

**EXHIBIT A-1
(Standard Agreement)**

WORK TO BE PERFORMED

A. Scope and Objectives

Beneficial uses of wetlands and riparian area in California have been heavily impacted by a variety of projects, with more than 90% of California's wetlands and riparian areas lost. California's *Wetland Conservation Policy* establishes a "no net loss-long term gain" goal for wetland quantity, quality, and permanence (Executive Order W-59-93). The main tool used by the State Water Resources Control (State Board) and the Regional Water Quality Control Boards (Regional Boards) to protect wetlands and riparian areas is the Clean Water Act (CWA) §401 Water Quality Certification (WQC) Program. Section 401 WQC is associated with CWA §404 permits issued by the U.S. Army Corps of Engineers (USACE). A principal means to achieve the "no net loss" goal is the requirement for compensatory mitigation when unavoidable impacts to wetlands and riparian areas occur.

Successful compensatory mitigation is technically complex, usually takes years to achieve, and can be expensive. Thus there is a real danger of failure, and a financial incentive for dischargers to avoid or minimize the necessary costs. These considerations argue for an effective compliance mitigation program for compensatory mitigation projects. However, due to staffing constraints, the Regional Boards perform little or no such compliance monitoring. A second concern is that regulatory conditions, even if complied with, may not assure reestablishment of beneficial use quality or permanence. The National Academy of Sciences, in a 2001 comprehensive review of wetland compensatory mitigation in the United States, found that the national "no net loss" goal is not being met because (1) there is little monitoring of permit compliance, and (2) the permit conditions commonly used to establish mitigation success do not assure the establishment of wetland functions. In establishing the conditions of wetland compensatory sites, the recently developed wetland assessment methods, like the "California Rapid Assessment Method" (CRAM), which was developed by the San Francisco Estuary Institute and Southern California Coastal Water Research Project and the "Wetland Ecological Assessment" (WEA) method, which was developed by the San Francisco Regional Water Board, will be applied. A third concern is that, because we have not integrated compliance monitoring into our routine regulatory practice, the State and Regional Board's administrative and regulatory procedures may not adequately support effective and efficient compliance monitoring of compensation sites.

The objectives of this project are to: (1) determine project-specific and regional compliance with regulatory requirements, (2) assess wetland function and condition at the compensatory mitigation sites, (3) improve administrative and regulatory practice for establishing and monitoring conditions to regulate compensatory mitigation, and (4) determine the need for ongoing compliance monitoring.

Compensation sites in the North Coast, San Francisco Bay, Central Coast, Los Angeles, Central Valley, Lahontan, Santa Ana, Colorado Basin, and San Diego Regional Board jurisdictions will be considered for the study.

B. Work

The Contractor shall be responsible for the performance of the work as set forth herein below and for the preparation of products and a final report as specified in this Exhibit. The Project Director shall promptly notify the Contract Manager of events or proposed changes that could affect the scope, budget, or schedule of work performed under this agreement.

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Task 1: Project Management and Administration

- 1.1 Provide all technical and administrative services as needed for agreement completion; monitor, supervise and review all work performed; and coordinate budgeting, scheduling, agreement and subcontract administration to assure that the agreement is completed within budget, on schedule, and in accordance with approved procedures, applicable laws and regulations.
- 1.2 Ensure that agreement requirements are met through completion of quarterly progress reports submitted to the Contract Manager by the 10th of the month following the end of each calendar quarter (March, June, September, and December) and through regular communication with the Contract Manager. The quarterly progress reports shall describe activities undertaken and accomplishments of each task during the quarter, milestones achieved, and any problems encountered in the performance of the work under this agreement. The description of activities and accomplishments of each task during the quarter shall be in sufficient detail to provide a basis for payment of invoices.

Task Product: 1.1 Quarterly Progress Reports

Task 2: Review Permit Files

- 2.1 Develop Compensatory Mitigation Database. Develop a "Compensatory Mitigation Database" to allow efficient management of project data, in order to help determine compliance with regulatory requirements and meet the other objectives of this agreement. The Database will be in Microsoft Access or similar electronic format and will include parameters and associated data developed in Tasks 2, Review Permit Files; 3, Develop Compliance Assessment Method and QAP; 4, Select Assessment Sites; and 6, Conduct Field Surveys. The structure of the Database will relate to the State Board's existing 401 Database (401done.mdb) so that data in the two databases can be linked.
- 2.2 Compile Permit Data. Compile, review, and summarize Regional Board CWA §401 (and, as appropriate, associated USACE §404) permits, which require compensatory mitigation. This review will support two objectives: (1) develop a compliance assessment method (Task 3), and (2) establish the pool of mitigation sites for field assessment (Task 4). Data to be compiled for the permits include, as available, project description, e.g., applicant name, permit date, file number, project type (based on State Board's 401done.mdb database project categories), project location, area of impact; mitigation site location, size, and age; target plant community type; success criteria; monitoring reporting requirements; and any other requirements. Files with insufficient information will be noted, but eliminated from further consideration. Note any difficulties in retrieving data and identify opportunities to improve regulatory and/or administrative practice to increase the efficiency of future data retrieval.

Task Products:

- 2.1. Documentation of Compensatory Mitigation Database to include data dictionary (annotated field list); internal table relationships, and relationship to State Board 401 Database.
- 2.2 Data from Regional Board and USACE Permit files compiled into MS Access or similar electronic tabular form to allow efficient sorting and retrieval.

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- 2.3 Report on difficulties encountered and recommendations to improve administrative and/or regulatory practice to facilitate efficient data retrieval.

Task 3: Develop Compliance Assessment Method and Quality Assurance Plan

- 3.1 Develop Compliance Assessment Method. Use the compiled data developed in Task 2 to determine the scope and variety of regulatory conditions that have been required for compensatory mitigation. For each condition, develop a written methodology to determine compliance, through review of existing monitoring reports and field visits.
- 3.2 Develop Quality Assurance Plan. Establish levels of accuracy and precision for field data (e.g., survey readings, camera positions, areal extent of compensation, vegetative coverage) and establish field protocols to assure achievement of desired levels of accuracy and precision.

- Task Products:
- 3.1. List of Regulatory Conditions For Compensatory Mitigation.
 - 3.2. Compliance Assessment Criteria
 - 3.3. Compliance Assessment Procedures for Report Reviews and Field Visits
 - 3.4. Mitigation Compliance Assessment Data Form
 - 3.5. Quality Assurance Plan (QAP)

Task 4: Select Assessment Sites

Develop a "Field Site Selection Study Design". To the extent possible, selected sites will represent all compensatory mitigation sites to ensure that the conclusions of this study are applicable regionally and statewide. Ideally, this project will assess compensation for a variety of wetland types, permit actions, project ages, locations, and construction techniques. Site selection will balance the need to include particular wetland types, etc., with the need for random selection and sufficient replication for statistical purposes. If necessary, sampling may be conducted at selected wetland types without a sufficient sample size to draw general conclusions. In determining the sample size and survey sites, the Project Director will consider: (1) accessibility of sites, (2) age of mitigation project (preferably at least five years), (3) types of wetland for which most compensation was required, (4) types of wetland provided or improved through compensation, (5) types of compensation provided, i.e., creation, restoration, enhancement, or preservation, (6) the field site selection study design (e.g., random or stratified sampling design), and (7) costs. For each compensatory mitigation project selected, the permit file will be reviewed and any unique characteristics noted in the electronic form developed in Task 2.1. The Project Director will confer with the Contract Manager on the selection of assessment sites.

- Task Products:
- 4.1. Field Site Selection Study Design
 - 4.2. List of assessment sites

Task 5: Adopt CRAM Methodology as Appropriate for Statewide Use and Recommend Application of WEA

- 5.1 The Contractor will use CRAM to assess the function and condition of wetland compensatory mitigation projects, adopting the CRAM model as necessary to address (1) regional differences in the area covered by this agreement, and (2) additional information need to achieve the project goals.

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5.2 The Contractor will recommend for the Contract Manager's approval a procedure to apply WEA to some or all of the study sites in order to test CRAM against WEA and document any discrepancies between the two.

Task Products: 5.1 Documentation of any suggested revisions to CRAM for use under this agreement.
5.2 Recommended protocol to apply WEA to some or all study sites.

Task 6: Conduct Field Surveys

For each site selected in Task 4, the Contractor will use the compliance assessment method developed in Task 3 to determine status of regulatory compliance, and the CRAM and WEA procedures as approved in Task 5 to evaluate function and condition. Field surveys will be conducted in spring and summer.

- 6.1 Assess Status of Compliance. Document status of regulatory compliance using compliance assessment method developed in Task 3.
- 6.2 Assess Wetland Function and Condition. Document wetland function and condition using CRAM and WEA methodologies as adapted in Task 5.
- 6.3 Photograph Each Site. Digitally photo-document each site adequately to provide complete visual description. Document location of each camera position per QAP (including compass bearing of photograph, site identifier, and date).

Task Products 6.1 Field data (completed Compliance Evaluation Data Form for each site in pdf format, or compiled into Compensatory Mitigation Database).
6.2 Completed Wetland Function and Condition Assessment Form for each site
6.3 Digital photographs of each assessment site.
6.4 Comparison of CRAM and WEA per approval procedure developed in Task 5.

Task 7. Report Survey Results

- 7.1 Status of Compliance. For each surveyed site, report on the status of regulatory compliance with requirements specified in the site's approved mitigation plan and/or in Regional Board CWA §401 (and, as appropriate, associated USACE §404) permits, e.g., its areal extent and planting composition and success.
- 7.2 Function and Condition. For each surveyed site, report on the wetland function and condition.

Task Products 7.1 Survey results compiled into Compensatory Mitigation Database.
7.2 Narrative report and photographs documenting status of compliance of each surveyed site.
7.3 Narrative report on the wetland function and condition of each surveyed site.

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Task 8: Consult with Steering Committee

The Contract Manager will convene a Project Steering Committee in consultation with the Project Director. The Steering Committee may include State Board, Regional Board, and other agency staff: academic experts and others. In consultation with the Contract Manager, the Project Director will schedule meetings or conference calls with the Steering Committee. Submit task products to the Contract Manager and the Steering Committee for review.

Task Products: Conduct timely meetings or conference calls to discuss draft products of Tasks 2 (Review Permit Files), 3 (Develop Compliance Assessment Method and QAP), 4, (Select Assessment Sites), 5 (Adapt CRAM & WEA Assessment Methodologies), 7 (Report Survey Results), and 9 (Prepare Final Report). Project Director may schedule additional meetings as needed to resolve issues that may arise during the term of the agreement.

Task 9: Prepare Final Report

Prepare a final report summarizing the results of the work performed.

In addition, the final report will present appropriate statistical and other analyses to:

- (1) document the regional and statewide compliance status of wetland compensatory mitigation projects,
- (2) document the regional and statewide function and condition of wetland compensatory mitigation projects,
- (3) discuss the correlation between regulatory compliance and function and condition,
- (4) recommend improvements to administrative and regulatory practices relating to requiring and monitoring compensatory mitigation, including methods for improving the success of wetland mitigation, and
- (5) provide recommendations on the necessity, frequency, location, and type of ongoing compliance monitoring.

9.1 Prepare Draft Final Report. The Draft Report will include the data, analyses, conclusions, and recommendations listed above. The report's format shall include: Abstract, Introduction, Methods, Status of Regulatory Compliance of Compensatory Mitigation Sites, Function and Condition of Compensatory Mitigation Sites, Conclusions, Recommended Administrative and Regulatory Changes, Recommended Monitoring Program, Literature Cited, and Appendices. Lengthy appendices (e.g., compliance evaluation data forms and Compensatory Mitigation Database) will be provided in electronic format.

9.2 Prepare Final Report. The Final Report will: (1) address comments on the Draft Final Report by the Contract Manger and the Steering Committee. The Project Director shall submit the Final Report in hardcopy (one reproducible copy for the State Board and for each Regional Board in which data were collected); and in electronic formats.

Task Product(s): 9.1 Draft Final Report
9.2 Final Report

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C. Schedule of Completion Dates

Task	Deliverable	Completion Date
1.1	Quarterly Progress Reports	January 10, 2005 & quarterly thereafter
2.1	Documentation of Compensatory Mitigation Database to include data dictionary (annotated field list); internal table relationships, and relationship to Sate Board 401 Database.	November 30, 2004
2.2	Data from Regional Board and USACE Permit files compiled into MS Access or similar electronic tabular form to allow efficient sorting and retrieval.	April 30, 2005
2.3	Report on difficulties encountered and recommendations to improve administrative and/or regulatory practice to facilitate efficient data retrieval.	April 30, 2005
3.1	List of regulatory conditions for compensatory mitigation.	April 30, 2005
3.2	Compliance assessment criteria	April 30, 2005
3.3	Compliance assessment process for report reviews and field visits	April 30, 2005
3.4	Mitigation compliance assessment data form	November 30, 2004
3.5	Quality Assurance Plan	April 30, 2005
4.1	Field site selection experimental design	February 29, 2005
4.2	List of assessment sites	
5.1	Documentation of any suggested revisions to CRAM for use under this agreement.	January 31, 2005
5.2	Recommend protocol to apply WEA to some or all study sites.	
6.1	Field data (completed Compliance Evaluation Data Form for each site in pdf format, or compiled into Compensatory Mitigation Database).	October 31, 2005
6.2	Completed wetland function and condition assessment form for each site.	
6.3	Digital photographs of each assessment site.	
6.4	Comparison of CRAM and WEA per approval procedure developed in Task 5	
7.1	Survey results compiled into compensatory mitigation database.	December 31, 2005
7.2	Narrative report and photographs documenting status of compliance of each surveyed site.	
7.3	Narrative report on the wetland function and condition of each surveyed site.	
8.0	Periodic meetings with Steering Committee	Various, as described in Task 8
9.1	Draft final report	January 31, 2006
9.2	Final report	March 31, 2006

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D. Reports

1. Not later than January 10, 2005, and quarterly thereafter, during the life of this agreement, the Project Director shall provide a written progress report to the Contract Manager describing activities undertaken, accomplishment of milestones, and any problems encountered in the performance of the work under this agreement, and delivery of intermediate products, if any.
2. The Project Director shall submit to the Contract Manager for approval the reports containing the results of the work performed in accordance with the schedule in this Exhibit.
3. Not later than January 31, 2006, the Project Director shall submit to the Contract Manager and the Steering Committee copies of a draft final report describing the work performed pursuant to Section B of this Exhibit for review and comment.
4. Within three (3) weeks following submittal of the draft final report, the Project Director shall convene a meeting of the Steering Committee to discuss the draft final report.
5. Within two (2) weeks following the Steering Committee meeting, the Contract Manager will submit his final comments to the Project Director.
6. Not later than March 31, 2006, the Project Director shall submit to the Contract Manager for approval an electronic copy of the final report containing the results of the work performed and addressing the comments submitted to the Project Director by the Contract Manager, and one (1) reproducible master copy for the State Board and for each of the Regional Boards in which data were collected.
7. The report will not be considered final until approved and accepted by the Contract Manager. Approval means that the final report adequately meets the requirements of Section B of this Exhibit.