

- Link with previously conducted efforts or is a continuation of a successfully implemented project
- Provide an opportunity to develop the project as an adaptive experiment including conceptual models, testable hypotheses, and comprehensive monitoring
- Contribute to resolution of some of the ecological uncertainties related to small unscreened diversions in the South Delta.

Implement ecosystem restoration actions included in the Lower Sacramento River, Yolo Bypass, and North Delta Bundle.

The Ecosystem Restoration Program emphasis is on:

- creating and maintaining sustainable aquatic and riparian and riverine aquatic habitats needed by aquatic and terrestrial species
- creating fresh emergent and seasonal wetland and habitats linked to flood control activities in the North Delta and Mokelumne River corridors, and
- evaluating additional fresh emergent wetland habitats.

The CALFED Bay-Delta Program approach for the lower Sacramento River, Yolo Bypass, and North Delta region is to implement integrated projects and programs that will either make a substantial contributions to the overall ecological health of the region or provide answers to critical ecological uncertainties, thus providing more precise direction for future action bundles.

Projected costs to implement the proposed ecosystem restoration projects in the Lower Sacramento, Yolo Bypass, and North Delta Region bundle are \$5.5 million in 2000 and \$10.0 million in 2001.

Restore Tidal Habitats along Georgiana Slough. Georgiana Slough is a natural distributary of the Sacramento River. It carries Sacramento River water to the interior of the Delta. When state and federal water project exports are high, unnaturally high volumes of Sacramento River water are drawn into the interior of the Delta. This highly modified hydrologic action exposes young fish of Sacramento River origin to high rates of predation and entrainment loss. The loss of escape cover and other aquatic habitats along Georgiana Slough increases the problem. The absence of habitat has been attributed to levee construction, boat wakes and increased flow velocities entering the Central Delta through Georgiana Slough.

The approach is to create a mosaic of riparian and riverine aquatic and tidally influenced fresh emergent wetland habitats along Georgiana Slough to provide direct benefits to fish species rearing or migration through the slough. The restoration actions will be designed and implemented as adaptive experiments complete with comprehensive monitoring for the dual purposes of helping to restore listed species while resolving some of the ecological uncertainty linked to the role of riparian and riverine aquatic and fresh emergent wetland habitats in the survival of young fish.

CALFED will evaluate proposed projects based on their ability to:

- Identify potential sites for restoration experiments
- Create or maintain shallow water and riparian habitats through setback levees
- Link with previously conducted efforts or is a continuation of a successfully implemented project
- Provide an opportunity to develop projects as an adaptive experiments including conceptual models, testable hypotheses, and comprehensive monitoring
- Contribute to resolution of some of the ecological uncertainties related to the role and value of riparian and riverine aquatic and fresh emergent wetland habitats along Georgiana Slough.

Integrate Ecosystem and Flood Control Improvements in the Lower Mokelumne River. The Mokelumne River corridor is one of four major habitat corridors proposed in the Ecosystem Restoration Program Plan for the Sacramento-San Joaquin Delta Ecological Management Zone. Acquisition of land for future conversion to a variety of aquatic habitats are the major focus of recently completed actions in the area. These actions are closely linked with programs and projects identified in the Long-Term Levee Protection Plan. Together, actions from these two common programs can provide significant ecological benefits including increased riparian and riverine aquatic habitats, ecologically beneficial floodplain configurations, and improved habitats for fish spawning, rearing, and migration.

The approach is to implement adaptive experiments designed to contribute to the restoration of listed fish species, improve habitat for a wide variety of other aquatic and terrestrial species, improve river-floodplain interactions and flood protection by setting back levees, and resolve ecological uncertainty by implementing a comprehensive monitoring and research program.

CALFED will evaluate proposed projects based on their ability to:

- Convert land to a variety of riparian and riverine aquatic habitats and tidally influenced fresh emergent wetland and tidal perennial aquatic (open water) habitats while providing improved flood protection in the form of wider floodplains and setback levees
- Link with previously conducted efforts or is a continuation of a successfully implemented project
- Create new habitats as adaptive experiments complete with conceptual models, hypotheses, and comprehensive monitoring
- Contribute to resolution of some of the ecological uncertainties related to integrating flood control and ecosystem improvements.

Provide Needs And Opportunities Analysis For Improving Ecosystem Restoration And Flood Bypass Habitat In The Yolo Bypass Area. Recent investigations indicate that the Yolo Bypass acts as a surrogate or alternative for natural floodplain habitat. When the bypass is operating, it effectively doubles the floodplain habitat of the Bay-Delta system. Field studies have demonstrated that the bypass supports at least 40 species of fish including delta smelt, steelhead trout, sturgeon, and chinook