

# CA - PMM

**Proposal Name:** California Water Data Management

**Proposal Priority #:** 4

**Department:** Water Resources

**Revision Date:** Monday, January 12, 2009

## Concept Statement

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### Description

**Brief description of the proposed project:**

Assess and implement an effective and efficient overall data management strategy and supporting technical information infrastructure for the various water data and water related information stores including California Data Exchange Center (CDEC), Water Data Library (WDL), Bay-Delta and Tributaries (BDAT), Iteragency Ecology Program (IEP), and California Integrated Management Information System (CIMIS).

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### Need Statement

**High Level Capabilities Needed:**

Develop a standard approach and technologies to data collection, storage, back-up and recovery.  
Define the data management strategy and data dictionary.  
Integrate data with a GIS-based presentation.  
Expand business and data analysis and forecasting capabilities.

**What is Driving This Need?**

These information stores were created over time to support multiple business needs of the Department, the State, multiple federal agencies, the State Water Contractors, Dam operators, and various other constituents in the state and country. With the passage of time, the inevitable redundancy in data collection, transfer, storage and retrieval has not been assessed. As a result, the Department cannot provide comprehensive nor consistent data to its constituents and cannot streamline its data collection process for staff efficiencies.

**Risk to the Organization if This Work is Not Done:**

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The inefficiencies and out of synch data gaps will continue to exacerbate with the passage of time. For example, the scope and level of effort to develop the mandated five year update to the State Water Plan (Bulletin 160) grows exponentially as pressure mounts for the Department to provide a plan that encompasses a growing population, diversifying needs, ecological concerns, and shrinking supply. The disparate data sources result in a significant amount of staff hours spent reconciling the data instead of interpreting the data and responding to legal challenges.

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### Benefit Statement

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#### Intangible Benefits

**Process Improvements** (describe the nature of the process improvement):

Development of a capital outlay project (storage, flood management, levee development/repair) life cycle that is integrated with the funding streams that support such projects.

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**Other Intangible Benefits:**

Integration of real-time hydrologic, environmental and weather information (e.g., river forecasting, water supply forecasting, and snow melt forecasting) with reservoir operations, State Water Project operations, flood operations, hydraulic model development, and Delta water quality monitoring.

Integration of the California levee inventory with annual levee inspections (e.g., flood damage, levee encroachment) and levee integrity modeling.

#### Tangible Benefits

**Revenue Generation** (describe how revenue will be generated):

None.

**Cost Savings** (describe how cost will be reduced):

TBD. Savings will accrue with decreased data redundancy and improved data quality (thus reduced QA/QC effort.)

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**Cost Avoidance** (describe the cost and how avoided):  
None.

**Risk Avoidance** (describe the risk and how avoided):  
Better data mangement in this area reduces risk of miss information and incorrect analysis results due to incorrecct data.

**Improved Services:**  
  
In conjunction with the Enterprise GIS Program, deploy a map based view of the data with the appropriate overlays (e.g., levee system, State Water Project, Delta, area of responsibility, environmental information). This will enhance the distribution of critical data and analysis to the Department and its stakeholders

### Consistency

"No" Responses		Rationale	Action Required
Enterprise Architecture			Proposal is consistent with EA. No action required.
Business Plan			Proposal is consistent with the Business Plan. No
Strategic Plan			Proposal is consistent with Department's Strategic Plan. No action required.

### Impact to Other Agencies

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## Nature of Impact to Other Agencies

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<b>Agency:</b>
<i>Describe the nature of the impact:</i>
TBD. After the implementation of the project, it may be of benefit to other State Agencies. We can explore expansion and synergy with other Agencies at that time. However, there are no dependencies on other State Agencies to successfully implement this project.

<b>Agency:</b>
<i>Describe the nature of the impact:</i>

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### Solution Alternatives

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#### Alternative 1:

No specific alternatives have been explored at this time. Solution Alternatives will be developed fully as an integral component of the business justification that will determine the best value solution to meet the business drivers and objectives. NOTE: The Rough Order of Magnitude is estimated at \$7 million for the entire project.

#### Technical Considerations for Alternative 1:

ROM Cost:

to

Note: high end of range must not exceed 200% of low end of range

#### Alternative 2:

#### Technical Considerations for Alternative 2:

ROM Cost:

to

Note: high end of range must not exceed 200% of low end of range

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<b>Alternative 3:</b>

<b>Technical Considerations for Alternative 3:</b>
ROM Cost: _____ to _____ <b>Note: high end of range must not exceed 200% of low end of range</b>

### Recommendation

**Comparison:**

Alternative 1	ROM Cost	Risk
	-	
Alternative 2	ROM Cost	Risk
	-	
Alternative 3	ROM Cost	Risk
	-	

**Conclusions:**

1	The system that will be implemented will meet all of the business drivers of the Department to receive the optimum ROI.
2	The system will conform to all standards and business plans to ensure consistency and leverage existing infrastructure.
3	The system will be designed holistically and implemented incrementally to ensure success and to deliver business value.
4	

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**Recommendation:**

To proceed with the California Water Data Management Program.

### Project Approach *(if known)*

<b>System Complexity:</b>		System Business Hours: <i>(e.g., 24x7, 9am-5pm)</i> :	
Architecture	<input type="checkbox"/> Mainframe	<input type="checkbox"/> Client Server	<input checked="" type="checkbox"/> Web Based
Technology	<input type="checkbox"/> New	<input checked="" type="checkbox"/> New to Staff	<input checked="" type="checkbox"/> In-House Experience
Implementation	<input type="checkbox"/> Central Site	<input checked="" type="checkbox"/> Phased Roll-out	
M & O Support	<input type="checkbox"/> Contractor	<input checked="" type="checkbox"/> Data Center	<input type="checkbox"/> Project <input type="checkbox"/> Returned to Sponsor
Procurement Approach: <i>(consult with OSI Procurement Center)</i> TBD			Number of Procurements:  TBD
Open Procurement?		Delegated Procurement?	
Scope of Contract			
Anticipated Length of Contract:	Years /	extensions for	years