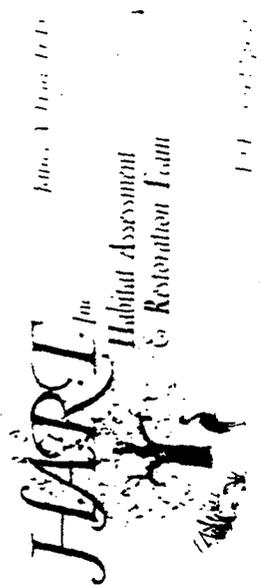


Executive Summary

Tyler Island
Levee Protection & Habitat Restoration Plan

by
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Project Description and Primary Biological/Ecological Objectives

This project involves the use of biotechnical bank and levee protection and enhancement methods to foster an increase in size of shaded riverine aquatic, instream herbaceous cover, and tidal perennial aquatic habitats. These features will improve water quality, foster and increase of macroinvertebrate populations, and improve habitat for priority species, including Delta smelt, splittail, San Joaquin and east-side tributaries fall-run chinook salmon, and other anadromous fishes that use this area for habitat and migration corridors.

Approach/Tasks/Schedule

We propose to incorporate various combinations of organic fabric, plant materials, and geotechnical substances that will serve the dual purpose of erosion control and habitat creation. Some of the methods include the use of ballast buckets, coir biologs, and coir mats. These will be installed along various reaches of the North Fork of the Mokelumne River and Georgiana Slough at Tyler Island. If funded, this project would begin in the fall of 1997.

Justification for Project and Funding by CALFED

This project will demonstrate how cost-effective biotechnical materials can reduce erosion on fragile Delta levees and simultaneously provide priority habitat for priority species.

Budget Costs and Third Party Impacts

Anticipated budget costs are presented in Tables I, II, and III. Third party impacts should be minimal.

Applicant Qualifications

The project team represents an extremely qualified group of people and organizations, with considerable experience in restoration implementation, scientific monitoring, and fisheries science. They include Jeffrey A. Hart, Ph.D., restoration ecologist; Tyson Holmes, Ph.D., research design scientist; Steve Sinnock, P.E., of Kjeldsen, Sinnock, and Neudeck; Stephen Shaner, Ph.D., invertebrate biologist; Dr. Michael McGowan, Ph.D., fisheries biologist; Gary Kirtlan, farmer and restorationist; and L & F Farm Labor.

Monitoring and Data Evaluation

Research level monitoring will form an integral part of the project, using appropriate experimental design parameters. Parameters to be measured include plant survival, plant cover, physical habitat heterogeneity, water quality, and abundance and distribution of fish and macroinvertebrates associated with the various restored vegetation treatments.

Local Support/Coordination with other Programs/ Compatibility with CALFED objectives

This project is fully supported by Reclamation District 563, which maintains the levees surrounding Tyler Island. The Reclamation District views the proposed methods and techniques to have the following long term benefits: 1) alternative, cost effective method to stabilize actively eroding earthen slopes; 2) means of providing additional slope stability in areas of existing revetment.