

**CONSIDERATION OF A RESOLUTION AUTHORIZING THE DIRECTOR, OR
DESIGNEE, TO EXECUTE WORK ASSIGNMENT 6, UNDER TASK ORDER 8 FOR
“COMMON ASSUMPTIONS” DEVELOPMENT AND COORDINATION
Agenda Item: 10**

Meeting Date: 8-14-03

Summary: This resolution would authorize the Director, or designee, to execute a work assignment under an existing contract with CH2M Hill, Inc., to provide technical services to implementing agencies to develop “Common Assumptions” in a timely manner so that ongoing surface storage investigations may continue.

Recommended Action: Adopt Resolution No. 03-08-53

Staff Recommendation: Staff recommends the Authority adopt the attached resolution, authorizing the proposed work assignment for “Common Assumptions” development and coordination.

Background

The focus of the Bay-Delta Surface Storage Investigations is to develop preliminary design and environmental documentation for five specific potential surface storage projects:

- North of Delta Off-Stream Storage (NODOS)
- Delta Wetlands
- Enlarged Shasta Reservoir
- Upper San Joaquin Storage
- Expanded Los Vaqueros

These studies are intended to determine the costs, benefits, and impacts of each of these potential projects in a technically rigorous and defensible manner.

To facilitate comparison among these projects and potentially to other water management options (e.g. groundwater conjunctive use), it is important to define a common set of input data. The process of defining this data has been called the “Common Assumptions” activity and will, among other things, define the following baseline conditions:

- Existing condition
- 2030 no-action condition
- Alternative 2030 no-action condition

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Staff is seeking execution of the proposed Work Assignment consistent with the CALFED Programmatic Record of Decision and the Architectural and Engineering contract Standard Agreement No. 4600002623 with CH2M Hill, Inc. This Work Assignment would engage CH2M Hill, Inc. to perform general technical support services related to the following activities:

- Characterize Baseline Conditions for Surface Storage Investigations
- Formulate Baseline Input Files
- Strategic Planning for Common Assumptions

Fiscal Information

Funding Source:	Water Use Efficiency General Fund \$100,000 Storage General Fund \$340,000 Storage (DWR) Proposition 50 \$440,000
Term of Contract:	July 1, 2003 to June 30, 2004
Total amount:	\$880,000

List of Attachments

Proposed Scope of Work

Staff Contact

Name: Tom Gohring

Phone: (916) 445-0936

CALIFORNIA BAY-DELTA AUTHORITY
RESOLUTION NO. 03-08-53

CONSIDERATION OF A RESOLUTION AUTHORIZING THE DIRECTOR, OR DESIGNEE, TO EXECUTE WORK ASSIGNMENT 6, UNDER TASK ORDER 8 FOR “COMMON ASSUMPTIONS” DEVELOPMENT AND COORDINATION

WHEREAS, the Department of Water Resources, CALFED Bay-Delta Program, executed Contract No. 4600002623 with CH2M Hill, Inc., to provide environmental analysis, scientific and technical services, and engineering for oversight and coordination related to the Bay-Delta Program; and

WHEREAS, the Authority is statutorily authorized to conduct oversight and coordination related to the Bay-Delta Program; and

WHEREAS, the Authority will consider accepting assignment of Contract No. 4600002623 from the Department of Water Resources; and

WHEREAS, the CALFED Programmatic Record of Decision (ROD) stated that five surface storage projects shall be investigated as part of an integrated water management strategy; and

WHEREAS, the ROD directed the implementing agencies to conduct surface storage investigations using consistent baseline and input data; and

WHEREAS, the implementing agencies have begun a “Common Assumptions” effort to develop common modeling data and characterization of current and future baseline conditions to be used in surface storage investigations; and

WHEREAS, the California Bay-Delta Authority Act directs the Authority to provide oversight and coordination to the implementing Agencies for Bay-Delta Program Surface Storage Investigations; and

WHEREAS, the Authority requires the assistance of contractors to provide technical support to accomplish oversight and coordination of the “Common Assumptions” activities;

NOW, THEREFORE, BE IT RESOLVED that the Authority authorizes the Director, or designee to, execute Work Assignment 6 under Task Order 8 of Contract No. 4600002623, for “Common Assumptions” Development and Coordination as generally described in the attached proposed scope of work, for an amount not to exceed \$880,000, subject to appropriation of adequate funds.

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CERTIFICATION

The undersigned Assistant to the California Bay-Delta Authority does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the California Bay-Delta Authority held on August 14, 2003.

Dated:

Heidi Rooks
Assistant to the California Bay-Delta Authority

Attachment 1
Common Assumptions Development and Coordination
Task Order 8 – Work Assignment 6
Proposed Scope of Work

1. General Statement of Work

The following task descriptions are consistent with those in Task Order 8. This Work Assignment (WA) provides detailed work specifications to the Task Order listed above for Contract No. 4600002623. This IWA does not authorize work or the expenditure of funds beyond the scope of the Task Order. The authority for this work is as specified in Contract No. 4600002623, Exhibit A, Scope of Work, Section B.

Subtask – Contract Administration

The Contractor's Task Coordinator shall administer this Work Assignment in accordance with the terms specified in Contract no. 4600002623. Contract administration shall include developing agreements, processing invoices, and managing the flow of work with the sub-consultants necessary to complete the Subtasks described herein.

Subtask – Characterize Baseline Conditions for Surface Storage Investigations

The purpose of this subtask is to characterize the baseline conditions for surface water models to be used by implementing agencies to evaluate surface storage projects. Since the surface storage projects will be evaluated using a variety of numerical (computer) models, the characterizations created under this subtask must be consistent with the input needs of those models. This subtask includes computing and documenting these characterizations. The following subtask includes creating specific storage model input files containing the characterizations.

These characterizations must be compatible with the following storage project evaluations which are being conducted by implementing agencies:

- DWR
 - North of Delta Off-Stream Storage (NODOS)
 - Delta Wetlands
- USBR
 - Enlarged Shasta Reservoir
 - Upper San Joaquin Storage
- Contra Costa Water District
 - Expanded Los Vaqueros

The characterization of baseline conditions is multi-dimensional table of values that represents estimates of water demand (or changes in demand) under various conditions. Under the direction of the Authority's Task Coordinator, the Contractor shall use accepted engineering practice to estimate water demand for each element in the following multi-dimensional array:

- Baseline scenarios: Existing condition, 2030 no-action condition, and Alternative 2030 no-action condition
- Water year type: critical, dry, below normal, above normal, and wet
- Months: January, February, March ... December
- Location: region or modeling node where demand is represented
- Sector: agricultural, urban, environmental (stream flows and delta outflow)
- Water Management options:
 - Agricultural water conservation
 - Urban water conservation
 - Water recycling
 - Water Transfers
 - Desalination
 - Conjunctive use of groundwater

Following is a brief description of the baseline scenario and water management options.

Baseline Scenarios: represent conditions during specific points in time:

- Existing condition – the timeframe of the existing condition is expected to be January 1, 2003 and will be defined by staff of the Authority.
- 2030 No-Action condition – the no-action condition will be based on projections of the level of population, land use, water demand, and water development expected to occur if none of the surface storage projects are constructed.
- 2030 Alternative No-Action condition – the alternative no-action condition represents an aggressive level of demand management options including conjunctive use of groundwater, water conservation, water recycling, desalination, and water transfers. This condition is currently being defined by the Department of Water Resources (DWR) Water Plan Update study team. The Contractor shall develop this scenario to be consistent with the DWR Water Plan Update definition.

Water Management Options: represent the six options (in addition to surface storage) that were identified in the ROD as follows:

- Ag Conservation – the Contractor shall Finalize existing conditions for Common Assumption and Water Plan Update regions; Create and distribute to DWR District staff the estimated savings potential at different conservation investment levels based on the economic factors used to develop Agricultural Quantifiable Objectives as part of the Water Use Efficiency program; and create tables and graphics depicting potential conservation at different investment levels per region.
- Urban Conservation – the Contractor shall quantify savings potential based on approach presented by the Urban Conservation Quantification Ad Hoc work group.

- Recycling – the Contractor shall obtain a regional breakdown of recycling data and assumptions used by DWR to produce current Water Plan statewide estimates; use 2007 incremental value to represent potential 2030 No-Action condition; and use ROD investment levels to determine 2030 Alternative Future No-Action quantity of recycling by comparing to cost/quantity represented in current draft Water Plan documents.
- Conjunctive Use of Groundwater – The Contractor shall refine the Consumptive Use Inventory (DWR, 2001) database with the latest information from the DWR State Water Plan; and finalize criteria used to determine what projects are to be included in “No-Action” and which may be used to characterize ROD value of 0.5 to 1 MAF.
- Water Transfers – The Contractor shall query the On-Tap water transfer database and sort results by year, by hydrologic region and sum the associated quantities to portray the approximate quantities of water transferred out-of or within a region; finalize Water Transfer Tool input tables including changes to the database structure; develop data representing the quantities of water available for transfer by year type by region and the quantities of water transfers demanded by entities by region; characterize pumping priorities at Delta pumps; and characterize storage availability to shift timing.
- Desalination – The Contractor shall work with staff of the DWR Water Plan Update to translate their current estimates into a No-Action condition.

The Contractor shall prepare a Technical Memorandum describing the results of this Subtask. The Technical Memorandum shall summarize results and methods used to compute characterizations and shall include all input and output data in appendices.

Subtask – Formulate Baseline Input Files

The purpose of this Subtask is to create specific storage model input files containing the baseline characterizations developed in the previous subtask. The Contractor shall create data input files for the following digital (computer) models in the format specified by each model:

- Least Cost Projection Simulation Model (LCPSIM) – The custodian and operator of LCPSIM is DWR Surface Storage Investigation Branch. In addition to formulating input files representing the baseline characterization, the Contractor shall also gather and codify historical delivery; provide new 2030 urban demand for the No-Action scenario; adjust other inputs to reflect current characterization of conservation, recycling, desalination, conjunctive use and transfers; query DWR’s Consumptive Use Database for South Coast and Bay Area and determine subset of projects that meet No-Action condition; determine the quantity of storage available for non-local supplies; determine assumed recycling supply under No-Action and modify remaining “options” available for recycling to reflect the No-Action quantities.

- Consumptive Use Model (CU Model) – The custodian and operator of the CU Model is DWR Delta Modeling Branch. The CU Model has two versions: 1) San Joaquin Valley and 2) Sacramento Valley. The Contractor shall develop input files reflecting the baseline characterizations from in the previous subtask.
- California Simulation Model (CALSIM) – The custodian and operator of CALSIM is DWR Delta Modeling Branch. However, the USBR Modeling Branch also operates CALSIM. The Contractor shall modify 2030 baseline values to reflect the baseline characterization from in the previous subtask. This shall include editing CALSIM Table 1 summary of assumptions. The Contractor shall also perform iterative analyses of CALSIM with Metropolitan Water District operations data to reflect Bay-Delta demands.
- California Agricultural Production Model (CALAG) – The custodian and operator of CALAG is DWR State Water Planning Branch. The Contractor shall develop input files reflecting the baseline characterizations from in the previous subtask.
- Integrated Water Resources Demand Management Suite (IWR-Main) – The custodian and operator of CALAG is DWR State Water Planning Branch. The Contractor shall develop input files reflecting the baseline characterizations from in the previous subtask.
- Integrated Groundwater Surface Water Model (IGSM) - – The custodian and operator of CALSIM is DWR Delta Modeling Branch. However, the USBR Modeling Branch also operates IGSM. The Contractor shall modify 2030 baseline values to reflect the baseline characterization from in the previous subtask.
- Other Models – The Contractor shall identify other model inputs that are necessary to complete the Surface Storage Investigations.

Subtask – Strategic Planning for Common Assumptions

Under the direction of the Authority’s Task Coordinator, the Contractor shall perform the following strategic planning activities related to the Common Assumptions activities. Some of the issues that the Contractor will take into account include: 1) the demarcation between Existing and 2030 No-Action conditions; 2) possible strategies for storage investigations to tier off Programmatic Environmental Impact Report/Statement; 3) possible strategies for approaching Army Corp of Engineers 404(b)(1) of Federal Clean Water Act permit requirements; 4) consistency of model interaction for all storage/conveyance investigations; 5) inclusion and characterization of increasing export pumping capacity to 8500 cfs in baselines; and 6) the relative consistency among storage investigations in determination of purpose, need and beneficiaries.

The Contractor shall engage in the following activities to guide the Authority’s Common Assumptions actions:

- Describe the approach to the Common Assumptions effort including a general description of how surface storage, groundwater storage and water use efficiency analyses will each use the Common Assumptions data. This task shall be staffed by the Contractor’s senior

water management professionals. Contractor shall summarize this activity in a memorandum.

- Develop at least 3 presentations on the Common Assumptions approach with the target audience of agency modelers and project managers. Each presentation shall be in MS PowerPoint format.
- Prepare at least 2 presentations on the Common Assumptions approach with the target audience of informed stakeholders such as the Bay-Delta Public Advisory Committee (BDPAC) or its Subcommittees. Each presentation shall be in MS PowerPoint format.
- Describe at least 4 options for extending the Common Assumptions to be part of a Water Management Evaluation Framework. This description should include relative advantages and disadvantages of each method including the expected costs, time for implementation, and expected stakeholder concerns. Contractor shall summarize the results of this activity in a memorandum.

2. Payment

The total amount payable under this work assignment shall be no greater than \$880,000.

3. Deliverables

Deliverables and corresponding schedule for this Work Assignment is presented in the following table.

Contractor will:

- Prepare documentation establishing the basis for baseline characterization
- Develop materials as needed to promote coordination of Common Assumptions activities with efforts of DWR's Water Plan Update and implementing agencies' preparation of the Year-4 Comprehensive Evaluation of Water Use Efficiency.
- Preparation of meeting and presentation materials, agendas, and meeting notes for at least 12 meetings.

The contractor shall solicit review comments from the California Water Plan Advisory Committee, the BDPAC Water Supply Subcommittee, and the BDPAC Water Use Efficiency Subcommittee, Storage Investigations staff of implementing agencies, and Water Use Efficiency staff of implementing agencies on each interim deliverable in this sequence. The Contractor shall summarize all review comments in a memorandum to the Authority's Task Coordinator. The Authority's Task Coordinator will provide direction to the Contractor on how best to incorporate the variety of review comments (some of which may be contradictory) into the next interim deliverable in this sequence. Per the direction of the Authority's Task Coordinator the Contractor shall incorporate review comments on each of these interim deliverables. The Contractor shall obtain approval from the Authority's Task Coordinator for each step in this sequence.

4. Representative

California Bay-Delta Authority Program Manager
Tom Gohring
California Bay-Delta Authority
650 Capitol Mall, 5th floor
Sacramento, CA 95814
(916) 445-0936

5. Term

The term of this work assignment shall be for one year, commencing July 1, 2003

Table 2			
Task Order 8, Work Assignment6: Common Assumptions Development and Coordination			
Schedule and Deliverables			
Subtask	Time Estimate	Deliverables	
6e	Contract Administration	7/1/2003 through 6/30/2004	None
6f	Characterize Baseline Conditions for Surface Storage Investigations	Draft Due 9/1/03; Final Due 1/1/04	Technical Memorandum describing the data, method, analysis, and outcome of this task. Data and outcome shall be described in a narrative and summarized in tables and graphs. All computations and supporting data shall be documented in an appendix to the Technical Memorandum. Contractor shall provide the complete document in Adobe Acrobat format and hard copies. Narrative shall also be provided in MS Word format. Tables, graphs, data and computations shall also be provided in MS Excel format..
6g	Formulate Baseline Input Files	Draft Due 2/1/04; Final Due 4/1/04	Technical Memorandum describing the data, method, analysis, and outcome of this task. Data and outcome shall be described in a narrative and summarized in tables and graphs. shall provide the complete document in Adobe Acrobat and 10 hard copies. Narrative shall also be provided in MS Word format. Tables and graphs shall also be provided in MS Excel format.
		Due 5/1/04	Input files containing the baseline input data in digital format compatible with the following models: CALSIM (at least 8 files); CALAG (at least 4 files); IWRMAIN (at least 6 files); CU (at least 6 files). All data files shall be documented including description of the data sources and background computations. Contractor shall also provide 10 printed copies of the data
6h	Strategic Planning for Common Assumptions	Draft Due 8/1/03; Final Due 11/1/03	Memorandum describing the approach to the Common Assumptions effort including a general description of surface storage, groundwater storage and water use analyses will each use the Common Assumptions data. Contractor shall provide the completed document in Adobe Acrobat format and 10 hard copies. Narrative shall also provided in MS Word format.
		Draft Due 8/1/03; Final Due 2/1/04	At least 3 presentations on the Common Assumptions approach with the target audience of agency modelers and managers. Each presentation shall be in MS PowerPoint format. Contractor shall provide each completed presentation in format on Compact Disc and in 30 printed
		Draft Due 12/1/03; Final Due 4/1/04	At least 2 presentations on the Common Assumptions approach with the target audience of informed stakeholders such as the Delta Public Advisory Committee or its Subcommittees. Each presentation shall be in MS PowerPoint format. Contractor shall provide each completed presentation in digital format Compact Disc and in 30 printed copies.
		Draft Due 2/1/04; Final Due 6/30/04	Memorandum describing at least 4 options for extending the Common Assumptions to be part of a Water Management Evaluation Framework. Description should include relative advantages and disadvantages of each method including expected costs, time for implementation, and stakeholder concerns. Contractor shall provide the document in Adobe Acrobat format and 50 printed copies. Narrative shall also be provided in MS Word format. Tables and graphs, if any, shall also be provided in MS Excel