

GOVERNANCE IN A COMPLEX, CHANGING ENVIRONMENT

LESSONS FROM NORTHERN CALIFORNIA WATER MANAGEMENT PROJECTS

Judith E. Innes

Department of City and Regional Planning
University of California Berkeley

FIGURE 4.6

The Sacramento-San Joaquin Delta

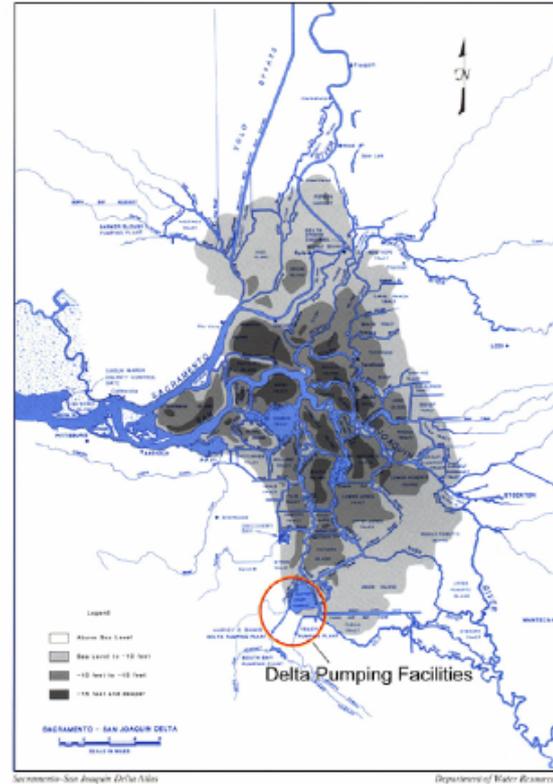
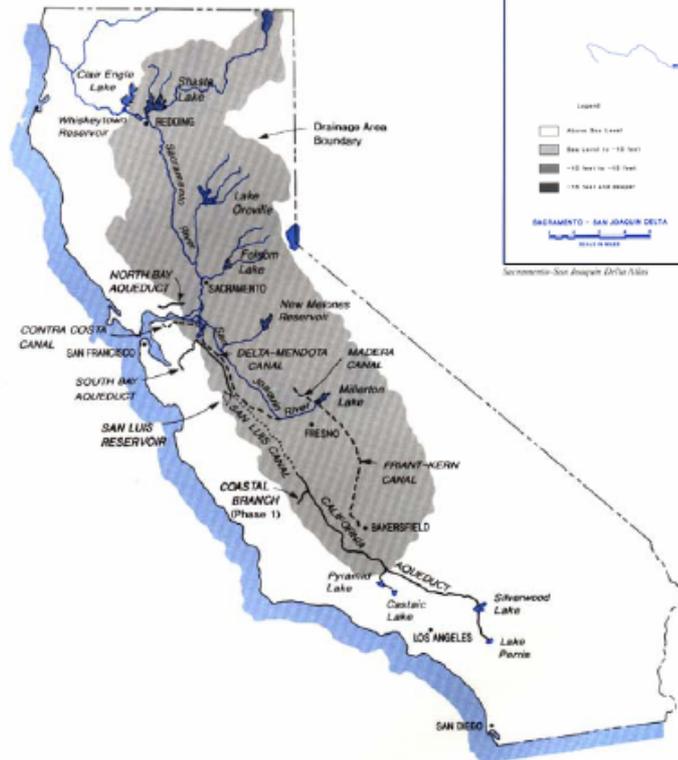


FIGURE 4.5

The Delta Watershed



PROJECTS STUDIED

- San Francisco Estuary Project 1988-1993
- Sacramento Area Water Forum 1993-2000
- CALFED Bay-Delta Program 1994-2003

The Lower American River in Northern California



The Lower American River is at the Confluence of the Waters that Serve 25 Million People





**SOURCES OF UNCERTAINTY
AND COMPLEXITY
IN THE DELTA**

LEGAL AND GOVERNMENTAL

- 128 public agencies at all levels of government each with some jurisdiction
- 20 major federal and state laws and constitutional requirements
- Dizzying array of overlapping and conflicting water rights, which cannot all be exercised at once
- Effects of current and future court decisions

CHALLENGES FOR INFORMING DECISIONS

- Multiple disciplines
- Advocacy science
- Local knowledge
- Species projections
- Climate predictions
- Levee capabilities
- Effects of operations
- Private sector actions



MULTIPLE AND CONFLICTING GOALS

- Conflicting interests and stakeholders
- Agriculture, urban, environment
- History of conflict and distrust
- Interdependence



In this context top down hierarchy and authoritative decision making is infeasible.

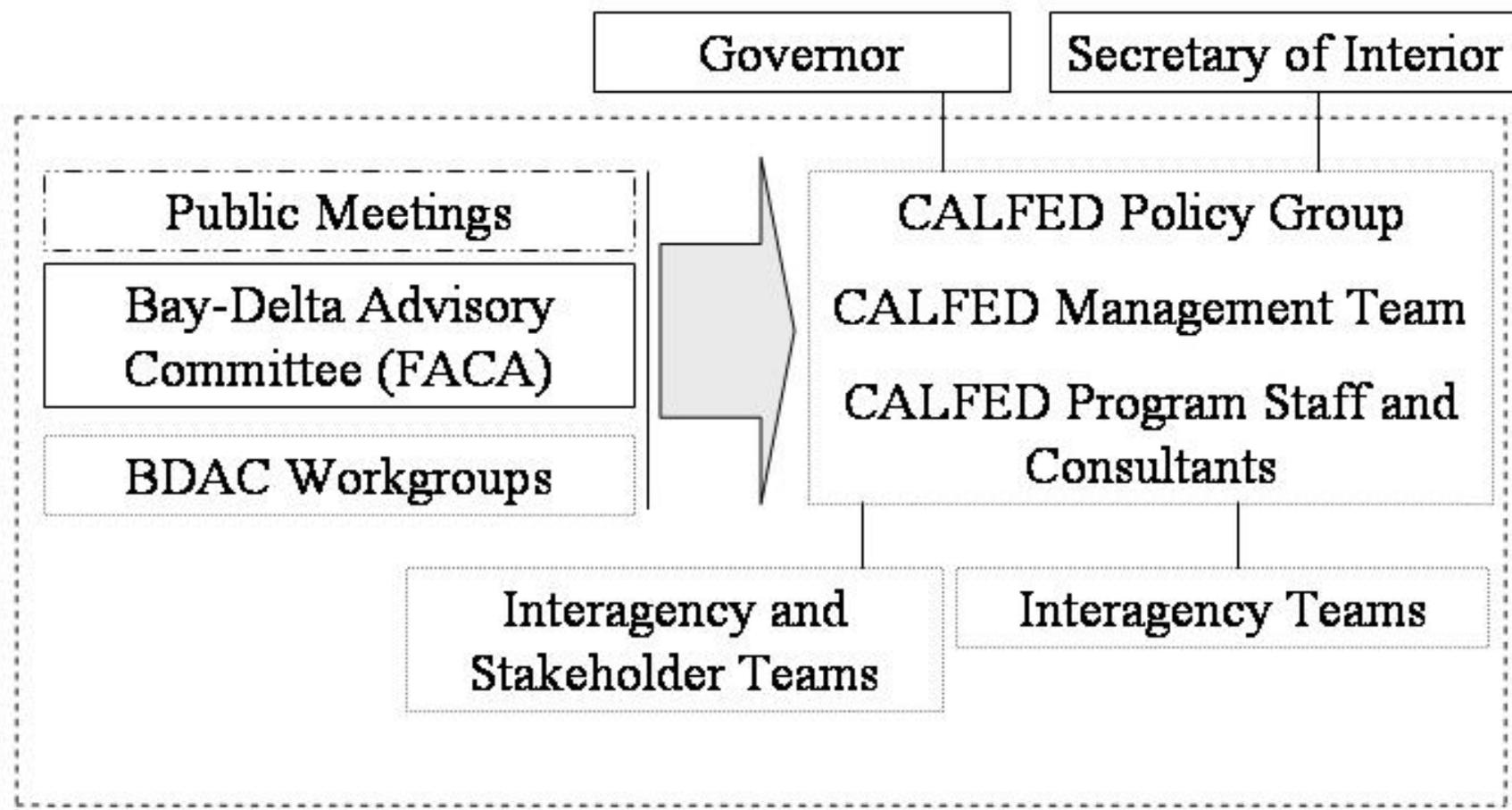
Bureaucratic rule making is slow and subject to lawsuits, has led to policy paralysis.



The resilient Delta of the future requires a flexible, networked governance system, employing multiple strategies and engaging key players and multiple knowledges in a continuous learning and action process



The CALFED Structure 1995-2003





SOME SUCCESSES AND IDEAS

MIXED TASK GROUPS

- Collaborative working groups of diverse players focused on specific tasks and addressing problems agreed on by a larger group



EXAMPLES

- *Management of Water Operations in Calfed*
 - Four Linked Agency-Stakeholder Task Groups.
 - Reviewed Water And Fishery Conditions Around The State On A Real Time Basis.
 - Made Recommendations For Pumping, Delta Cross Channel Operation.

- *The Environmental Water Account*

- A “bank account” for environmental water.
- Flexibility to release for environment or agriculture as needed.
- Joint gaming and modeling.
- More reliable water supply.

AGREEMENT ON A BIODIVERSITY CRITERION FOR THE SF ESTUARY

- Opposing agency and stakeholder scientists spent two weekends in facilitated dialogue
- All but one or two agreed on a controversial measure of best conditions for biodiversity





**INFORMALITY AS A
PLANNING STRATEGY**

Planning Method

- Started as Stepwise Linear Method
- Evolved to Non Linear Method
- Negotiated Process for Joint Action
- Negotiated Set of Issues
- Agreed on Heuristics for Solutions

Implementation

- Implementation was informal
- Similar to song book for jazz combo
- Prepared Record of Decision (ROD)
- Adaptation of EIR & EIS process
- Agreement of agents to implement ROD
- No legislative approval of plan or program
- Agents Adapted Actions to Fit Changed Conditions



KEYS TO SUCCESSFUL COLLABORATIVE GOVERNANCE

*Diversity, Interdependence,
and
Authentic Dialogue*

**Comparing Traditional
Governance with Collaborative
Complex Adaptive System
Governance**

Traditional vs Collaborative CAS Governance

- Top Down Hierarchy
- Central Control
- Closed Boundary
- Clear Goals, Problems
- Single Authority
- Manager is Controller
- Plan, Lead, Control
- Networked Clusters
- Distributed Control
- Open Boundary
- Various/Changing
- Shared Authority
- Guide Interactions
- Influence Conditions, Select Agents/Resources

Traditional vs Collaborative CAS Governance (cont.)

- Directive Leadership
- Linear Planning
- Success is Attainment of Goals of Policy
- System Determined by Components
- Representative Democracy
- Generative Leadership
- Nonlinear Planning
- Success is Realization of Collective Action
- System Determined by Interactions
- Deliberative Democracy

The problems we have created as
a result of our thinking so far,
cannot be solved by thinking the
way we thought when we
created them.

Albert Einstein