# Integration of CALFED and the Wetlands Ecosystem Goals Project
## Brief Outline of Possible Quarterly Products of Three Approaches

by the
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# Bay Area Approach

*Narrative*

This approach to integrate CALFED efforts with the Bay Area Wetlands Goals Project involves complete production of the wetland habitat goals for the Bay Area, including all baylands downstream of the Delta at Broad Slough. This would include the Suisun Bay Area, which is within the operational scope of the CALFED Group. However, according to the "water accord", the scope of planning efforts by the CALFED Group includes the Bay Area. Therefore, the Bay Area Wetlands Ecosystem Goals Project should be, in part, a CALFED product. With regard to the CALFED efforts, completion of the Project in the Bay Area could mean the final habitat prescriptions and the draft alternative wetlands mosaics, without an implementation plan or a final written report of the process. This approach would provide the most product in the short-term (i.e., 3-6 months minimum). The estimated costs reflect the short time frame; done over a year or 18 months, costs would be somewhat lower. Costs could also be trimmed (by perhaps 20%) if severe limitations were placed on collection of new data, number of features mapped, and number of iterations of map products generated.

*Deliverables and Schedule*

The Bay Area Wetlands Ecosystem Goals Project is scheduled to have the habitat prescriptions completed during the first quarter of 1996. The draft regional wetlands mosaics are scheduled to be completed during the second quarter. The habitat prescriptions and alternative regional mosaics will exist in GIS (ArcInfo) at SFEI.

*SFEI Funding Requirements for Bay Area Approach*

| | |
|---|---|
| Science Coordinator, 400 hours | $40,000 |
| Assistant Science Coordinator, 800 hours | 36,000 |
| GIS Technicians, 1200 hours | 48,000 |
| SFEI environmental analysts, 1000 hours | 54,000 |
| University RA's, 2500 hours | 36,000 |
| clerical support | 3,200 |
| 2000 miles of car travel | 580 |
| Focus Team compensation | 4,000 |
| Alpha 250 (six monthly payments) | 7,200 |
| color plotter (six monthly payments) | 1,950 |
| 9 gb computer disk | 2,000 |
| miscellaneous materials | 1,500 |
| TOTAL | $234,430 |

# Suisun Marsh Approach

*Narrative*

This is a subset of the Bay Area Approach described immediately above. This approach would focus on the Suisun Marsh as the area of geographic overlap between the Bay Area Wetlands Ecosystem Goals Project and the core scope of the CALFED efforts. This approach has the advantage of also providing technical support for the Suisun Ecological Workgroup of DWR (which is also underfunded). The Bay Area Wetlands Goals Project is designed to feed information and regional perspective to the Suisun Ecological Workgroup. The wetlands goals developed through this coordination could be adopted by the CALFED Group.

*Deliverables and Schedule*

The Bay Area Wetlands Ecosystem Goals Project is scheduled to have the habitat prescriptions for the Suisun Bay Area completed during the first quarter of 1996. The suggested timeline for the Suisun Ecological Workgroup is to produce draft habitat recommendations during the second quarter of 1996. The recommendations of the Suisun Ecological Workgroup will be consistent with those of the Bay Area Wetlands Ecosystem Goals Project. SFEI work would probably consist of three months of effort distributed over two quarters.

*SFEI Funding Requirements for Suisun Marsh Approach*

| | |
|---|---|
| 1 Science Coordinator, 200 hours | $20,000 |
| 1 Assistant Science Coordinator, 225 hours | 10,125 |
| 1 GIS Technicians, 450 | 18,000 |
| 1 SFEI environmental analysts, 350 | 14,000 |
| clerical support | 1,600 |
| Alpha 250 (3 monthly payments) | 3,600 |
| plotter (3 monthly payments) | 975 |
| 4 gb computer disk | 900 |
| miscellaneous materials | 500 |
| Total | $69,700 |

# Delta Approach

*Narrative*

This approach would extend the Project upstream through the Delta. It would provide a number of alternative recommendations for wetlands mosaics for both the Bay Area and the Delta that are seamless, supported in one GIS platform for scenario planning, and entirely consistent in rationale and documentation. This approach could provide the most product in the long-term (i.e. perhaps 12 months minimum, depending upon the number and kinds of deliverables), and would best advance comprehensive ecosystem management for the Bay-Delta system. Our comparison of the CALFED process and the Project reveals compatibility, although some adjustments of the goals project is probably required. In terms of the CALFED process, the Project would generate "management objectives" consistent with CALFED "goals."

*First Quarter Deliverables*

1) Establishment of the Delta Resource Managers Group. The RMG is responsible for the Goals. Members of the RMG operate at the intersection of science, policy, and practical land management for the Federal and State agencies with major operational or regulatory interests in Delta wetlands.

2) Selection of Target Wetlands Functions. These are the functions for which levels of support will be recommended and later translated into quantitative habitat goals.

3) Establishment of Science Focus Teams. The Focus Teams will provide scientific rationale for the recommended levels of support for target functions. The Focus Teams comprise the technical staff to the RMG. Focus Team membership can involve anyone from government, the public, or the private sector who has a regional (Delta) perspective, commitment to the Project, and needed technical expertise.

4) Identification of Sources of Historical Information. A picture of the distribution and abundance of wetlands habitats of the past (circa 1800-1850) is essential to develop scientific consensus about the appropriate complexity and patch size of a regional wetlands habitat mosaic and to understand the natural climatic and hydro-geomorphic controls on wetlands in the region. The information to support the picture of the past tends to be widely scattered among numerous and diverse sources. Substantial detail is required to validate any generalities that are required to simply the historical perspective.

5) Delta Wetlands Atlas. The RMG will define the scope of a GIS base map for wetlands planning. Numerous pieces of different cartographic perspectives of the Delta exist now. However, no complete atlas exists of the kinds of wetlands or related features that are defined by state or federal operations or management interests. For example, no map exists for Delta levees of different age classes, percent cover of riparian vegetation, use by anglers, etc. This kind of information will be required by the RMG to set goals (i.e., management objectives), and for subsequent monitoring efforts.



C-049886

*Second Quarter Deliverables*

1) Draft Delta Wetlands Atlas. An atlas of Delta wetlands would be produced in GIS (ArcInfo) to the specifications of the RMG. If possible, the atlas would be produced based upon color-IR photography (1:24000) scanned at 600 dpi that NOAA intends to produce during spring 1996. SFEI will negotiate with NOAA for purchase of the photos. SFEI is also negotiating with BADGER for the compilation of the photography into a single, seamless image of the region for GIS applications and future wetlands change detection. Attribute files for each "parcel" of wetlands would be developed later.

2) Draft Historical Wetlands Atlas. All available evidence of the historical distribution and abundance of wetlands and related features, including natural levees, riparian tree stands, tidal marshland ponds, and perennial ponds, would be produced in GIS (ArcInfo). The base scale would probably be 1:10,000. Attribute files, including lists of supporting evidence, for each "parcel" of wetlands would be developed later.

3) Geography of Target Functions. All professional data for the distribution and abundance of the target wetlands functions would be compiled and prepared as attribute files or GIS overlays for the Delta Wetlands Atlas.

*Third Quarter Products*

1) Delta Wetlands Atlas. The atlas of operations kinds of wetlands, including all attribute files about known existing natural resources and human operations, will be completed according to the specifications of the RMG.

2) Historical Wetlands Atlas. The atlas of historical wetlands and related features of the Delta, including all attribute files of the supporting evidence and certainty of the features shown, will be completed according the specifications of the RMG.

3) Draft Habitat Prescriptions. SFEI would produce in GIS (ArcInfo) maps to illustrate the wetlands habitat prescriptions provided by the RMG and its Focus Teams.

*Fourth Quarter Products*

1) Alternative Regional Mosaics. Based upon the revised habitat prescriptions, a number of alternative, optimal wetlands mosaics would be produced in GIS (ArcInfo) as the basis for planning scenarios and the development of implementation strategies by CALFED.

2) Science Report. SFEI would produce a comprehensive report to document the scientific process undertaken, the supporting data (including the metadata of the GIS layers), and majority and minority scientific opinions.



C-049887

*SFEI Funding Requirements for Delta Approach*

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|---|---|
| Science Coordinator, 800 hours | $76,000 |
| Assistant Science Coordinator, 1800 hours | 81,000 |
| GIS Technicians, 2400 hours | 96,000 |
| SFEI environmental analysts, 3200 hours | 128,000 |
| University RA's, 4000 hours | 57,600 |
| clerical support | 6,400 |
| 4000 miles of car travel | 1,160 |
| Focus Team compensation | 8,000 |
| Alpha 250 (12 monthly payments) | 14,400 |
| color plotter (12 monthly payments) | 3,900 |
| 9 gb computer disk | 2,000 |
| miscellaneous materials | 3,000 |
| Total | $477,460 |



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