CALFED Science Program

2006 Focused Proposal Solicitation Package

June 30 – August 31,2006

CALIFORNIA BAY-DELTA AUTHORITY

STATE OF CALIFORNIA resources AGENCY

Delta Waterways

SYNOPSIS

Proposal Solicitation Package (PSP) Synopsis

Through the California Bay-Delta Authority, the CALFED Science Program is seeking to invest grant funding in projects that will fundamentally advance the understanding of the complex environments/systems within the CALFED jurisdiction to aid policy-makers and resource managers. The geographic area of interest is the CALFED Bay-Delta System which includes California's Sacramento and San Joaquin River watersheds and the San Francisco Estuary with a focus on the Delta (Figures 1a and 1b).

Specifically, the Science Program is soliciting research proposals focused on the following four topics:

1. Environmental Water
2. Aquatic Invasive (Exotic) Species
3. Trends and Patterns of Populations and System Response to a Changing Environment
4. Habitat Availability and Response to Change

Award Information

- Anticipated Type of Award: Grant
- Estimated Number of Awards: 5 - 10
- Anticipated Total Funding: Approximately $6 million
- Potential Funding per Grant: Less than $6 million
- Length of Funding: Up to 3 years

Eligibility Information

Any public agency or nonprofit organization capable of entering into a grant agreement with the State or Federal government may apply. This includes, but is not limited to: (1) local agencies; (2) private nonprofit organizations (3) tribes; (4) universities; (5) State agencies; and (6) Federal agencies.

Deadline

Proposals will be accepted from June 30 – August 31, 2006.

Contacts

Proposal Submittal Process Helpline: (877) 408-9310 or via email:
help@solicitation.calwater.ca.gov

CALFED SCIENCE PROGRAM

2006 FOCUSED PROPOSAL SOLICITATION PACKAGE

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I. Introduction

A. Overview of the CALFED Bay-Delta Program

The CALFED Program is a cooperative effort of more than 20 State and Federal agencies with management and regulatory responsibilities for the San Francisco Bay, Sacramento-San Joaquin Delta, and their tributaries and watershed. The mission of the Program is to develop and implement a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system (Figures 1a and 1b). The mission is achieved through the following four Program objectives:

- **Improve Ecosystem Quality**. Improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta system to support sustainable populations of diverse and valuable plant and animal species.
- **Improve Water Supply Reliability**. Reduce the mismatch between Bay-Delta system water supplies and current and projected beneficial uses that depend on the Bay-Delta system ecosystems.
- **Improve Water Quality**. Provide good water quality for all beneficial uses.
- **Improve Levee System Integrity**. Reduce the risk to land use and associated economic activities, water supply, infrastructure, and ecosystem from catastrophic failure of Delta levees.

In 2003, a new law created the California Bay-Delta Authority (Authority) that is charged with ensuring that policies are carried out as described in the CALFED Bay-Delta Program Programmatic Record of Decision and the Final Programmatic Environmental Impact Statement/Impact Report (ROD and PEIS/EIR, respectively). The Authority is specifically charged with providing accountability, ensuring balanced implementation of CALFED objectives, tracking and assessing CALFED progress, using sound science, ensuring public involvement and outreach, and coordinating and integrating related government programs.

The Authority, until July 1, 2006 was the implementing agency for the CALFED Science Program. The Budget Act of 2006 and accompanying trailer bill (AB1803) transfer that function to the Resources Agency.

B. Overview of the CALFED Science Program

The long-term goal of the Science Program is to establish a body of knowledge relevant to CALFED actions and their implications. That body of knowledge, both in perception and reality, must be unbiased, relevant, authoritative, integrated across program elements, and communicated to the scientific community, CALFED agency managers, stakeholders, and the public. The mission of the Science Program is to integrate world-class science and peer review into every aspect of the CALFED program to develop the best scientific information possible to guide decisions and evaluate actions that are critical to CALFED's success.

C. Background of this Proposal Solicitation Package (PSP)

Goals of this PSP

The PSP is one of several tools the Science Program uses in accordance with its mission and goals to establish unbiased and authoritative knowledge directly relevant to CALFED actions. The goal of this PSP is not to create knowledge for its own sake nor is it to fund routine monitoring or mandated projects. The goal is to invest in knowledge that will fundamentally advance the understanding of the complex environments/systems within the CALFED jurisdiction to aid policy-makers and managers. This knowledge must be timely and highly relevant to CALFED decision-making. This focused PSP will help to achieve this goal by:

1. identifying scientific unknowns of the highest priority to the CALFED community prior to the opening of the PSP;
2. soliciting for and supporting new scientific studies that closely investigate these scientific unknowns;
3. thoroughly analyzing what is learned through unbiased scientific review;
4. clearly articulating what is learned through publications, conferences, workshops, and web-sites.

Development of this PSP

Unlike the 2004 Science Program PSP which covered a very broad array of CALFED Program needs and research questions, this PSP is more focused in order to accelerate the review process and maximize the use of scarce funds by more precisely targeting CALFED priority issues.

The 4 topics in the Priority Research Topic List of this PSP were developed by a Selection Panel comprised of agency representatives, stakeholders, and independent scientists whose combined expertise covered the breadth of CALFED issues and interests (panelist names and affiliations are available through the PSP website at http://science.calwater.ca.gov/psp/psp_package_2006.shtml). To assist them in defining and selecting these topics the panel utilized information from recent public events and processes and from priority management issues solicited from implementing agencies and stakeholder groups. Some of these efforts included:

- Pelagic Organism Decline (POD) Report, Review, and Responses
- Interagency Ecological Program (IEP) Delta Smelt Review
- Environmental Water Account (EWA) Reviews
- Operational Criteria and Plan (OCAP), Biological Opinion, and Review
- Mercury Workshop
- Delta Science Panel experts
- Delta Risk Management Strategy (DRMS) experts
- Water Quality experts
- Agriculture experts
- Other

Priority issues were considered in the context of currently funded ongoing research, such as the Interagency Ecological Program (IEP) Pelagic Organism Decline work, the Ecosystem Restoration Program's (ERP) assisting farmers in integrating agricultural activities with

ecosystem restoration PSP, and other agency efforts focused on addressing management needs such as the Delta Risk Management Strategy (DRMS). An additional consideration was the minimum two to three year time frame for most research projects to yield useful products. Integration and synthesis of available information, models, and interdisciplinary approaches were stressed.

In addition to recommending the research topics the Selection Panel also recommended that each priority topic area be designated a minimum of $1 million of the total $6 million of available funding for this PSP (assuming there are enough adequate proposals per topic).

This PSP process and the Priority Research Topic List were open to the public for comment on June 6, 2006 and approved by the Authority board on June 15, 2006 (see Figure 2 for a summary of the PSP process and schedule). To view the public comments and the Science Program response please visit the Science Program PSP website at http://science.calwater.ca.gov/psp/psp_package_2006.shtml

Guiding Documents

Project proponents unfamiliar with CALFED goals, objectives, and issues are encouraged to review the documents that guide CALFED activities. These documents and a host of other useful information can be found through the CALFED website (http://www.calwater.ca.gov) and the Science Program website (http://science.calwater.ca.gov). Following are some specific documents that will be particularly helpful to proponents wishing to familiarize themselves with broad and specific CALFED issues:

CALFED-Wide Perspective:

- CALFED Record of Decision (ROD): http://calwater.ca.gov/CALFEDDocuments/CALFEDDocuments.shtml
- CALFED 10 year action plan: http://www.calwater.ca.gov/Revitalizing_CALFED/RevitalizingCALFED.shtml
- Science Program 2004 PSP: http://science.calwater.ca.gov/psp/psp_toc_2004.shtml
- ERP Draft Stage 1 implementation plan: http://calwater.ca.gov/Programs/EcosystemRestoration/Ecosystem_ReportsDocuments.asp

CALFED Specific issues:

- Pelagic Organism Decline (POD) Report and IEP 2006-2007 Workplan: http://science.calwater.ca.gov/
- Environmental Water Account workshop and reviews: http://science.calwater.ca.gov/
- Operational Criteria and Plan (OCAP), Biological Opinion, and Review: http://science.calwater.ca.gov/
- Delta Risk Management Strategy (DRMS): http://www.drms.water.ca.gov/

CALFED previously funded efforts:

- Science Program
  2004 Science Program PSP funded proposals:
  http://science.calwater.ca.gov/psp/psp_package_2004.shtml

- ERP
  ERP directed actions and research grants:
  http://calwater.ca.gov/Programs/EcosystemRestoration/Ecosystem_Grants.asp

D. Funding for this PSP

Approximately $6 million is targeted for this focused solicitation, reflecting the Proposition 50 funds that have been appropriated to the Authority for these purposes. Of this $6 million, each of the four priority topic areas of this focused PSP have been designated a minimum of $1 million assuming there are enough qualified proposals per topic area.

The Science Program anticipates an additional $6 million will be available in 2007 for another focused solicitation. It is hoped the Science Program PSP will be an annual event, however, due to the uncertainty of funding sources there is no guarantee.

II. Priorities of this Proposal Solicitation Package (PSP)

A. Preamble

The Priority Research Topic List was developed by a Selection Panel through the careful consideration of broad CALFED needs and objectives. The geographical area of interest is the San Francisco Bay-Delta System (Figures 1a and 1b). While viewing the Topic List, proponents should keep in mind several aspects of projects the Selection Panel stressed as areas of great need that would add high value:

- **Interdisciplinary Projects** – the Science Program is in a fairly unique position to fund interdisciplinary projects through this PSP that sometimes are more difficult to fund through other CALFED agency mechanisms. Interdisciplinary studies are crucial to extract the knowledge needed for management to answer extremely complex questions about a correspondingly complex Bay-Delta system whose issues are inherently interconnected across multiple disciplines of study. Additionally, from a CALFED programmatic standpoint, interdisciplinary studies typically cut across multiple CALFED needs thus maximizing the use of scarce funds.
- **Analysis, integration and synthesis of existing information** – the Bay-Delta system has a strong history of monitoring and research that has resulted in a wealth of accessible information. However, much of this information remains only partially analyzed. A very cost effective way to provide CALFED resource managers and policy-makers needed information is to analyze, integrate, and synthesize existing information across data sets in new ways.
- **Models** – models can be an extremely useful tool management uses to make predictions on a variety of scenarios pertinent to CALFED issues. Models are a direct and tangible way science information can be incorporated into management practices and policy decisions (finding direct and practical connections between science and management is a constant challenge for the CALFED community and any projects that help to facilitate this connection will be viewed favorably). Models that incorporate multiple disciplines of study and synthesize information to understand system level responses and connections are especially desirable.

Each of the topics in the Priority Research Topic List (below) is composed of the following sections:

1) the need/importance and relevance for the research tied to specific CALFED programs so that outcomes from the research can be directly tied to a management/policy need;
2) questions that define the unknowns that the research needs to clarify/answer as it relates to the need/importance as stated above;
3) key study components that clarify the type of research efforts expected by the researcher(s) that fit into the broader efforts by CALFED agencies.

All proposals must address at least one of the topic needs and questions and contain at least one of the associated key study components within the selected topic. Cross cutting proposals that address more than one topic need and study question and contain many key components are encouraged. Proposals that address a topic need through additional study questions and key components not present in the Topic List are also encouraged as the Science Program wishes to

stimulate creative thinking and new ideas. A critical aspect of all proposals will be to address the need as directly and clearly as possible.

B. Priority Research Topic List

Topic 1: Environmental Water

Need**:**

To effectively manage water projects in the Delta and upstream watershed to allocate water to protect and recover at risk fish species through both prescriptive standards and flexible, adaptive programs in a way that also provides reliable water supply and water quality.

Questions to be addressed by the research:

- How effective has previous use of discretionary environmental water (i.e. Environmental Water Account and CVPIA (b)(1) and (b)(2)) been for protection and recovery of at-risk fish species of the Bay-Delta estuary?
- How could existing discretionary environmental water supplies be utilized to more effectively protect and recover at-risk fish species?
- What is the relative importance of various key factors such as fish entrainment, Delta inflow (overall or from specific sources such as Sacramento or San Joaquin Rivers), Delta outflow, exports, E/I ratio, channel geometry, invasive species, water quality, temperature, turbidity, toxicants, and others in determining how environmental water of all types should be utilized? What other factors could be considered and what would their relative importance be? Is Delta inflow a more important factor in the South or the North Delta in determining how environmental water should be utilized?
- What effect could a different amount (greater or smaller) of environmental water have on fisheries?
- What alternative or additional ways to manage water would provide fish protection benefits? How would the benefits of those actions compare to current benefits of environmental water use?

Key Components:

- An analysis of the effects of the existing EWA and (b)(2) using modeling and analytical approaches;
- An examination of the amount of environmental water use from (b)(2) and EWA that is needed to show a measurable effect on at-risk fish populations;
- An analysis to determine the most effective way to use environmental water to provide the largest benefits to at-risk fish populations, including an analysis of the most important factors that should be considered in managing environmental water use;
- A study to determine what actions, including environmental water use, could be taken to affect entrainment or migratory movement of fish away from the pumps.

Topic 2: Aquatic Invasive (Exotic) Species

Need**:**

Aquatic invasive species have an impact on at-risk species, water quality, and Delta ecosystems that can severely limit current and future management options including the constraint of water operations.

Questions to be addressed by the research:

- How will aquatic invasive species affect future Delta environmental conditions and what is their impact on the ability to achieve potential desired future conditions in the Delta?
- What are the key factors allowing successful establishment/distribution/survival/control of invasive species?
- What will the response of invasives be to possible future conditions?
- What are some likely future invasives and can actions be taken to reduce the introduction and effects of these invasives?
- How might management options alter likelihood of invasibility?
- To what extent do invasives limit options for managing the Delta?

Key Components:

- The development and application of scenarios and models that could be used to predict successful establishment of invasives under a host of future scenarios including different water management regimes, climate change, land use change, catastrophic events, etc;
- An exploration of invasive control measures or incentive programs successfully used locally and elsewhere;
- Justification of choice of species or group of species in terms of their impact on the Delta ecosystem. Factors to consider:
    - Abiotic: temperature, salinity, depth, flow, turbidity, contaminants, etc.
    - Biotic: natural population cycles, response to other invasives, competitors, predators, etc.
- Example invasives of concern:
    - *Egeria densa* (Common waterweed)
    - *Eichhornia crassipes* (Water hyacinth)
    - *Corbula amurensis* (Overbite clam)
    - *Corbicula fluminea* (Asian clam)
    - *Potamopyrgus antipodarum* (New Zealand mudsnail)
    - *Esox lucius* **(**Northern Pike)
    - Planktonic invaders

Topic 3: Trends and Patterns of Populations and System Response to a Changing Environment

External and internal drivers and environmental changes influence populations of key species such as Delta smelt, important structures such as levees, and system water operations. For example, climate change is expected to not only change the hydrology of watershed rivers, but also raise ocean levels. These two factors alone may alter the salinity balance of the Delta. The pattern of how species, structures and system water operations might respond to these changes is not well understood in that the response may be stepwise, eventually reaching thresholds that cause potential catastrophic changes, or gradual with concomitant gradual or linear responses of the attribute of concern.

Need**:**

To better understand, through use and synthesis of existing information, present and future dynamics of populations of key species, and/or response of structures and

system operations to anticipated environmental changes which may be a function of natural or human caused phenomena.

Questions to be addressed by the research:

- What are the driver/response relationships of key species, and/or structures (e.g. levees) or system water operations? How are these relationships best described (e.g. continuous, stepwise, other)?
- What are the implications for management strategies of the type of response of species or structures?
- What models are needed to describe these driver/response relationships?

Key Components anticipated to be used in developing a proposal to address the need and questions:

- Response variable selection (e.g. species, structure or operations) and justification;
- Driver (environmental variables that may change and influence the response variable) selection and justification;
- Approach (methods) to determine driver/response relationships;
- Application to selected geographic areas in the Bay-Delta region;
- Model development and management implications;
- Demonstration of heavy use and synthesis of existing information;

Topic 4: Habitat Availability and Response to Change

Need**:**

Habitat availability for key Delta species and communities will change as a result of future changes in Delta configuration and use. Long-term Delta planning requires a better understanding of the effects of anticipated changes (climate, population growth, resource use) and unanticipated changes (earthquakes) on habitats and communities of key species and the potential for remedial action.

Questions to be addressed by the research:

- How will the extent and quality of Delta habitat for key species be affected by a variety of future scenarios such as population growth, invasive species, climate change, sea level rise, subsidence, and earthquakes?
- How will future scenarios affect abiotic and biotic drivers and how will these drivers, in turn, affect key species at different geographic and temporal scales? How will key species respond to these changes?
- How can habitat requirements continue to be met following changes in Delta configuration and use?

Key Components:

- An inventory and analysis of current habitat extent and condition, and spatially explicit data on species relative abundance and demographic characteristics;
- The development and use of spatially-explicit models and databases to analyze and map the potential effects of anticipated stressors on existing habitats;
- The development and use of population models to evaluate effects of changes in habitat on demographic characteristics of key species such as fecundity, growth, survival,

abundance, etc;

- Factors/drivers to consider:
  - Abiotic: temperature, salinity, depth, hydrologic regimes, turbidity, contaminants, etc.
  - Biotic: natural population cycles, response to invasives, competitors, predators, lower trophic levels,
  - How future scenarios of human population growth, resource use, climate change, earthquakes etc. will affect abiotic and biotic factors.

C. Other Desirable Project Features

Collaborative Proposals – The Science Program encourages applicants from different institutions to work together on proposals. Collaborative approaches have been identified as a means of strengthening communication between different institutions; this communication can last well beyond the course of a single study and lead to further collaborative projects, and collaborative proposals typically involve applicants and institutions with different strengths and expertise resulting in stronger interdisciplinary projects.

Matching Funds – Because the CALFED Science Program has limited funds, proposals that can demonstrate they will use other funding sources (matching funds, cost sharing, in kind services, etc.) to leverage Science Program funds will have a greater likelihood of being selected over projects that do not have matching funds.

III. Proposal and Submittal Requirements

A. Overview

Successful proposals are those whose proponents thoroughly and accurately complete the application forms and follow the prescribed format for the proposal document. All proposals must be submitted electronically through the PSP web-site to be considered for funding; hard copies of proposals will not be accepted. Proposals will be accepted through the website from June 30 – August 31, 2006. Before applying, please make sure you are eligible to receive funds by carefully reading the information below. If you need assistance please contact the helpline at (877) 408-9310 or via e-mail: help@solicitation.calwater.ca.gov. A brief summary of differences between this PSP and the Science Program 2004 PSP is available through the PSP website at http://science.calwater.ca.gov/psp/psp_package_2006.shtml

B. Eligibility

Any public agency or a nonprofit organization capable of entering into a grant agreement with the State or federal government may apply. This includes, but is not limited to: (1) local agencies; (2) private nonprofit organizations; (3) tribes; (4) universities; (5) State agencies; and (6) federal agencies. Individuals and private for-profit entities are not eligible for this PSP, and should not apply.

C. Confidentiality and Conflict of Interest

Applicants should be aware that the titles and executive summaries of all abstracts will be available for viewing on the Science Program website immediately after the solicitation has closed. Comments from all levels of the review process will also be posted on the website and distributed as part of the public comment process. After the Authority takes formal action on the Technical Synthesis Panel's final funding recommendations, the complete text of all funded proposals will be posted on the Science Program website. By submitting a proposal, the applicant agrees to waive any right to confidentiality of the proposal[1]. For more information on confidentiality, please contact the PSP helpline.

Both applicants and individuals who participate in reviews of submitted proposals are bound to State and federal conflict of interest laws. Any individual who has participated in planning or setting priorities for this PSP or who will participate in any part of the grant development and negotiation process on behalf of the public is ineligible to receive funds or personally benefit from funds awarded through this PSP. To help the Science Program manage potential conflicts, applicants should use the PSP Conflict of Interest Form (section III.E. below) to fully disclose individuals who participated in writing or who will benefit from the project if funded. Individuals who have participated in development of this PSP should not submit proposals.[2]

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[1] Although the Science Program will not post proposal documents for unfunded proposals on their website, all submitted proposals, whether funded or not, are considered public documents and subject to disclosure under California law.

[2] Failure to comply with these laws, including business and financial disclosure provisions, will result in the proposal being rejected and/or any subsequent grant being declared void. Before submitting a proposal, applicants are urged to seek legal counsel regarding potential conflict of interest concerns that they may have and requirements for disclosure. Applicable California statutes include (i.e., are not limited to) Government Code Section 1090 and Public Contract Code Sections 10365.5, 10410, and 10411.

Scientific reviewers and individuals participating in review panels are also subject to the same conflict of interest laws. Proposals may be reviewed and discussed by members of the public under public disclosure requirements. Applicants should also be aware that certain State and federal agencies may submit proposals that will compete for funding. Employees of State and federal agencies may participate in the review process as scientific/technical reviewers but are subject to the same State and federal conflict of interest laws.

D. How to Submit a Proposal

Proposals will be considered for funding only when all four steps outlined below have been completed. If you need assistance you may contact the helpline at (877) 408-9310 or via e-mail: help@solicitation.calwater.ca.gov

1. *User Registration***.** Prior to initiating a proposal, you must complete an online registration process available through the PSP website at *https://solicitation.calwater.ca.gov*. Registration does not obligate the registrant to submit a proposal, but you must be registered to submit your proposal and access detailed PSP information. As part of the registration process, you will choose a user ID and password that will let you access proposal forms and submit your proposal document. Registration will also facilitate communication between Authority staff and registered users.

2. *On-line Forms.* The application forms available on the website must be completed before your proposal can be considered for funding. Summary information on each form can be found below in section III.E. On-line Application Forms of this PSP**.** Detailed instructions for completing each form can be found on the forms themselves.

3. *Proposal and Budget Composition, Upload and Verification.* Proposals may be prepared using the word processing software of your choice. Proposal documents and detailed budgets must be converted to Adobe PDF prior to uploading. Instructions for .PDF conversion and uploading are available through the PSP website. Once the proposal document or budget have been accepted into the website, the registered user will be asked to verify the proposal or budget by viewing it directly from the website and checking the "Proposal Complete" or "Budget Complete" box to acknowledge that the document was submitted as intended.

4. *Fax Signature Page.* The signature page must be printed, signed, and faxed to the number on the page by the submittal deadline.

E. On-line Application Forms

Summary information on each of the on-line application forms is provided below. Detailed information and instructions can be found the forms themselves. The forms can be accessed by logging into the PSP web-site at https://solicitation.calwater.ca.gov. Forms may be completed incrementally; you need not complete the process during a single session, and may therefore provide information over multiple sessions as needed. The following on-line forms must be completed:

- Project Information and Executive Summary
- Contacts and Project Staff
- Conflict of Interest

- Task and Budget Summary
- Detailed Budget Upload and Justification
- Schedule of Deliverables
- Proposal Document Upload
- Signature Page

Project Information and Executive Summary - This form gathers basic information about the your project and its location, and requires you to insert an Executive Summary for your project. The Executive Summary needs to be a concise and informative stand-alone description of your proposed project.

Contacts and Project Staff – This form provides information on the principal and supporting project participants, including administrators, consultants, subcontractors, and vendors. This information is linked to and supports other forms, including the Conflict of Interest and Task and Budget Summary forms.

Conflict of Interest - This form assists the Science Program in assigning reviewers to avoid conflicts of interest between applicants, co-applicants, or subcontractors and reviewers (see section III.C. Confidentiality and Conflict of Interest for policy details).

Task and Budget Summary - List major tasks and the time to complete them (in months from the date the project's grant agreement is executed), and a budget total for each task. Because funding may be awarded for only a portion of the proposal, you should organize tasks and subtasks that may be funded separately. The total of all task budgets should equal the total entered in the Project Information form and your uploaded Detailed Budget (described below).

Detailed Budget Upload and Justification – This form consists of two sections:
Section 1 - Budget Format and Upload - The first section provides information on what should be included in your detailed budget such as costs and pay rates of personnel, information on subcontractors, benefits, equipment, travel, operating expenses, etc. Use this information to construct a budget in the software of your choice. Some guidance on the budget, such as breaking it down into tasks, is included in this form and required in the format, but many format decisions are left up to you. However, if it is not abundantly clear to reviewers what project costs are commensurate with what efforts and benefits, the proposal may receive a poor review and denied funding. When you complete your budget you must convert it to .PDF and upload it to the website. The detailed budget total should exactly match the budget totals in the Task and Budget Summary and the Project Information forms.
Section 2- Budget Justification and Matching Funds – this section provides prompts to enter other funding commitments including matching funds (if any), and space to justify all aspects of your budget. Projects can be multiyear efforts but may not exceed three years.

Schedule of Deliverables - List key deliverables and the time to complete them (in months from the date the project's grant agreement is executed). The required minimum deliverables are:

- Semi-annual reports
- Final Report
- 1 page project summary for public audience at beginning of project

- 1 page project summary for public audience upon project completion
- Project closure summary report or copy of draft manuscript
- Presentation at CALFED Science Conference
- Presentations at other events at request of CALFED Science Program staff
- Copy of all published material resulting from the grant

Proposal Document Upload - This form allows you to upload your .PDF version of your proposal document (described below) to the PSP website.

Signature Page - Your proposal will not be considered complete until a signature page is received. The signature page must be signed by a representative of your organization or agency who is authorized to enter into a contractual agreement with the State of California. Print this page from the website, sign it, and fax it to the number listed on the form by the proposal submittal deadline**.** (Other information faxed to the helpline will not be considered and will be discarded.) This page is used to verify that you intended to submit your proposal and that you agree to the conditions of the grant solicitation and review process.

F. Proposal Document Outline and Format

Proposal Document Outline – The proposal document is comprised of the written text and images that will be uploaded to the website via the Proposal Document Upload form described above. Successful proposals will be well-written, accurate, and concise. The proposal document should follow the outline below. You need to make sure all of the components within the outline are clearly incorporated and identified in your proposal document to assist reviewers in evaluating your proposal; a table of contents in the proposal document might facilitate this review process. You should read the Proposal Review and Selection section of this PSP (section IV) prior to writing your proposals to familiarize yourself with the criteria that will be used for proposal evaluation.

1. Project Purpose — Describe the purpose of your project. This section should include:

- the identification of the problem, question(s) or critical unknown(s) that your proposed effort is designed to address;
- your project goals, objectives, and how they relate to the problem, question(s) or critical unknown(s) you propose to address;
- the clearly stated hypothesis you will be testing to achieve your goals and objectives;
- a description of relevant studies or other information that documents the problem and unknowns, substantiates the goals and objectives, and includes the ways this problem has been addressed locally and elsewhere.

2. Background and Conceptual Models – this section should include all necessary background information not covered in the Project Purpose section above. A conceptual model should be provided that clearly explains the underlying basis of the knowledge that will support the proposed work. Models can be presented graphically or as a narrative. A description of the project's physical setting, with maps or photographs if appropriate, should be included.

3. Approach and Scope of Work — Describe the approach you will undertake to address your project's objectives. Include specific information about methods and techniques, equipment and facilities, data collection, statistical analysis and quality assurance procedures as applicable. Provide narrative detail about the tasks and schedule listed on the Task and Budget Summary form (on-line). Clearly indicate which tasks are contingent upon other tasks and which tasks can be done separately; this information is necessary in case only part of the project is funded. Elaborate on expected deliverables that your project will produce and submit. Deliverables can include presentations, workshops, seminars, educational programs, project summaries, web-sites, reports, and publications. This section should fully describe the proposed deliverables you list in the Schedule of Deliverables form (on-line). (Some good examples of proposal approaches broken down by task are evident in successful proposals from the Science Program 2004 PSP available through the website at http://science.calwater.ca.gov/psp/psp_package_2004.shtml)

4. Feasibility — Show how your proposed project is both feasible and appropriate for the proposed work. Demonstrate how the work you've outlined in your proposal can be completed within no more than three years given reasonably foreseeable constraints (e.g. weather conditions or permitting). Thoroughly address any contingencies or requirements such as dependence upon the outcome or timing of other projects or programs, upon natural or operational conditions, and on environmental compliance or permitting processes. Explain the current status of each permit or agreement, as well as any other constraints that could impact the schedule and your ability to complete your project. Describe how project management decisions will be coordinated.

5. Relevance to the CALFED Science Program
Relevance to this PSP - Describe how your proposal directly meets one or more of the needs identified in the Priority Research Topic List of this PSP. Identify all "questions to be addressed by the research" and "key components" from the Topic List that your proposal addresses and incorporates. Summarize other questions your proposal may answer that, although not found in the Topic List, address a need from the Topic List. Describe how your proposal meets other priorities described in section II of this PSP such as the need for synthesis, integration, collaboration and models.
Relevance to CALFED Issues Outside this PSP - If applicable, explain how your proposal addresses Science Program needs not mentioned in this PSP. Describe how the project will link back to or complement larger CALFED goals and efforts. Identify any synergistic, CALFED-wide benefits, including how your proposal complements projects or programs in other areas within the Bay-Delta system. Explain any relationship between your proposal and past CALFED actions or investments.

6. Qualifications - Briefly describe how the participants identified in your Contacts and Project Staff form provide the range of experience and expertise needed for your project. (If appropriate, highlight relevant field experience, completed projects, published reports, or other materials not adequately captured in the Contacts and Project Staff form). Specify individual roles and responsibilities for technical, administrative, and project management activities that are not described in the Contacts and Project Staff form. Describe the organizational structure for the staff and other resources. For projects using consultants or subcontractors, briefly describe how they were selected and why. A subcontractor role exceeding a quarter of the total project budget should be fully explained and clearly justified.

7. Literature Cited - All proposals must include a list of references for all research studies, project reports, scientific reports or other supporting information cited in the proposal. Reference information should follow accepted scholarly practices.

Proposal Document Format – There are some formatting considerations that you need to keep in mind in order to successfully upload and submit your proposal document.

Page limits - The proposal text should be no more than 20 pages, excluding literature cited, maps, photographs, figures, and tables. You may *not* include attachments; it is essential that you present all critical information in the body of your proposal.

File size - The PSP website includes links to tools to help you manage the size of the file containing the proposal document. Please contact the helpline early if you anticipate submitting a file greater than 2 MB. Large files are difficult to upload and sometimes cannot be viewed readily by reviewers or others who lack high-speed Internet connections.

Format - Body text must be 12 point in a readable typeface; text in tables and figures must be no smaller than 10 point in a readable typeface. Headings must be at least 14 point, but no larger than 18 point, bold typeface, flush left. Page margins are to be between three-quarters and one inch on all sides. All proposal pages, including diagrams, must be readable when printed on 8.5 x 11-inch paper.

Submission Format - You must submit your proposal as a .PDF file.

Maps, Photographs, Figures, and Tables. Each map, photograph, figure, or table needs to be individually numbered and clearly titled. If you need help in incorporating these graphics into your proposal for submission as a .PDF, please ask for assistance through the helpline at (877) 408-9310 or by e-mailing help@solicitation.calwater.ca.gov

Page Numbering - Each page of the proposal needs to be numbered sequentially.

G. Collaborative Proposals

Grant agreements will be made with only one eligible lead applicant, so the proposal needs to clearly state which applicant will sign the agreement. This organization will be responsible for payments, reporting, and accounting. Other collaborators in the project will typically be subcontractors to the lead applicant but should be identified, if known, in the application forms and proposal document. You must document that the lead institution will be able to execute all subcontracts in a timely manner. Your proposal must explain how the collaboration will work, including how decision-making authority and liability is to be allocated. Your proposal must also identify the tasks or sub-tasks that will be performed by the different entities. The names of known subcontractors must be identified. When subcontractors are identified, explain briefly how they were selected, and why. The Science Program is aware that some subcontractors may not be known until after the proposal is selected for funding and subcontracts are put out for competitive bidding, as required by California State law. You should include the estimated costs of subcontract work and any costs for managing subcontractors in your proposal. A

subcontractor role exceeding a quarter of the total project budget should be fully explained and clearly justified.

H. Deadline

The deadline for completing and submitting your proposal to the website is 5:00 p.m. Pacific Daylight Time on August 31, 2006. Proposals submitted after this time will *not* be considered. You are strongly advised to submit your proposal well before the deadline; this deadline is firm and will not be extended due to the slow connections speeds or last minute questions that typically occur in the hours preceding the deadline.

IV. Proposal Review and Selection

A. Review Process Summary and Schedule

The proposal review process and schedule, summarized in Figure 2, involves 4 steps. All complete proposals (due August 31, 2006) will undergo administrative review, external scientific review, and review by a technical synthesis panel (November, 2006) who will make recommendations on funding to the California Bay-Delta Authority (Authority) board (December, 2006). The Authority Board will consider the recommendations in a public meeting in December 2006 and make funding recommendations to the Resources Agency and other funding agencies as applicable.

B. Administrative Review

Science Program staff will conduct an initial review of proposals to ensure the following:

- all proposal components have been completed by the submission deadline including all on-line application forms and associated uploaded documents including the proposal document and detailed budget (see section III.D. of this PSP above);
- proposals are from eligible applicants;
- proposals are responsive to the solicitation's priorities;
- acceptable past performance of project staff, including effective management of grants previously received from CALFED or CVPIA programs (if any);

C. External Scientific Review

Three independent external reviewers will be selected to review each proposal based on their expertise in the subject areas of the proposal. The reviewers will evaluate submissions using a set of criteria that combine classic scientific review questions and elements designed by the Science Program to address common issues. The subject experts will also make overall recommendations to a Technical Synthesis Panel as to whether proposals are excellent, very good, good, fair, or poor, and explain their recommendations. The external scientific reviewers will thoroughly explain their reviews and base them on the following criteria:

Project Purpose

- Are the goals, objectives and hypotheses clearly stated and internally consistent?
- Is the idea timely and important? Is the study justified relative to existing knowledge?
- Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?
- Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology, or approaches?

Background

- Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work?
- Is all other information needed to understand the basis for the proposed work included and well documented?

Approach

- Is the approach well designed and appropriate for meeting the objectives of the project?

- Is it clear who will be performing management tasks and administration of the project and are resources set aside to do so?
- Are products of value likely from the project? Is there a plan for widespread and effective dissemination of information gained from the project? Are contributions to larger data management systems relevant and considered?

Feasibility

- Is the approach fully documented and technically feasible?
- What is the likelihood of success?
- Is the scale of the project consistent with the objectives and within the grasp of authors?

Budget

- Is it clear how much each aspect of the proposed work will cost including each task, salaries, equipment, etc.?
- Is the budget reasonable and adequate for the work proposed?

Relevance to CALFED

- How well does the proposal address the priorities stated in the PSP?
- Does the proposal clearly and directly address one or more of the topics in the Priority Research Topic List?
- Does the proposal address other priorities stated in the PSP such as integration, syntheses, use of existing information, multiple disciplines or modeling?
- Does the proposal address other CALFED needs outside the scope of this PSP?
- Will the information ultimately be useful to CALFED resource managers and policy makers?

Qualifications

- What is the track record of authors in terms of past performance?
- Is the project team qualified to efficiently and effectively implement the proposed project?
- Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

Overall Evaluation Summary Rating

- A brief explanation of a summary rating.

D. Technical Synthesis Panel Review

The role of the Technical Synthesis Panel is to provide final funding recommendations to the Authority based on the evaluation of each proposal's technical quality and responsiveness to the PSP priorities. The Technical Synthesis Panel will consist of technical experts whose expertise spans the range of topics covered by the submitted proposals. The Lead Scientist (or designee) will serve as the non-voting chairman for the panel with primary responsibility for assuring that the discussion is balanced, fair, and comprehensive. The Technical Synthesis Panel will consider all external reviewer comments in their overall evaluation of the proposals. The result of these discussions will be a panel rating of superior, above average, sufficient, or inadequate, along with clear evaluation statements. The Panel may also provide conditions for funding such as the modifications of tasks, products, and funding. . All reviews will be made available for public comment prior to the December Authority meeting. No proposals rated inadequate by the panel will be recommended to the Authority for funding.

E. California Bay-Delta Authority Review and Action

The Technical Synthesis Panel will forward its final recommendations to the Authority which will consider the recommendations in a public meeting and make final funding recommendations to the Resources Agency (as implementing agency for the Science Program effective July 1, 2006), and to other funding agencies as appropriate. The Authority and the Resources Agency may, at their discretion, recommend and/or award a package of grants determined to be most responsive to the charge to promote implementation of the Program in a balanced manner, consistent with the goals and objectives of the CALFED ROD.

F. Signed Grant Agreements

The process of finalizing grant agreements will begin as soon as projects are approved by the Resources Agency (and other funding agencies, as appropriate). Depending on the complexity of each project, the institution receiving the funds, review panel requirements and modifications, and the complexity of the project, it will likely take 2-6 months to develop and finalize the grant agreements for successful proposals. Applicants should not commence work on their projects until a funding agreement is finalized by signature of the grantee and funding agency. Work performed prior to the signing of a funding agreement is done at the risk of the applicant and without expectation of reimbursement. General terms and conditions for grants are provided in Attachment 1. (Note that some modifications may be made to the sample agreement and attachments prior to awarding.)

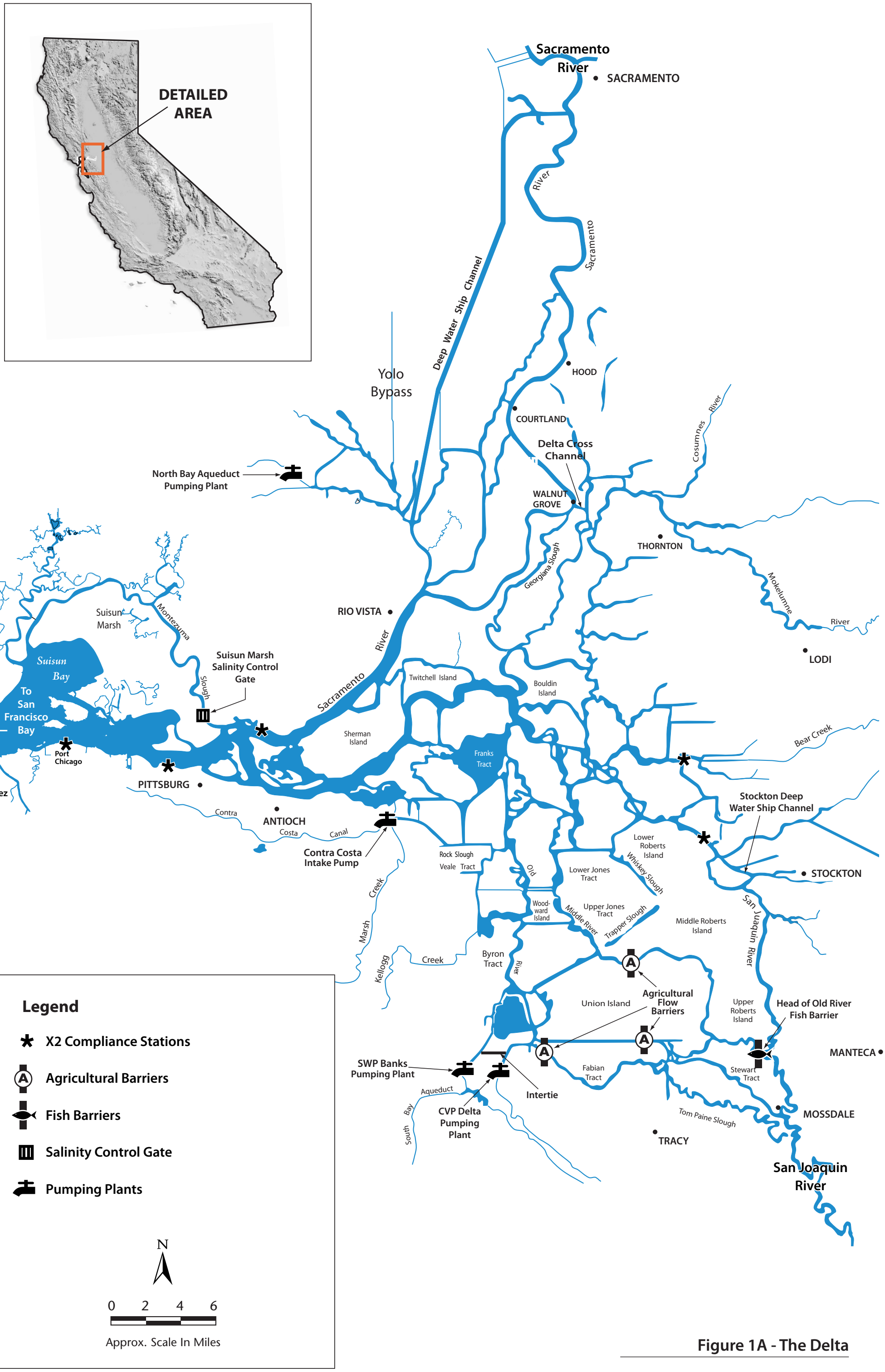


Figure 1A - The Delta

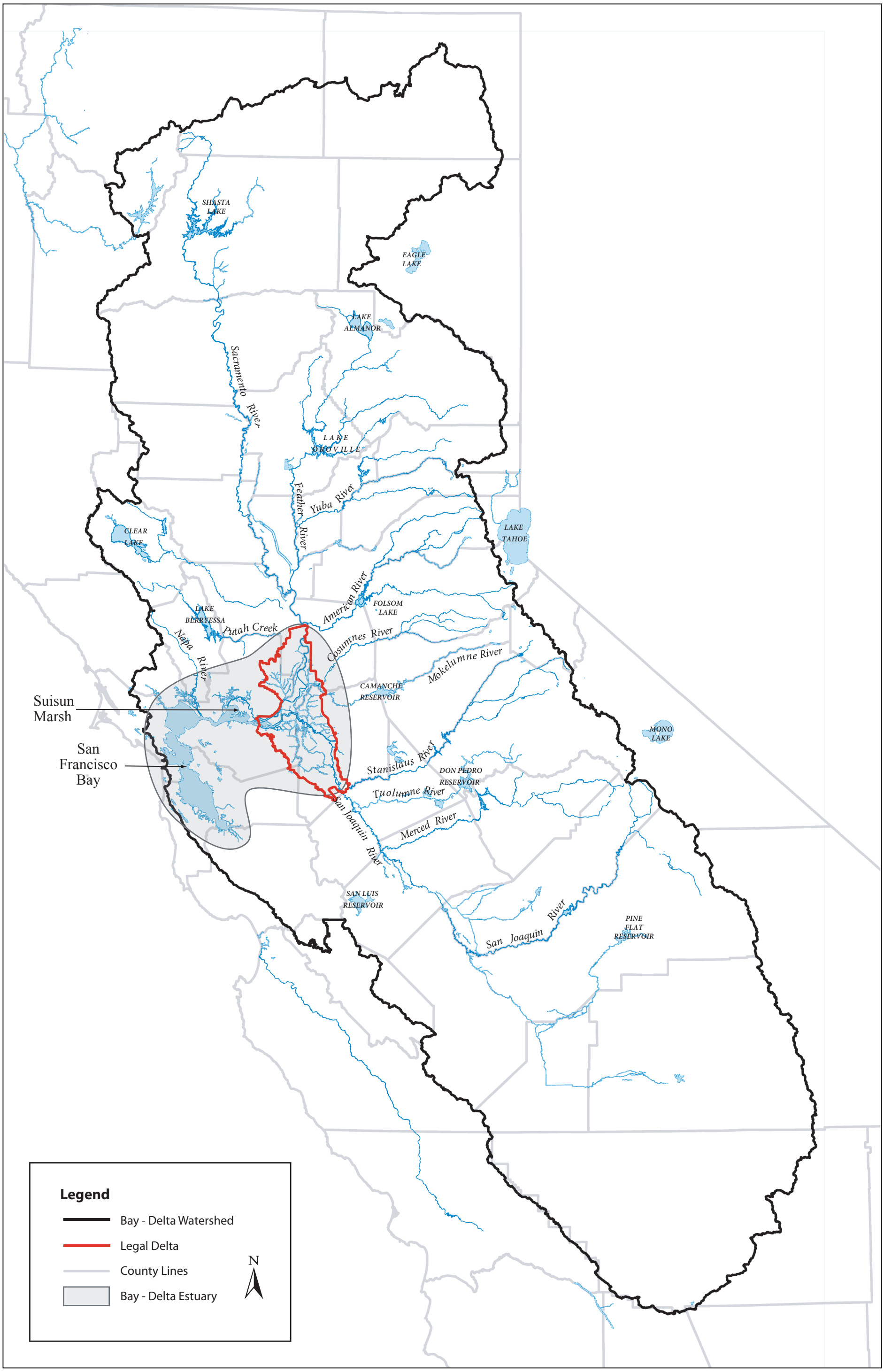
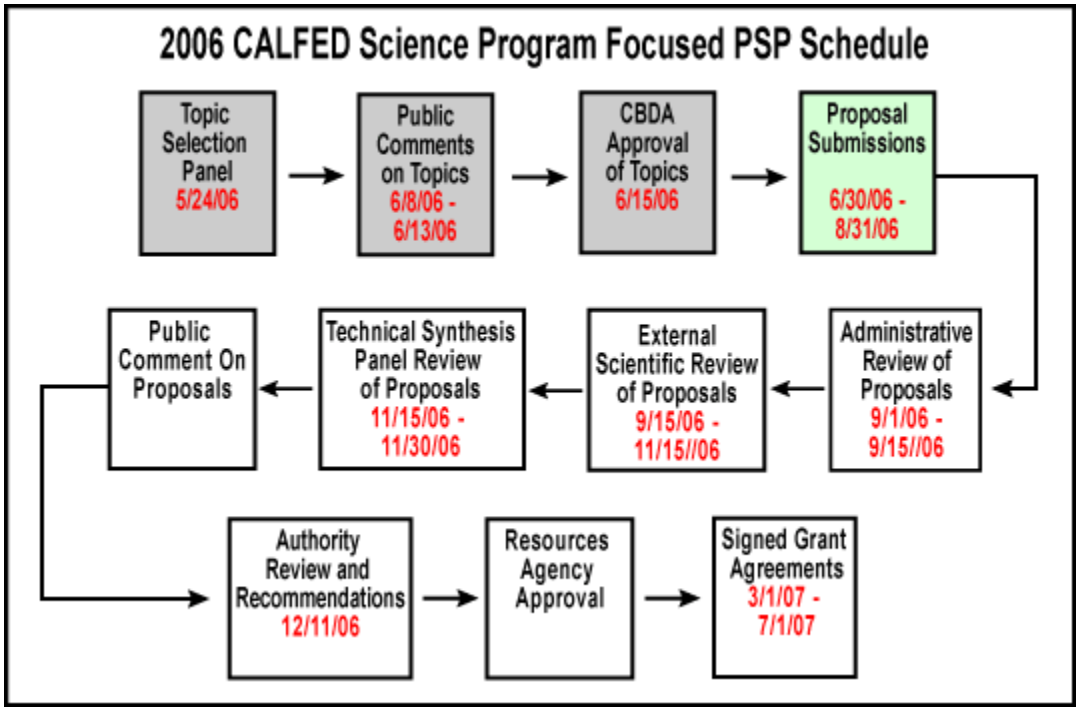


Figure 1B - The Bay-Delta System

Figure 2
Process Summary and Schedule



Attachment 1
Terms and Conditions for Funded Grants

EXHIBIT B

BUDGET DETAIL AND PAYMENT PROVISIONS

1. **Payment in Arrears:** Payment shall be made in arrears based on receipt of a complete, properly documented and accurately addressed invoice or payment request.

2. **Invoicing:**

2.1 Invoices shall include the Agreement Number and shall be submitted in triplicate not more frequently than monthly in arrears to:

Resources Agency
CALFED Offices
650 Capitol Mall, 5th Floor
Sacramento, CA 95814
Attn: Accounting Department

2.2 Payment of any invoice will be made only after receipt of a complete and accurate invoice or payment request. Failure to use the address exactly as provided above may result in return of the invoice or payment request to the Grantee. Payment shall be deemed complete upon deposit of the payment, properly addressed, postage prepaid, in the United States mail. All invoices must be approved by the Resources Agency Grant Manager.

2.3 Notwithstanding any other provision of this Agreement, no disbursement shall be required at any time or in any manner which is in violation of or in conflict with federal or state laws, rules, or regulation, or which may require any rebates to the Federal Government, or any loss of tax-free status on state bonds, pursuant to any federal statute or regulation.

2.4 Notwithstanding any other provision of this Agreement, the Grantee agrees that the Resources Agency may retain an amount equal to ten percent (10%) of the grant amount specified in this Agreement until completion of the Project in accordance with the Scope of Work. Any retained amounts due to the Grantee will be promptly disbursed to the Grantee, without interest, upon completion of the Project.Resources Agency

2.5 The invoice shall contain the following information:

2.5.1 The word "INVOICE" should appear in a prominent location at the top of page(s);

2.5.2 Printed name of the Grantee;

2.5.3 Business address of the Grantee, including P.O. Box, City, State, and Zip Code;

2.5.4 The date of the invoice;

2.5.5 The number of the Grant Agreement upon which the claim is based; and

2.5.6 The time period covered by the invoice, i.e., the term "from" and "to";

2.5.6.1 The method of computing the amount due.

2.5.6.2 Supporting documentation for invoiced costs, for major equipment purchases..

2.5.7 Original signature of Grantee (not required of established firms or entities using preprinted letterhead invoices).

3. Budget Contingency Clause

If the Budget Act of the current year and/or any subsequent years covered under this Agreement does not appropriate sufficient funds for the program, this Agreement shall be of no force and effect. This provision shall be construed as a condition precedent to the obligation of the Resources Agency to make any payments under this Agreement. In this event, the State shall have no liability to pay any funds whatsoever to Grantee or to furnish any other considerations under this Agreement and Grantee shall not be obligated to perform any provisions of this Agreement. Nothing in this Agreement shall be construed to provide the Grantee with a right of priority for payment over any other Grantee.

If funding for any fiscal year is reduced or deleted by the Budget Act for purposes of this program, the State shall have the option to either cancel this Agreement with no liability occurring to the State, or offer an agreement amendment to Grantee to reflect the reduced amount.

4. Line Item Budget

ATTACH LINE ITEM BUDGET FOR FUNDED PROJECT

5. Budget Line Item Flexibility

5.1 Line Item adjustment(s). Subject to the prior review and written approval of the Grant Manager, adjustments between existing line item(s) may be used to defray allowable direct costs. Line item adjustments in excess of 15%, or a cumulative maximum of $ 250,000, shall require an amendment to the Grant Agreement.

5.2 Procedure to Request an Amendment. Please refer to the Amendment Request Policy and Procedure on the web site.

6. Payment of Project Costs

The Grantee agrees that it will provide for payment of its full share of Project costs and that all costs connected with the Project will be paid by the Grantee on a timely basis.

EXHIBIT C
GENERAL TERMS AND CONDITIONS FOR CALFED GRANTS

1. **Approval:** This Grant Agreement is of no force or effect until signed by both parties. Grantee shall not commence work under this Grant Agreement until such signatures have been obtained. Work performed prior to having a fully executed Grant Agreement is performed at the Grantee's risk, with no expectation of reimbursement.

2. **Amendment:** No amendment or variation of the terms of this Grant Agreement shall be valid unless made in writing, signed by the parties and approved as required. No oral understanding or agreement not incorporated in the Grant Agreement is binding on any of the parties.

3. **Assignment:** This Agreement is not assignable by the Grantee, either in whole or in part, without the consent of the Resources Agency in the form of a formal written amendment.

4. **Audit:** Grantee agrees that the awarding department, the Department of General Services, the Bureau of State Audits, or their designated representative shall have the right to review and to copy any records and supporting documentation pertaining to the performance of this Grant Agreement. Grantee agrees to maintain such records for possible audit for a minimum of three (3) years after final payment, unless a longer period of records retention is stipulated. Grantee agrees to allow the auditor(s) access to such records during normal business hours and to allow interviews of any employees who might reasonably have information related to such records. Further, Grantee agrees to include a similar right of the State to audit records and interview staff in any subcontract related to performance of this Agreement. (GC 8546.7, PCC 10115 et seq., CCR Title 2, Section 1896).

5. **Indemnification:** Grantee agrees to indemnify, defend and save harmless the State, its officers, agents and employees from any and all claims and losses accruing or resulting to any and all contractors, subcontractors, suppliers, laborers, and any other person, firm or corporation furnishing or supplying work services, materials, or supplies in connection with the performance of this Agreement, and from any and all claims and losses accruing or resulting to any person, firm or corporation who may be injured or damaged by Grantee in the performance of this Agreement.

6. **Disputes:** Grantee shall continue with the responsibilities under this Grant Agreement during any dispute.

7. **Termination For Cause:** The grant agreement may be terminated by written notice at any time of this Grant Agreement prior to completion of the Project, at the option of the Resources Agency, upon violation by the Grantee of any material provision after such violation has been called to the attention of the Grantee and after failure of the Grantee to bring itself into compliance with the provisions of this Agreement within a reasonable time as established by the Resources Agency. In the event of such termination, the Grantee agrees, upon demand, to immediately repay to the Resources Agency an amount equal to the amount of grant funds disbursed to the Grantee prior to such termination. In the event of termination, interest shall accrue on all amounts due at the highest legal rate of interest from the date that notice of termination is mailed to the Grantee to the date of full repayment by the Grantee.

8. **Independent Status***:* Grantee, and the agents and employees of Grantee, in the performance of this Grant Agreement, shall act in an independent capacity and not as officers or employees or agents of the State.

9. **Non-Discrimination Clause:** During the performance of this Grant Agreement, Grantee and its subcontractors shall not unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, physical disability (including HIV and AIDS), mental disability, medical condition (cancer), age (over 40*),* marital status, and denial of family care leave. Grantee and subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment. Grantee and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code Section 12990 (a-f) et seq.) and the applicable regulations promulgated there under (California Code of Regulations, Title 2, Section 7285 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code Section 12990 (a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations, are incorporated into this Agreement by reference and made a part hereof as if set forth in full. Grantee and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other Agreement.

   Grantee shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the Grant Agreement.

10. **Compensation:** The compensation to be paid Grantee, as provided herein, shall be in compensation for all of Grantee's expenses incurred in the performance of this Grant Agreement, including travel, per diem, and taxes, unless otherwise expressly so provided.

11. **Governing Law:** This Grant Agreement is governed by and shall be interpreted in accordance with the laws of the State of California.

12. **Travel:** Any reimbursement for necessary travel and per diem shall be at rates specified by the California Department of Personnel Administration for similar employees (www.dpa.ca.gov/jobinfo/statetravel.shtm). Federal agency grantees can invoice for travel reimbursement at State rates, and make necessary arrangements with their agency to be personally reimbursed for expenses at the available federal rate.

13. **Conflicts Of Interest**: Grantee shall comply with all applicable State laws and rules pertaining to conflicts of interest including, but not limited to, Government Code section 1090, Public Contract Code sections 10410 & 10411, and Public Contract Code section 10365.5.

14. **Unenforceable Provision:** In the event that any provision of this Grant Agreement is unenforceable or held to be unenforceable, then the parties agree that all other provisions of this Grant Agreement have force and effect and shall not be affected thereby.

15. **Drug-Free Workplace Requirements:** Grantee will comply with the requirements of the Drug-Free Workplace Act of 1990 and will provide a drug-free workplace by taking the following actions:

a. Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations.

b. Establish a Drug-Free Awareness Program to inform employees about:

   1) The dangers of drug abuse in the workplace;

   2) The person's or organization's policy of maintaining a drug-free workplace;

   3) Any available counseling, rehabilitation and employee assistance programs; and,

   4) Penalties that may be imposed upon employees for drug abuse violations.

c. Every employee who works on the proposed Agreement will:

   1) Receive a copy of the company's drug-free workplace policy statement; and,

   2) Agree to abide by the terms of the company's statement as a condition of employment on the Agreement.

Failure to comply with these requirements may result in suspension of payments under the Agreement or termination of the Agreement or both and Grantee may be ineligible for award of any future State agreements if the department determines that the Grantee failed to carry out the requirements as noted above.

16. Withholding Of Grant Disbursements: The Resources Agency may withhold all or any portion of the grant funds provided for by this Agreement in the event that the Grantee has materially violated, or threatens to materially violate, any term, provision, condition, or commitment of this Agreement; or the Grantee fails to maintain reasonable progress toward completion of the Project.

EXHIBIT D
SPECIAL TERMS AND CONDITIONS FOR SCIENCE PROGRAM GRANTS

1. Grantee Responsibilities and State Requirements

1.1 The Grantee has full responsibility for the conduct of the project or activity supported under the Grant Agreement and for adherence to the award conditions. Although the Grantee is encouraged to seek the advice and opinion of CBDA on special problems that may arise, such advice does not diminish the Grantee's responsibility for making sound scientific and administrative judgments and should not imply that the responsibility for operating decisions has shifted to CBDA. The Grantee is responsible for notifying CBDA about: (1) any allegation of research misconduct that it concludes has substance (2) any significant problems relating to the administrative or financial aspects of the award.

1.2 By acceptance of this award, the Grantee agrees to comply with the applicable State requirements for grants and to the prudent management of all expenditures and actions affecting the award. Documentation for each expenditure or action affecting this award must reflect appropriate organizational reviews or approvals that should be made in

advance of the action. Organizational reviews are intended to help assure that expenditures are allowable, necessary and reasonable for the conduct of the project, and that the proposed action:

1. is consistent with award terms and conditions;
2. is consistent with CBDA and grantee policies;
3. represents effective utilization of resources; and
4. does not constitute a significant project change (see Article 11).

Nothing in this article shall be construed to require administrative reviews or documentation that duplicates those already required by existing organizational systems.

1.3 The Grantee is responsible for ensuring that the Principal Investigator(s) or Project Director(s) receives a copy of the award conditions, including: the award letter, a copy of the Grant Agreement, and any subsequent changes in the award conditions. This provision does not alter the Grantee's full responsibility for conduct of the project and compliance with all award terms and conditions.

2. Publications/Acknowledgement of Support

2.1 *Acknowledgment of Support.* The grantee is responsible for assuring that an acknowledgment of CALFED Bay-Delta Program support is made:

a. in any publication (including World Wide Web pages) of any material based on or developed under this project, in the following terms:

"This material is based upon work supported by the CALFED Science Program under Grant No. (CBDA grant number)."

b. CALFED Bay-Delta Program support also must be orally acknowledged during all news media interviews, including popular media such as radio, television and news magazines.

2.2 *Disclaimer.* The grantee is responsible for assuring that every publication of material (including World Wide Web pages) based on or developed under this award, except scientific articles or papers appearing in scientific, technical or professional journals, contains the following disclaimer:

"Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the California Bay Delta Authority or CALFED Bay-Delta Program."

2.3 *Copies for CBDA.* The grantee is responsible for assuring that two copies of every publication of material based on or developed under this award, clearly labeled with the award number and other appropriate identifying information, are sent to the CBDA Project Representative promptly after publication.

3. Government Permits and Environmental Review

Grantee is responsible for ensuring compliance with all applicable permitting and environmental review requirements that may be required to accomplish the project described in the Scope of Work.

As a condition of grant funding, Grantee is required to utilize the information and analysis in the CALFED Programmatic Environmental Impact Statement/Environmental

Impact Report (PEIS/EIR), to the extent applicable, in evaluating the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) compliance needs for the Project.

As a further condition of grant funding, Grantee is required to utilize the information, analysis, and procedures in the CALFED Multi-species Conservation Strategy (MSCS), to the extent applicable, in complying with state and federal endangered species acts for the Project.

4. Permission for Access to Private Property

If Grantee requires access across private property, Grantee shall provide written evidence of the property owner's permission for access to the property.

5. Subcontracts

Grantee is responsible for all subcontracted work. Subcontracts must include all applicable terms and conditions as presented herein. Subcontractors not specifically identified in the grant proposal must be obtained using a competitive bidding process, or non-competitive selection process, that meets basic State requirements. The Grantee must provide copies of all executed subcontracts to the CBDA Grant Manager.

6. Reporting Requirements

Grantee will be required to submit a project report every six (6) months until the project is completed. These reports will serve as performance measures/ project monitoring tools to allow determination of the success of the project in relation to its objectives. The report will include descriptive information such as activities performed during the period, findings, the percentage of each task completed, the deliverables produced, problems and delays encountered, etc. Financial information should also be included with this report outlining: 1) the financial status of the project (amount invoiced to the grantee agency and the amount invoiced to cost share partners) and 2) six month expenditure/ invoice projections to enable funding availability for payment of invoices. The final report must include copies of any publications or reports produced. The final report is due on or before the scheduled project completion date.

7. Project Presentations

Grantee agrees to present project findings at the biennial CALFED Science Conference and/or other CALFED Science Program workshops and symposia.

8. Site Visits

CBDA staff, or its authorized representatives, has the right, at all reasonable times, to make site visits to review project accomplishments and management control systems and to provide such technical assistance as may be required. If any site visit is made by CBDA on the premises of the Grantee or a subcontractor under an award, the Grantee shall provide and shall require subcontractors to provide all reasonable facilities and assistance for the safety and convenience of the CBDA staff or authorized representatives in the performance of their duties.

9. Equipment

9.1 Conditions for Acquisition and Use of Equipment.

9.1.1 Grantee Assurance. The grantee will assure that each purchase of equipment is:

(a) necessary for the research or activity supported by the grant;

(b) not otherwise reasonably available and accessible;

(c) of the type normally charged as a direct cost; and

(d) acquired in accordance with organizational practice.

10. Dispute Resolution

Any claim that the Grantee may have regarding the performance of this Grant Agreement, including, but not limited to, claims for additional compensation or extension of time, shall be submitted to the Science Program Manager within thirty days of its accrual. The Science Program Manager will attempt to facilitate a mutually acceptable resolution of the dispute.

11. Notice

11.1 Grantee shall promptly notify CBDA in writing or via electronic mail of events or proposed changes that could affect the scope, budget, or work performed under this Grant Agreement, and shall obtain CBDA's prior written or electronic mail approval to proceed accordingly. Notwithstanding the foregoing, any "substantial" change proposed in the scope, budget, or work performed under this Grant Agreement shall require, prior to undertaking that change, a formal agreement amendment. "Substantial" changes shall include, but not be limited, to the following:

(a) Budget line item adjustments in excess of the lesser of $250,000 or 15% of the agreement total, including any amendments thereto.

(b) Budget adjustments deleting a budget line or adding a new budget line item.

(c) Transfer of significant project responsibilities to or among subgrantees.

(d) Change in phenomenon or phenomena under study or previously-stated project objectives.

(e) Change in, or relinquishment of active direction by, Principal Investigator.

(f) Extension of Term of Agreement.

11.2 Grantee shall notify CBDA in writing or via electronic mail at least 10 working days prior to any public or media event publicizing the accomplishments and/or results of this Agreement and provide the opportunity for attendance and participation by CBDA's representatives.

11.3 Grantee shall promptly notify CBDA in writing or via electronic mail of completion of work on the Project.

12. Rights in Data

The Grantee agrees that all data, plans, drawings, specifications, reports, computer programs, operating manuals, notes, and other written or graphic work produced in the performance of this Grant are subject to the rights of the State as set forth in this section. The State shall have the right to reproduce, publish, and use all such work, or any part thereof, in any manner and for any purposes whatsoever and to authorize others to do so. If any such work is copyrightable, the Grantee may copyright the same, except that, as to any work which is copyrighted by the Grantee,

the State reserves a royalty-free, fully paid-up, nonexclusive, and irrevocable license to reproduce, publish, and use such work, or any part thereof, and to authorize others to do so for a public purpose. Except for publication or other dissemination of results for education or research purposes, the Grantee shall not utilize the materials for any profit-making venture or sell or grant rights to a third party who intends to do so.

13. Peer Review

California Bay-Delta Authority staff may establish peer review panels to review and comment on successful applicants work product or deliverables.

Attachment 2
Semi-Annual Report

SAMPLE SEMI-ANNUAL PROJECT REPORT **SEMI-ANNUAL REPORT #:**
CALFED SCIENCE PROGRAM PROJECT NUMBER:
PROJECT TERM:
PROJECT TITLE:

CONTRACTOR/GRANT RECIPIENT CONTACT INFORMATION

Program Administrator

NAME:
INSTITUTION:
ADDRESS:
PHONE:
EMAIL:

Lead Investigator

NAME:
INSTITUTION:
ADDRESS:
PHONE:
EMAIL:

GRANTING PROGRAM CONTACT INFORMATION

Technical Contact

NAME:
TITLE:
AGENCY:
ADDRESS: 650 Capitol Mall, 5th Floor, Sacramento, California 95814
PHONE:
ADDRESS:
PHONE:
EMAIL:

Grant/Administrative Contact

NAME:
TITLE:
AGENCY:
ADDRESS: 650 Capitol Mall, 5th Floor, Sacramento, California 95814
PHONE:
E-MAIL:

Attachment 2
Semi-Annual Report

Funding Source:

Project Location:

Brief Description of Project:

Primary Objective to be Achieved:

BUDGET SUMMARY (All tasks should exactly match those identified in the project Scope of Work.)

TASK/SUBTASK	% COMPLETE (BY DOLLARS)	AMOUNT INVOICED (CURRENT FISCAL YEAR)	AMOUNT INVOICED TO DATE (ALL YEARS)	PROJECTED EXPENDITURES (NEXT 6 MONTHS)
Task 1				
Task 2				
Task 3				
Totals				

PROJECT STATUS TO DATE (BY TASK)

This section should be a cummulative overview of the activities performed to date and include both current and past information for each task. Please list all new information at the top of each task section so that it is clear which information is the most recent. Please keep all new information brief yet detailed enough so the technical contract manager can determine your progress (e.g. a paragraph or two of new information for each task should suffice). At the end of the project, this section will serve as a full historical record of all activities performed on the project.

TASK 1:

TASK 2:

TASK 3:

PROJECT-WIDE STATUS

ACHIEVED OBJECTIVES, FINDINGS, AND CONTRIBUTIONS:

PROBLEMS OR DELAYS ENCOUNTERED:

DELIVERABLES:

PERSONNEL CHANGES:

CONTRACT MODIFICATIONS:

Notes/Other: