



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: CA3961

Title: Hydrodynamics of Shallow Water Habitats in the Sacramento-San Joaquin Delta

Focus Categories: Hydrology, Solute Transport

Keywords: biota, sediments, hydrodynamics, ecosystems

Start Date: 03/01/2001

End Date: 02/28/2002

Federal Funds: \$14,959

Non-Federal Matching Funds: \$20,845

Congressional District: 9th

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Abstract

This study will carry out a combination of field data analysis and numerical modeling to examine the hydrodynamics of shallow tracts of open water in the "delta lakes." The Delta is critically important to California water, as it is a source of drinking water for a large fraction of the state's population. The Delta also provides water for agricultural uses and is a valuable ecosystem which may be irreplaceable. The complexity of the system makes its management difficult, as every alteration which improves its function for one objective has implications in other areas. This study is designed to observe and model the details of the hydrodynamics which govern the physical transport and dispersion of sediment, biota, contaminants and nutrients in three delta lakes. The goal is the development of tools which will provide a foundation for more detailed studies of the dynamics of these ecosystems. The study is likely to be interdisciplinary and collaboration with other scientists working in the field, including USGS, is expected.