

**Development of a Spatial Information and Monitoring Data Management System for Category III Funded Projects.**

**Applicant:**

EDAW, Inc. in association with R2Resources  
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Attn: David Blau

**Project Description:**

This project would involve development of a watershed based GIS and data management system to track monitoring results of Category III funded projects. The primary objective of the project would be to improve system-wide reporting and tracking of current and future Category III projects by providing a consistent framework for storage and retrieval of monitoring data (including spatial referencing).

The information system would be developed in consultation with applicants and CALFED agency staff and would be designed to be consistent with the monitoring guidelines currently being prepared by CALFED. Deliverables would include, the information management system itself (including tailored graphical user interface), development of a pilot project, and documentation explaining how to access and transfer data to the information management system.

**Approach/Tasks/Schedule:**

The overall approach for this project would be to: (1) informally review the range of Category III projects and monitoring data (including data from previously funded projects); (2) develop a list of options, methodologies and variables to include in a data management system (with agency and CALFED consultation); and (3) to develop a pilot application for a particular watershed. The project would take approximately nine months to complete.

Specific tasks would include:

- A. Survey existing environmental monitoring efforts in the CALFED region.
- B. Survey the use of GIS for managing environmental and monitoring data.
- C. Review CALFED Comprehensive Monitoring Program.
- D. Develop a number of spatial data management options.
- E. Conduct workshop to explain data management options.
- F. Conduct pilot study within an approved watershed.
- G. Produce document explaining the system
- H. Develop Internet access and procedure for submittal of data.

**Justification for Project and Funding:**

The monitoring efforts associated with all the Category III projects will produce an enormous quantity of data. The utility and benefit of this data to improve current projects and to inform future decisions will depend on the quality, availability, and type of the data. A structured data management system would improve all three of these variables and aid in evaluating project performance over time, including how the cumulative sum of several projects in a watershed may be impacting overall restoration goals.

One of the primary tenets of adaptive management is that the results of previous actions are used to guide future decisions or to suggest a change of plans. Standardization of monitoring protocols would facilitate analysis and comparison between different sites and/or methodologies and allow for a comprehensive evaluation of the overall Category III process.

**Budget Costs and Third Party Impacts**

Although any budget figure would depend on the scope of the data to be included in the system and the amount of stakeholder consultation, an approximate estimate for completing the assignment as described above would be \$200,000. No third party impacts would result from implementing this project.

**Applicant Qualifications**

EDAW Inc. specializes in developing, analyzing and managing environmental data, including development of GIS information management systems for large scale resource management projects. EDAW has developed several automated planning modules for the Department of Defense and other large organizations which have a need to readily access environmental data and information that is spatially oriented.

R2 Resource Consultants Inc. specializes in the design of monitoring and impact studies focused on the collection and analysis of aquatic and fisheries data. R2 has also developed a number of quality assurance project plans (QAPP) and provided environmental audit expertise to clients for documenting proper protocol selection and application, chain of custody procedures, and data validation.

**Monitoring and Data Evaluation**

This project is specifically designed to facilitate monitoring and data evaluation of the full range of CALFED restoration projects. It would provide consistency in the reporting and storage of monitoring data, act as a clearing house for such information, and facilitate user friendly access to the information, including internet access.

**Local Support/Coordination and Compatibility with CALFED Objectives**

The intent of this program would be to develop a system that is useable and accessible to the general public as well as specific agencies and interest groups. A key step in meeting this goal will be allowing the stakeholders and end-product users to assist in the development of the system. By working with local project leaders, agency personnel and other information stakeholders, the final product would be highly compatible with local needs and CALFED objectives and programs.