Risk Management Study and Delta Vision Process.

- Propose that a DWS meeting be devoted to this activity. Staff could prepare an exercise or straw proposal to assist DWS.

Recommendations for stage 2 and conveyance decisions

QUESTIONS:

How does all of this information translate into an “ELPH” strategy and Stage 2 actions?

PROPOSED APPROACH:

Synthesize information and prioritize actions to develop an “ELPH” strategy and Stage 2 actions, include research and monitoring needs.

- Staff will complete this task, bringing information to DWS as developed, and with DWS input into final product.
- Implementing agencies will review final product and make recommendations on Conveyance Decision and on Stage 2 Actions.
- An independent science panel could be convened as called for by Conveyance Decision (WQ Program does not have funding available for this activity).