

**CONSIDERATION OF A RESOLUTION AUTHORIZING THE DIRECTOR, OR  
DESIGNEE, TO EXECUTE WORK ASSIGNMENT 2, UNDER TASK ORDER 7 TO  
EVALUATE SYSTEM-WIDE TOOLS DEVELOPED BY THE U.S. ARMY CORPS OF  
ENGINEERS FOR EVALUATION OF HYDROLOGIC, HYDRAULIC, AND  
ECOLOGIC PROCESSES FOR CALIFORNIA BAY-DELTA AUTHORITY PURPOSES**  
**Agenda Item: 10**

**Meeting Date: 8-14-03**

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**Summary:** This resolution would authorize the Director, or designee, to execute a work assignment under an existing contract with CH2M Hill, Inc., to assess the system-wide tools developed by the United States Army Corps of Engineers in the Sacramento-San Joaquin River Basins Comprehensive Study that allow evaluation of hydrologic, hydraulic, and ecologic processes related to flooding events.

**Recommended Action:** Adopt Resolution 03-08-52.

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**Staff Recommendation:** Staff recommends the Authority adopt the attached resolution, which would allow the contractor to evaluate system-wide tools developed by the United State Army Corps of Engineers in the Sacramento-San Joaquin River Basins Comprehensive Study.

**Background**

The Sacramento-San Joaquin River Basins Comprehensive Study developed a plan to increase flood protection and ecosystem restoration in the Central Valley. The Comprehensive Study developed hydrologic and hydraulic models, as well as topographic data for the Central Valley.

Scientific advances in numerous disciplines have revealed misconceptions in previous assumptions about the structure and function of riverine and floodplain ecosystems. These advances have also highlighted the many direct and indirect adverse consequences of human interventions in these systems for flood management, water supply, urban, and agricultural land use, and other purposes. The modeling tools developed by the Comprehensive Study could potentially be used to meet some of the Bay-Delta Program objectives.

**Fiscal Information**

**Funding Source:** General Fund

**Term:** June 1, 2003 through September 30, 2003

**Total amount:** \$47,234

Agenda Item: 10  
Meeting Date: 8-14-03  
Page 2

**List of Attachments**

Proposed Scope of Work

**Staff Contact**

**Name:** Sergio Guillen

**Phone:** (916) 445-0974

CALIFORNIA BAY-DELTA AUTHORITY  
RESOLUTION NO. 03-08-52

CONSIDERATION OF A RESOLUTION AUTHORIZING THE DIRECTOR, OR DESIGNEE, TO EXECUTE WORK ASSIGNMENT 2, UNDER TASK ORDER 7 TO EVALUATE SYSTEM-WIDE TOOLS DEVELOPED BY THE U.S. ARMY CORPS OF ENGINEERS FOR EVALUATION OF HYDROLOGIC, HYDRAULIC, AND ECOLOGIC PROCESSES FOR CALIFORNIA BAY-DELTA AUTHORITY PURPOSES

**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 Sacramento-San Joaquin River Basins Comprehensive Study has developed important engineering and technical information for California's Central Valley; and

**WHEREAS**, the engineering and technical information developed through the Sacramento-San Joaquin River Basins Comprehensive Study may have applications for the Bay-Delta Program; and

**WHEREAS**, it is the goal of both the California Bay-Delta Program and the Sacramento-San Joaquin River Basins Comprehensive Study to have the respective program activities integrated to the greatest extent possible; and

**WHEREAS**, the Authority requires the assistance of contractors to investigate opportunities and applications for information developed by the Sacramento-San Joaquin River Basins Comprehensive Study;

**NOW, THEREFORE, BE IT RESOLVED** that the Authority authorizes the Director, or designee, to execute Work Assignment 2, under Task Order 7 of Contract No. 4600002623 (CH2M Hill, Inc.) for evaluation of system-wide tools developed by the U.S. Army Corps of Engineers as described in the attached proposed scope of work for an amount not to exceed \$47,234, subject to appropriation of adequate funds.

CERTIFICATION

Agenda Item: 10

Meeting Date: 8-14-03

Page 4

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**  
**Evaluation of System-Wide Tools**  
**Task Order 2 - Work Assignment 8**  
**Proposed Scope of Work**

***1. General Statement of Work***

The following task description is consistent with those in Task Order 7. This Work Assignment (WA) provides detailed work specifications to the Task Order listed above as specified in Contract No. 4600002623 (CH2M Hill, Inc.), Exhibit A, Scope of Work, Section B. This WA does not authorize work or the expenditure of funds beyond the scope of the Task Order.

The Contractor shall assist the California Bay-Delta Authority in assessing the system-wide tools developed by the Sacramento-San Joaquin River Basins Comprehensive Study that allow evaluation of hydrologic, hydraulic, ecologic processes, flood damage analysis, and ecosystem functions within the river basins. The Contractor will recommend how these models can be used directly or indirectly to meet regional Bay-Delta Program multi-purpose objectives. The task includes providing expertise, information, and recommendations on how to utilize these modeling tools to the greatest extent possible. The Contractor shall identify opportunities in the existing modeling tools, as well as provide recommendations on optimizing the use of such tools for meeting Bay-Delta multi-purpose objectives. The Contractor shall document the findings in a working-level draft report to the Bay-Delta Authority.

Activities will include:

- Meetings and discussions with modeling staff from agencies, including the US Army Corps of Engineers, and their consultants, to assess the capabilities and limitations of the models.
- Assist in the formulation of strategies to use the flood management modeling tools to meet Bay-Delta multi-purpose objectives.
- Write a recommendations report of the assessment and optimization of the flood modeling tools to meet Bay-Delta multi-purpose objectives.

Technical memoranda will be prepared by the Contractor, as appropriate, to document approach(es) and assumptions used for assessing the modeling tools.

Individual tasks will include, but not be limited to:

- a. Define regional Bay-Delta Program multi-purpose objectives.

- b. Define Bay-Delta Program Modeling Needs - Define purpose and objectives of modeling efforts, describe current modeling activities, and describe the program for model documentation and maintenance.
- c. Establish Modeling Review Committee consisting of representatives of Bay-Delta implementing agencies, US Bureau of Reclamation, US Army Corps of Engineers, and Department of Water Resources, responsible for modeling activities.
- d. Evaluate the Sacramento-San Joaquin River Basins Comprehensive Study Modeling Efforts - Define purpose and objectives of modeling efforts, extent and accuracy of surveying and mapping, types and limitations of models developed, status of modeling activities, and the program for model documentation and maintenance. Models to be evaluated include the HEC-5 hydrology models, UNET hydraulics simulation, FLO-2D hydraulics simulation, DSM2 Delta simulation, levee reliability evaluation, and HEC-FDA flood damage analysis simulation.
- e. Identify Synergies between Bay-Delta needs and the Comp Study Modeling efforts.
- f. Develop Modeling Strategy/Plan for Bay-Delta Program.
- g. Prepare Technical Memorandum.

## **2. Payment**

The total amount for this Work Assignment shall be no greater than \$47,234.

## **3. Deliverables**

Contractor shall deliver a recommendations report at the end of the term of this WA that describes the recommended uses of flood modeling tools developed by the Sacramento-San Joaquin River Basins Comprehensive Study to meet Bay-Delta multi-purpose objectives.

Contractor will:

- Attend bi-weekly meetings upon request and provide pertinent summaries of the work.
- Incorporate comments by Bay-Delta manager on all draft documents.
- Prepare technical memoranda to document approach(es) and assumptions used for preparation of the recommendations report.
- Prepare summaries and graphics, as directed, detailing work progress for use by Bay-Delta managers.

## **5. Representative**

Bay-Delta Authority Program Manager

Sergio Guillen

Agenda Item: 10  
Meeting Date: 8-14-03  
Page 7

California Bay-Delta Authority  
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**6. Term**

Contractor shall complete all work under this WA within the following time period:

Start Date:	June 1, 2003
Termination Date:	September 30, 2003