The Comprehensive Study...

Makes the Civil Works Strategic Plan and Environmental Operating Principles *Real*

- Recommends holistic solutions regardless of who implements them.

Took a systems-wide focus on balancing multiple objectives in two river basins with a view toward future needs

- Improves system-wide knowledge.
- Embraces others' expertise and programs, considers multiple resources, and leverages resources.
- Provides baseline information and leads to quicker implementation and new initiatives.

Fostered a comprehensive vision with state-or-the-art systems tools and knowledge and project spin-offs

- Enhances collaborative relationships at Federal, State, tribal, local, and non-governmental levels in developing large scale, integrated solutions.

Enhanced partnerships at multiple levels with multiple stakeholders through strategic alliances with Federal, State and local water managers and others for system impacts

- Considers future watershed needs by developing a framework for activities.
- Gives Corps projects context within the watershed.
- Seeks ways to better align and integrate ongoing water management activities.

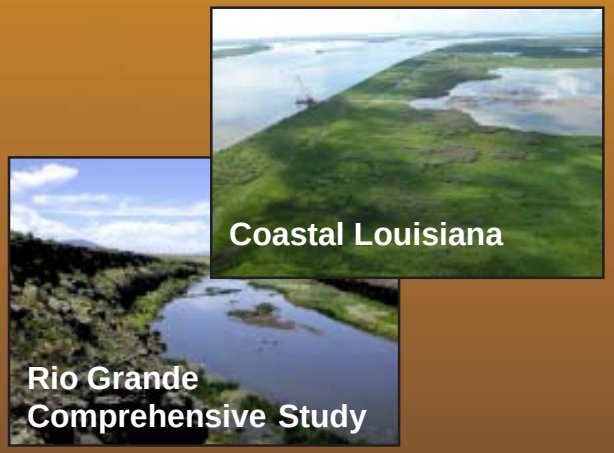
Developed and applied Guiding Principles, an administrative structure, and enhanced knowledge to move ahead an begin implementing projects

The Corps Future...

A Systems Approach for Water Resource Management

- Watershed scale
- Partnerships with key stakeholders
- Systems view
- State-of-the-art systems tools & models
- Multiple objectives
- Integrated approaches and solutions
- Multiple Corps roles – Technical Advisor, Information Provider, Planner or Plan Architect, Team Member, Team Leader or Co-Leader

Others Watersheds



For further information, contact:

Future Directions Team
U.S. Army Corps of Engineers
441 G Street, NW
Washington, D.C. 20548
www.usace.army.mil
(202) 761-0015

U. S. Army Corps of Engineers
Institute for Water Resources
7701 Telegraph Road , Casey Building
Alexandria, VA 22315
www.iwr.usace.army.mil
(703) 428-6291

The Sacramento and San Joaquin River Basins Comprehensive Study

An Example of the Corps Watershed Approach

US Army Corps of Engineers

THE SITUATION

The 43,000 square mile watershed covers most of California's Central Valley, where the Sacramento and San Joaquin River Basins flow together to form a rich and diverse delta. It is a complex system of reservoirs, levees, weirs, and floodwater bypasses operated for water supply, floodplain management, land use, ecosystem viability, and too often emergency management. It is home to 4.4 million people and dozens of native species. It is an agricultural area that contributes $14 billion or eight percent of the U.S. agricultural production per year and one third of all agricultural jobs in California.

In 1997 California experienced one of the worst floods in its history. Levees failed along the Sacramento River tributaries and in more than two dozen places on the San Joaquin River.

Acting for the Watershed

California took stock of aging levees that failed in more than 24 places, erosion that had created a measurable decline in habitats and species, and the effects of proliferating development in surrounding floodplains.

The Governor's Flood Emergency Action Team recommended a new floodplain management plan to sustain the watershed – to protect current resources, prepare for California's population growth, and interrelated river system benefits. In 1998 the State Legislature and the U.S. Congress funded a comprehensive plan for the watershed. To implement this plan, the U.S. Army Corps of Engineers and the California Reclamation Board joined together to initiate a study to extend traditional flood management approaches toward a broader array of integrated solutions that address both flood protection and ecosystem restoration along the river systems.

The Comprehensive Study: A New Approach

Collaboration – A multi-entity administrative structure brought together:

- Twenty federal and state agencies
- Counties, cities and towns
- Local flood control operators
- Environmental groups
- Water users
- Farming industry
- Urban developers

A System-wide Focus on Balancing and Integrating Multiple Objectives...

...related to local, regional, and systemic issues; multiple purposes, regional coordination; and program integration with the CALFED Bay-Delta Program, and other programs and studies.

Guiding Principles for Planning and Implementation...

...set forth a strategy for developing projects both immediately and in the future, as well as revised or new policies for multi-objective system-wide programs.

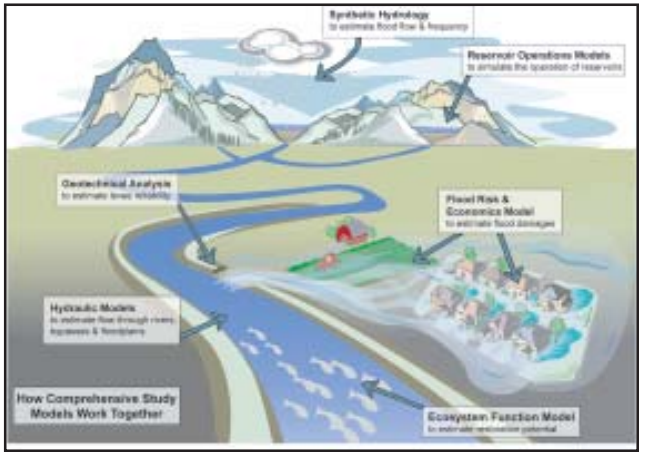
Guiding Principles

- Protect public safety first
- Promote effective floodplain management
- Recognize the value of agriculture and open space
- Avoid adverse hydraulic and hydrologic impacts
- Plan system conveyance capacity compatible with all uses
- Provide for sediment continuity
- Adopt an ecosystem approach to restore and sustain floodplain health, productivity and diversity
- Optimize use of existing facilities
- Integrate with the CALFED Bay-Delta and other programs
- Promote multi-purpose project objectives
- Protect existing infrastructure

The Study Showed the Benefits of a System-Oriented Watershed Approach

- A more comprehensive vision for flood management AND ecosystem restoration
- Enhanced partnerships
- Enhanced knowledge

The largest suite of hydrologic, hydraulic, economic and environmental models of their kind:



A multi-scale approach

- Enhanced system-wide emergency preparedness and flood response
- Regional projects: *Lower San Joaquin River Basin Reconnaissance Study*
- Local projects: *Hamilton City Flood Damage Reduction & Ecosystem Restoration Project*

Administrative efficiencies

- Adaptive assessment and adaptive management
- Consistent application of Guiding Principles
- Reduced costs and redundancies
- Early implementation of solutions (projects)