

BLUE RIBBON TASK FORCE

DELTÀ

VISION



*Our Vision for
the California Delta*



California's Delta

**Resolving
environmental and
economic conflicts**

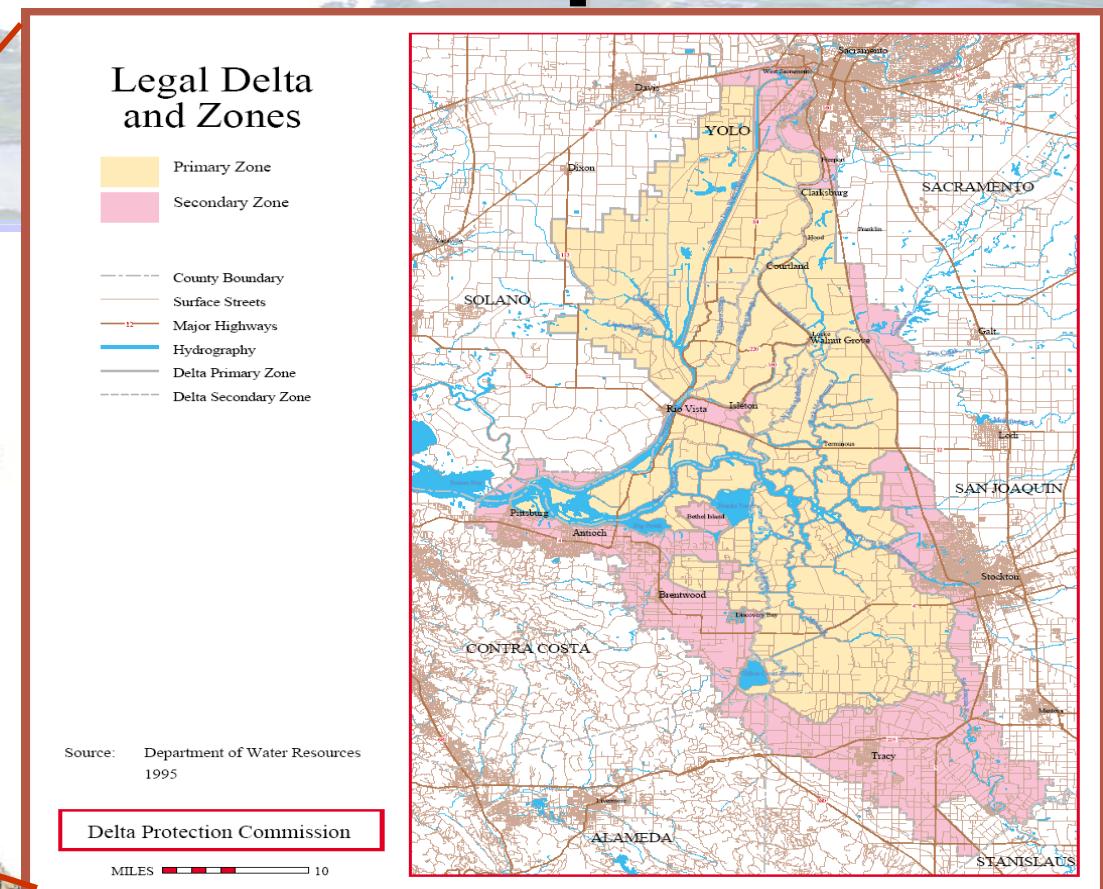
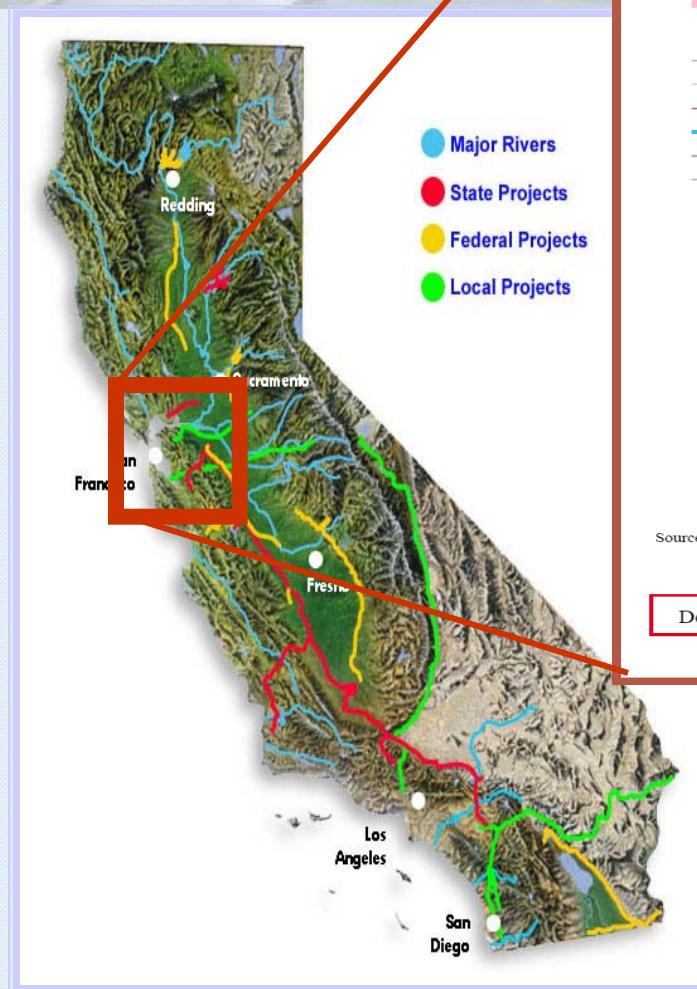
Leo Winternitz

*Acting Chief Deputy Director,
CALFED Bay-Delta Program*

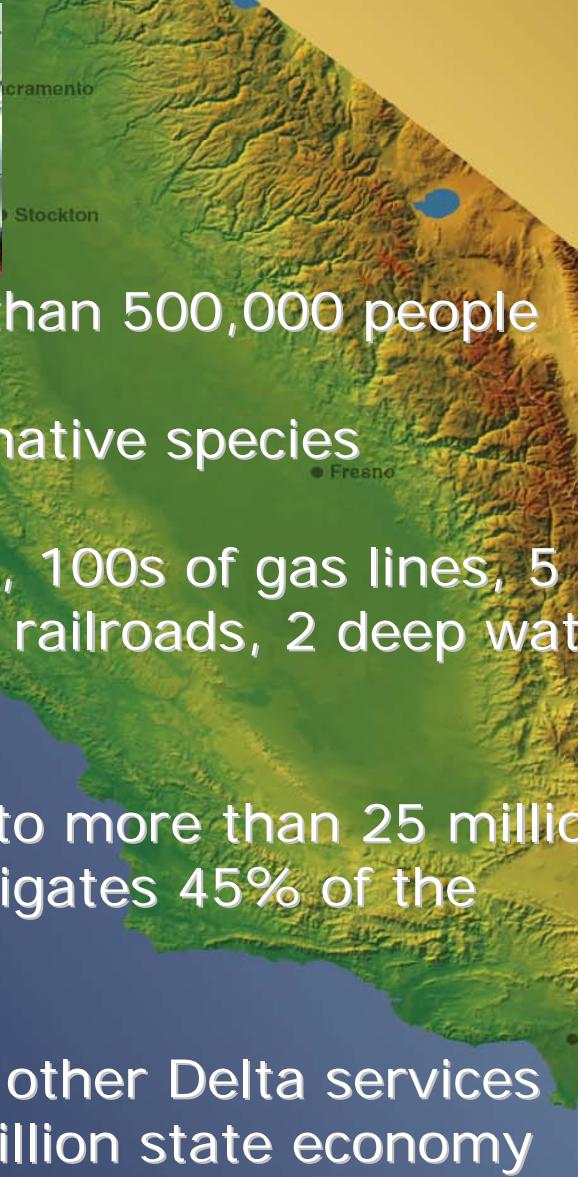
Corning, CA

December 3, 2008

Sacramento-San Joaquin Delta



Importance of the Delta



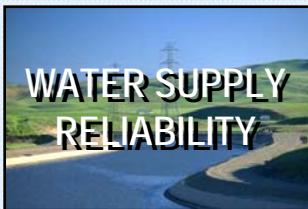
- Home to more than 500,000 people
- Habitat to 700 native species
- Three highways, 100s of gas lines, 5 high voltage lines, 3 railroads, 2 deep water ports
- Supplies water to more than 25 million Californians, irrigates 45% of the nation's crops
- Water supply & other Delta services support \$400 billion state economy



Defining the Bay-Delta Conflict



California Bay-Delta's ecosystem is at the center of competing demands.



Water supplies are not fully reliable.



Water quality degradation makes it difficult and expensive to meet drinking water standards.



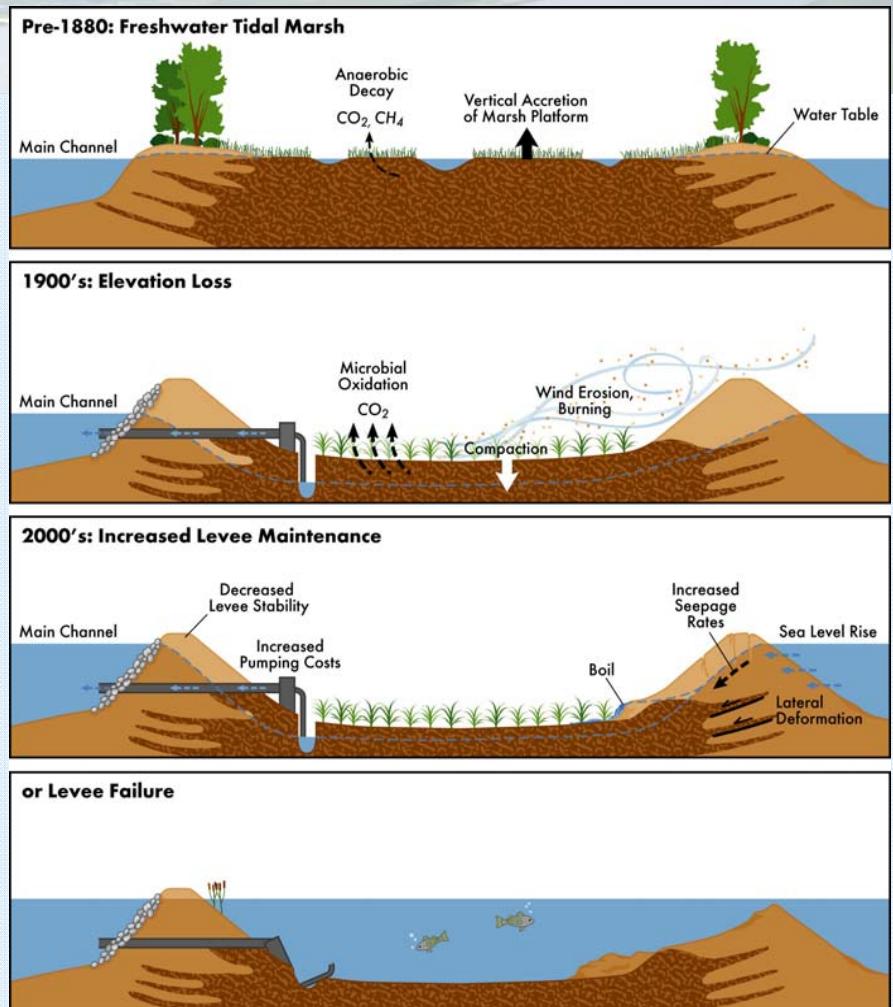
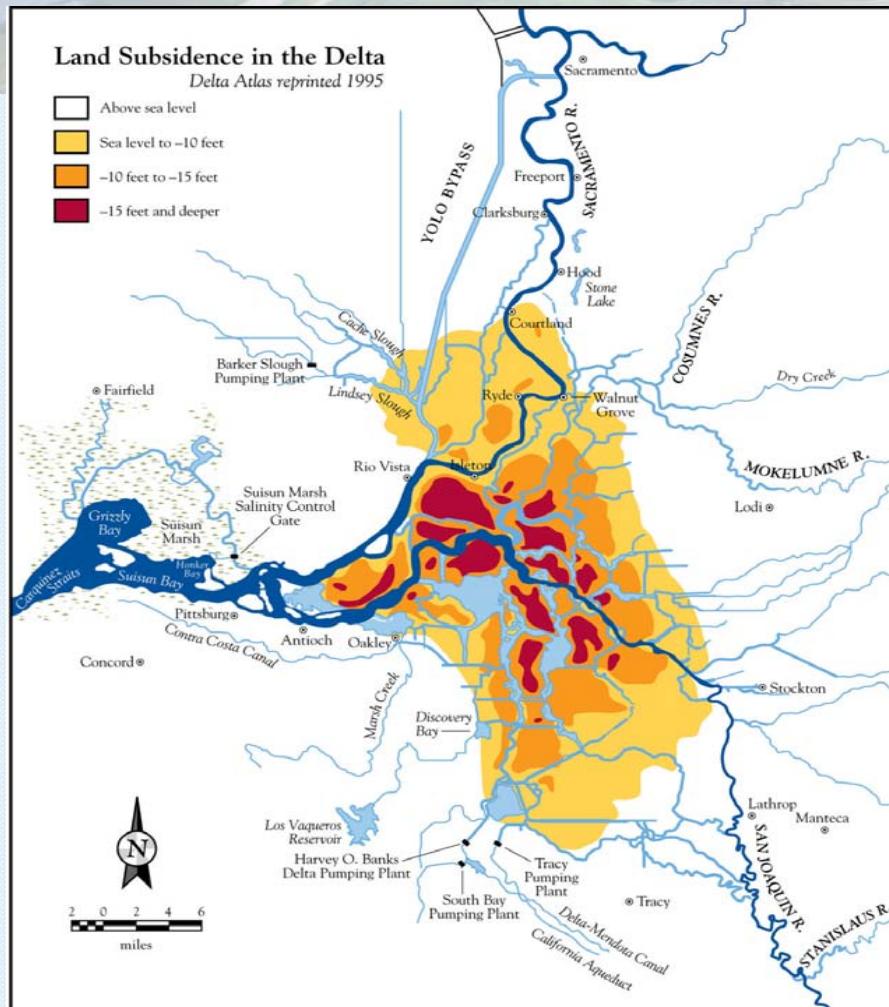
Delta levee failures threaten agricultural, urban and environmental uses.



What We Face in the Delta

- Subsidence
- Seismicity
- Levee Failures
- Invasive species
- Climate change /
Sea level rise
- Desirable species
decline
- Urbanization

Subsidence: Past and Future

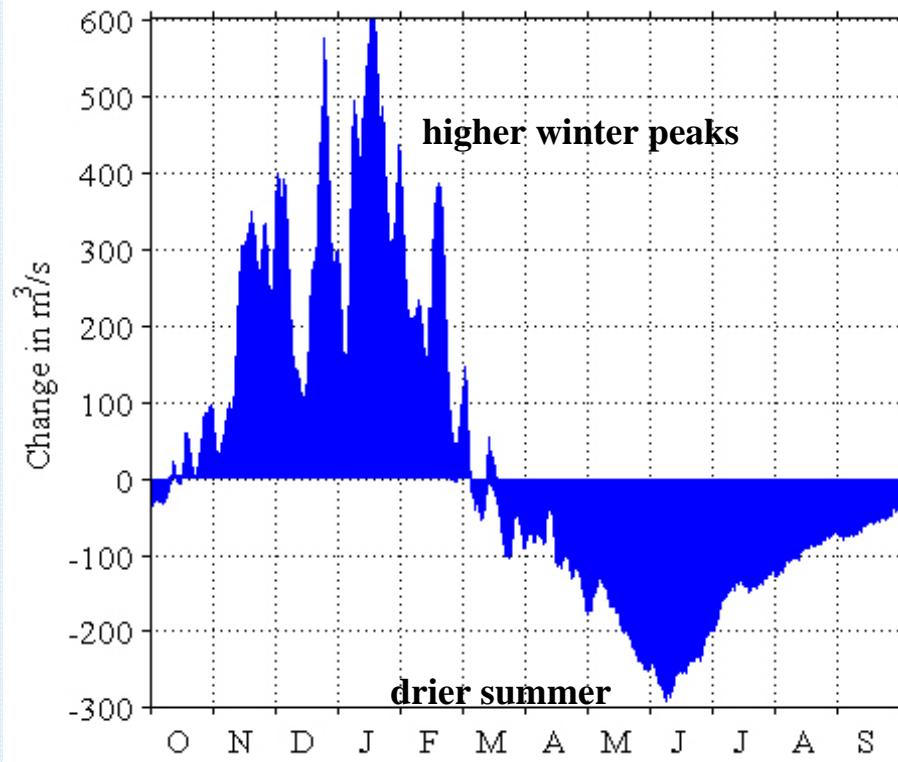


Seismic Vulnerability



Bay Delta Region Major Faults

Climate Change

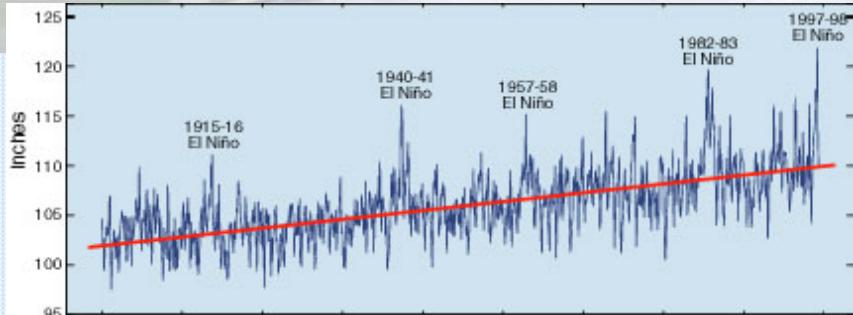


Change in inflows to Delta by 2060 (Knowles and Cayan, 2004)

- On-going shift in runoff timing toward winter, extending low-flow periods – 1/3 loss of snowpack by 2050
- Increase in intensity and frequency of winter runoff events



2. Sea Level Rise



Ryan et al., 2005



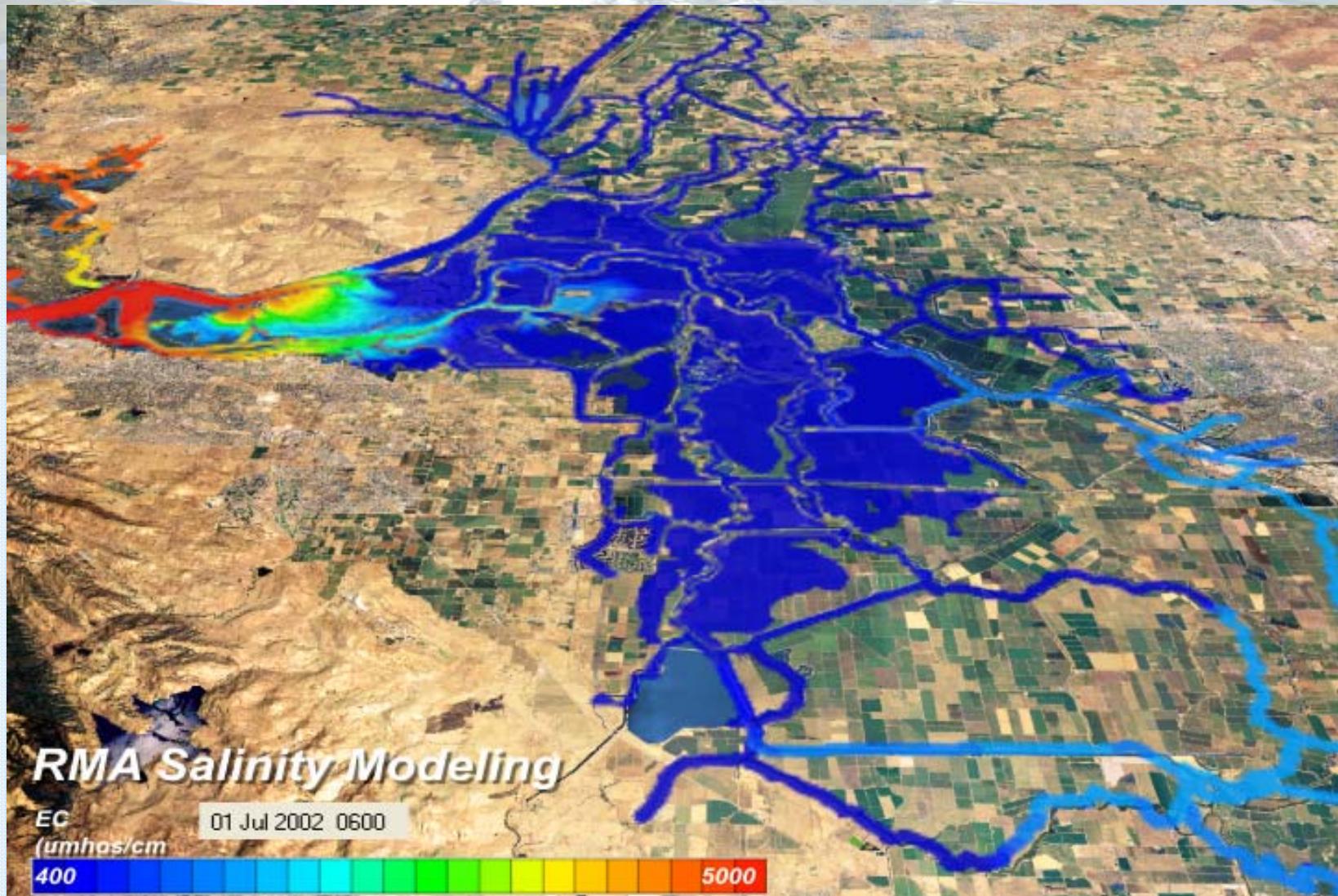
- Character of Delta based on sea level
- All hydrodynamics, habitat conditions, levee heights tied to sea level
- Rate of sea level rise increasing
- A modest rise overwhelms current Delta levee network



Levee Failures: Case in Point

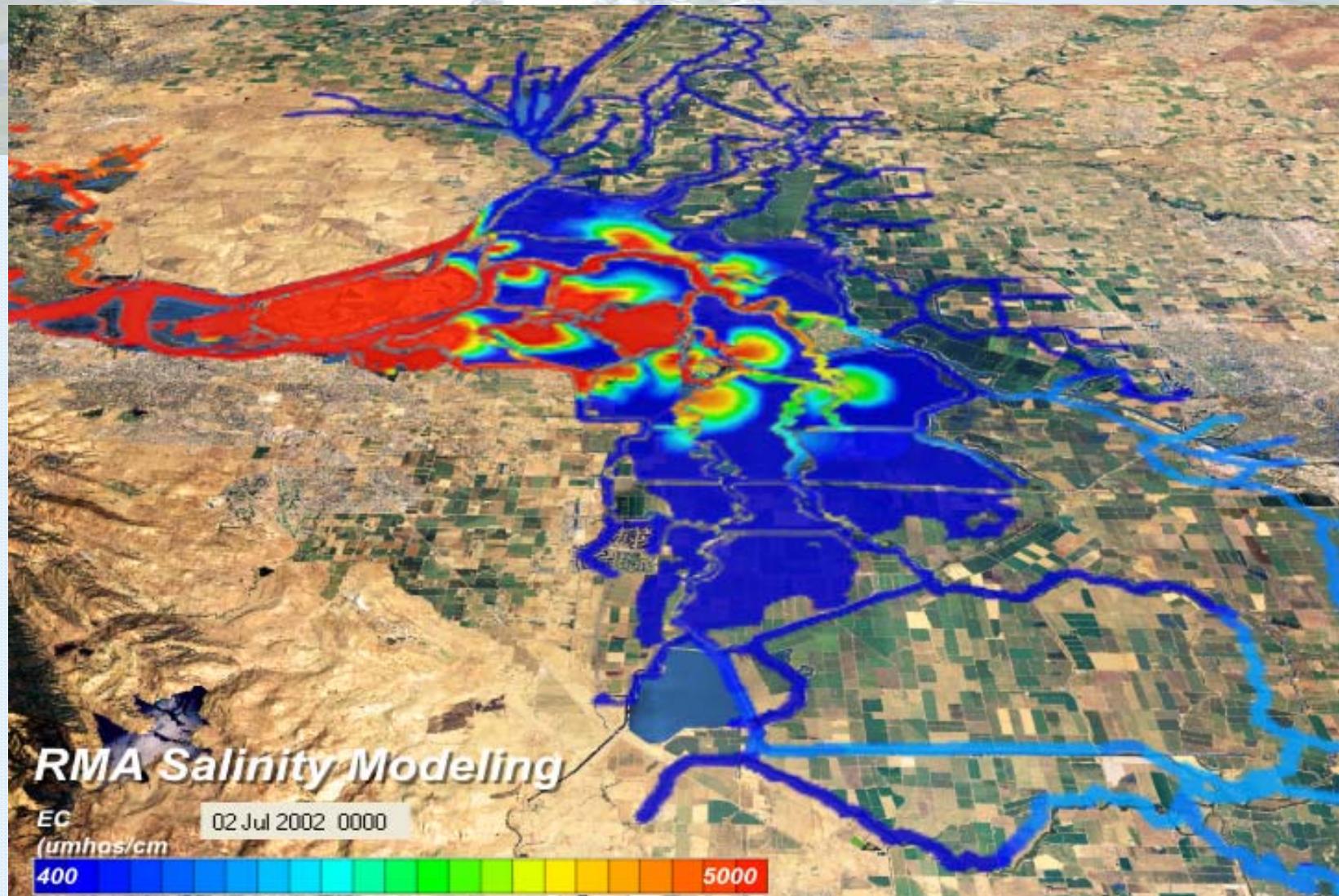


6.5 Magnitude Earthquake causing 20-Island Failure



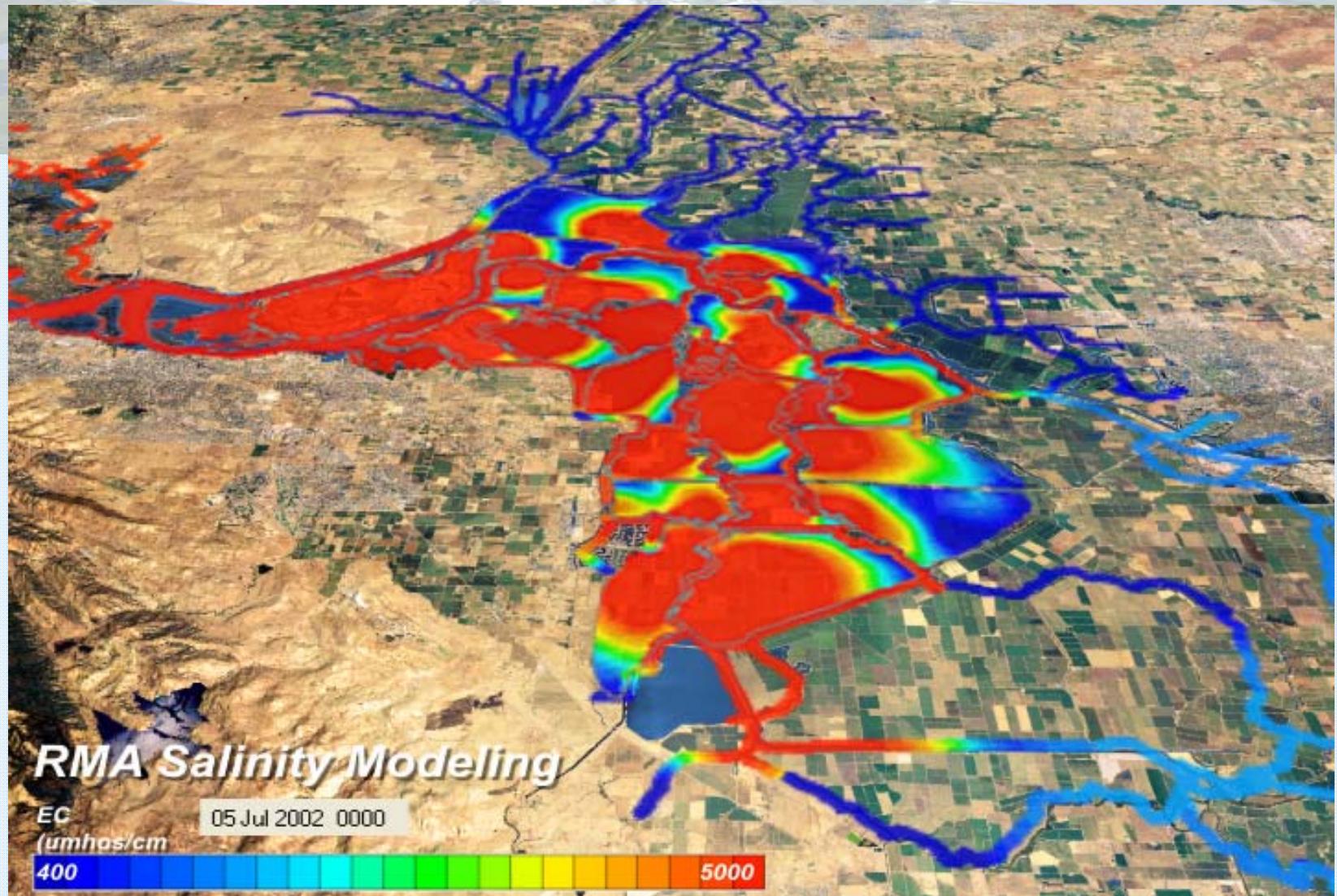
0 – 6 hours: Islands flood with fresh water

6.5 Magnitude Earthquake causing 20-Island Failure



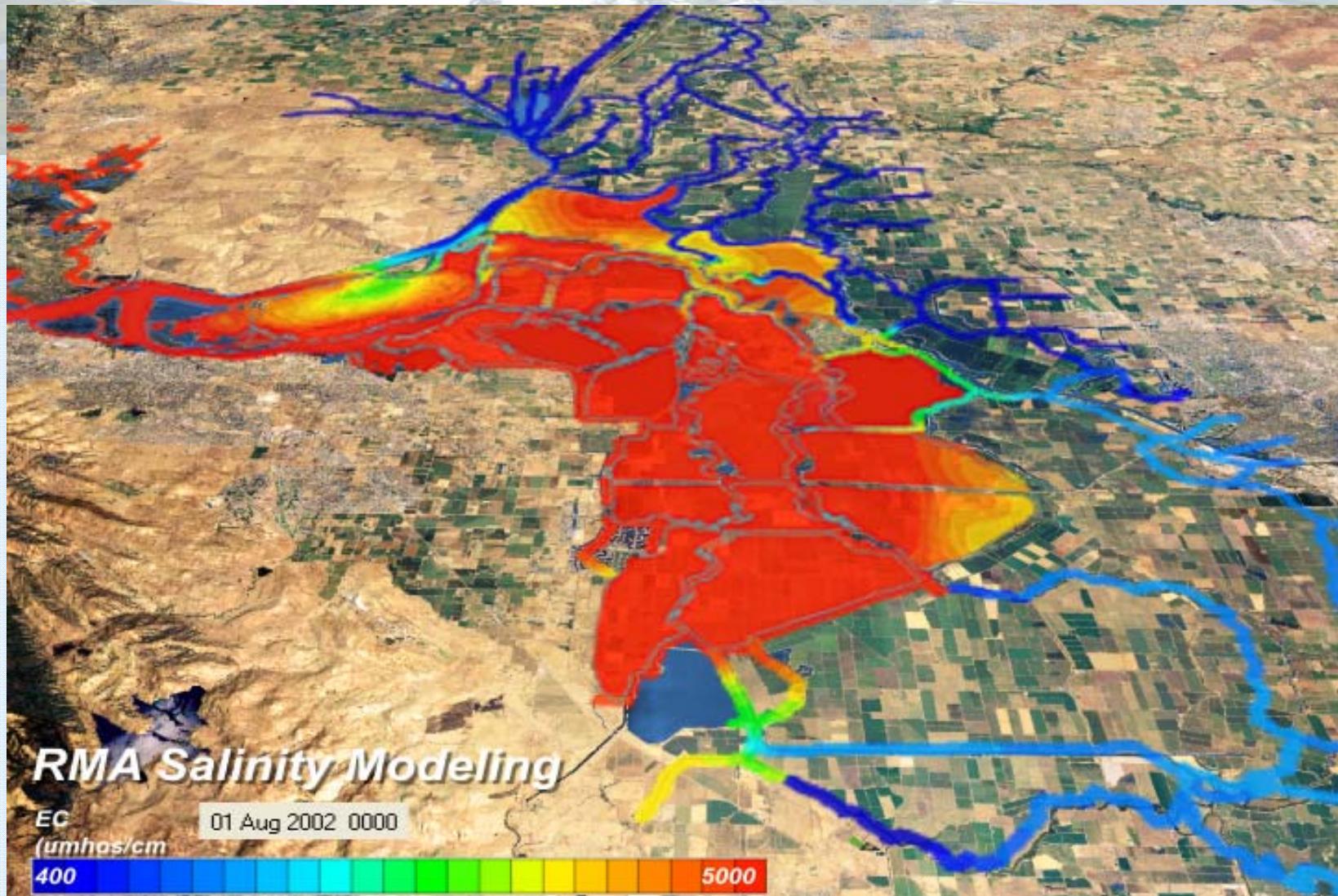
12 – 24 hours: Salt water intruding into Delta

6.5 Magnitude Earthquake causing 20-Island Failure



1 – 7 days: Salt water throughout Delta

6.5 Magnitude Earthquake causing 20-Island Failure



30 days: A saline estuary

Invasive Species

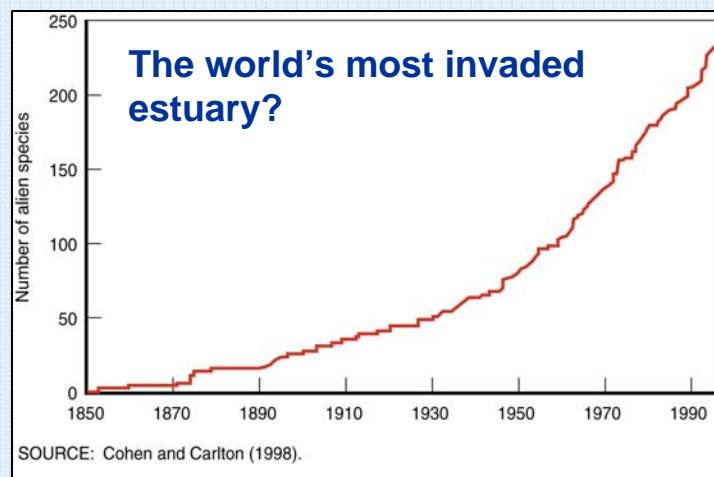
- Profound, on-going changes in food webs and physical habitat due to invasions
- Alien species do best with constant salinity (fresh or saline) and altered hydrology



Asiatic clam



Brazilian waterweed



Quagga Mussel

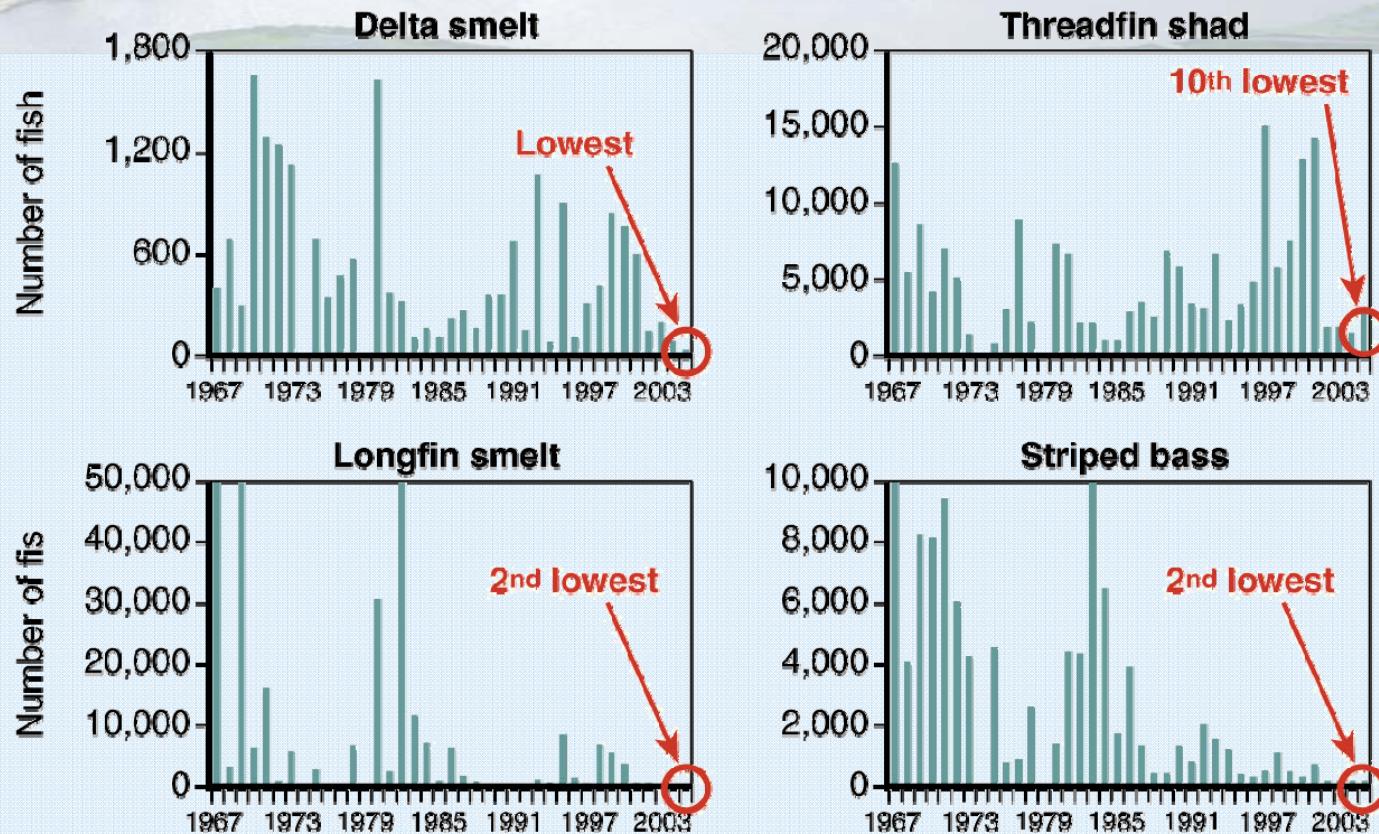


Overbite clam

Urbanization: A Case in Point



Desirable Species Decline: Pelagic Organisms



SOURCE: California Department of Fish and Game.

NOTES: Graphs report the indices for the fall midwater trawl. Circles indicate the rank of indices in 2005. For delta smelt, longfin smelt, and striped bass, the recent indices represent low points in long-term declines of their populations.

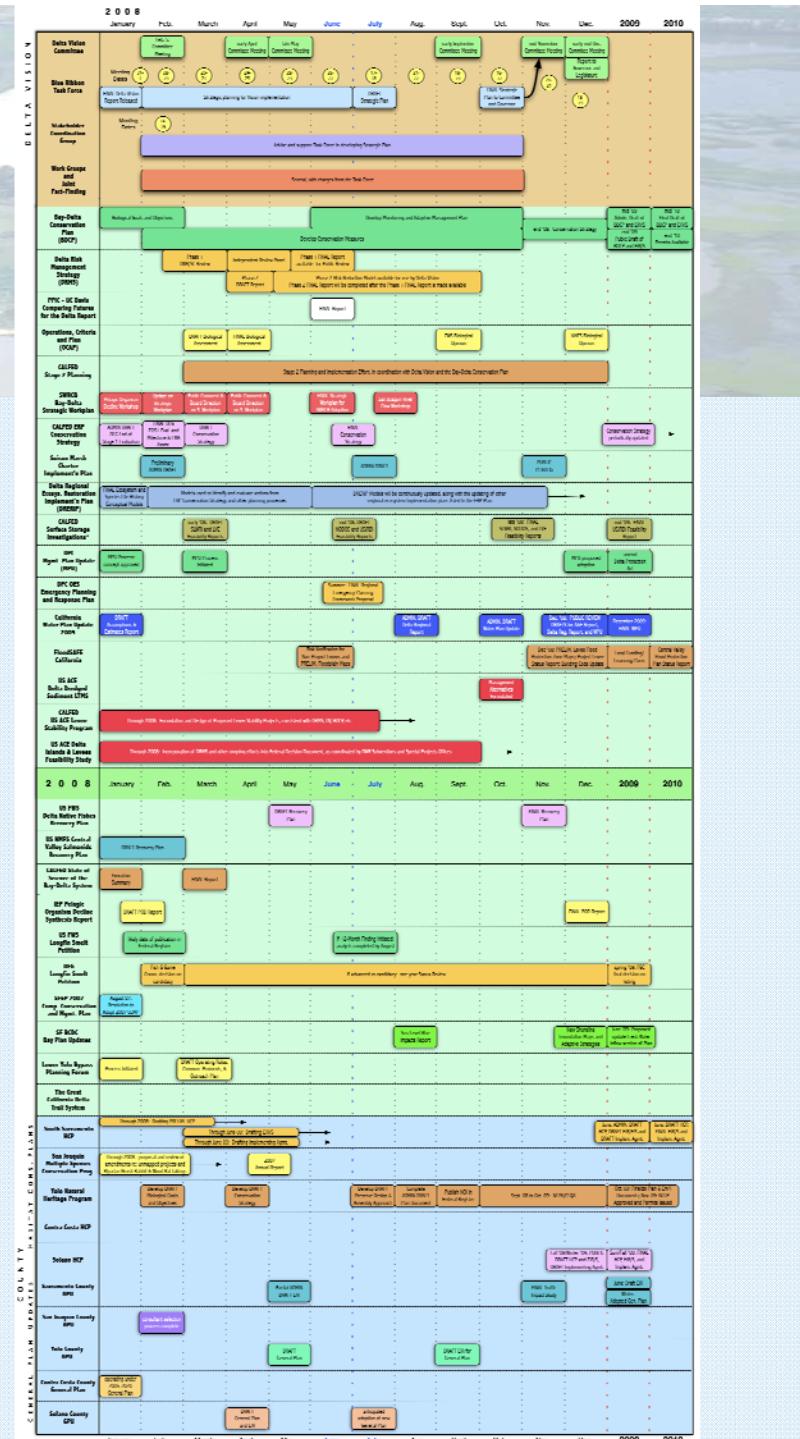


Key Questions

- End of Stage 1** – Are CALFED ROD objectives being met – or likely to be met – by the Preferred Program Alternative (Through-Delta Conveyance)? Where do we go from here?
- Delta Vision** – What changes (landscape, ecology, water conveyance and governance) need to occur to keep the Delta and its uses sustainable?
- Bay Delta Conservation Plan** – What conservation strategies and management practices will provide stable regulatory framework for water export operations?

Delta Today – Multiple Efforts to address problems

- Delta Vision
- Bay-Delta Conservation Plan
- 26 other state and federal efforts
- 10 county-based efforts





Beginnings of Delta Vision

- Established by Governor's Executive Order on September 17, 2006
- Charged with developing a durable vision for sustainable management of the Delta over the long term
- Seven members appointed to serve by the Governor



Blue Ribbon Task Force

- ✓ Phillip Isenberg, Chair
- ✓ Monica Florian
- ✓ Richard M. Frank
- ✓ Thomas V. McKernan

- ✓ Sunne Wright McPeak
- ✓ William K. Reilly
- ✓ Raymond Seed

Stakeholder Advisory Committee –

43 members represent diversity of interests who live, work, play and depend on the Delta



Recommendation #1

“Delta ecosystem and a reliable water supply are the primary, co-equal goals for sustainable management of the Delta.”





Recommendation #2



“The California Delta is a unique and valued area, warranting recognition and special legal status from the State of California.”



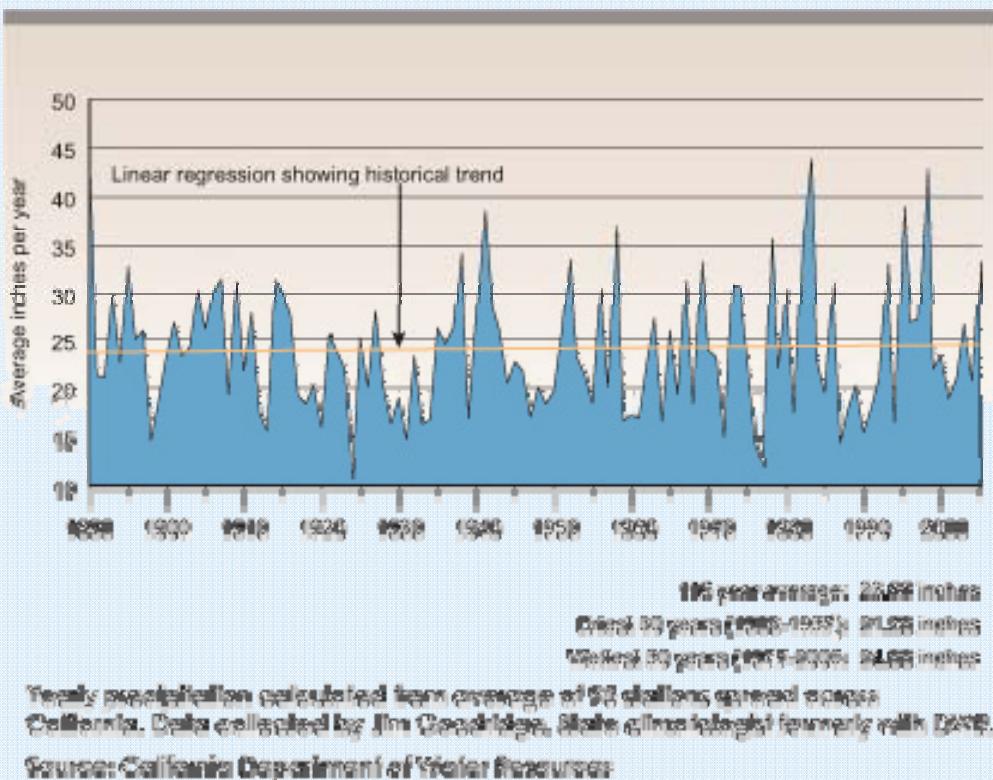
Recommendation #3

“The Delta ecosystem must function as an integral part of a healthy estuary.”



Recommendation #4

Figure 5. California Precipitation History



"California's water supply is limited and must be managed with significantly more efficiency to be adequate for its future population, growing economy and vital environment."

Recommendation # 5

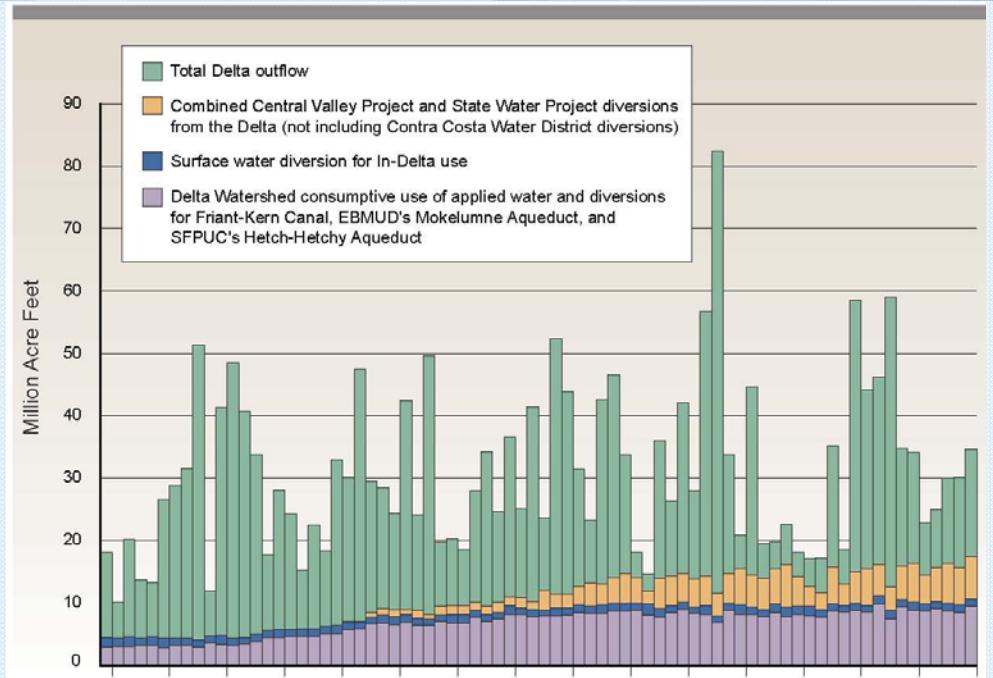
“The foundation for policymaking about California water resources must be the longstanding constitutional principles of ‘reasonable use’ and ‘public trust;’ these principles are particularly important and applicable to the Delta”



Patterns of Delta Diversions

□ 20-year averages compared:

- ✓ In-Delta use fairly constant
- ✓ Flow to ocean reduced 33%
- ✓ Delta exports begin: from 0-17%
- ✓ Watershed diversions increase from 14-31%

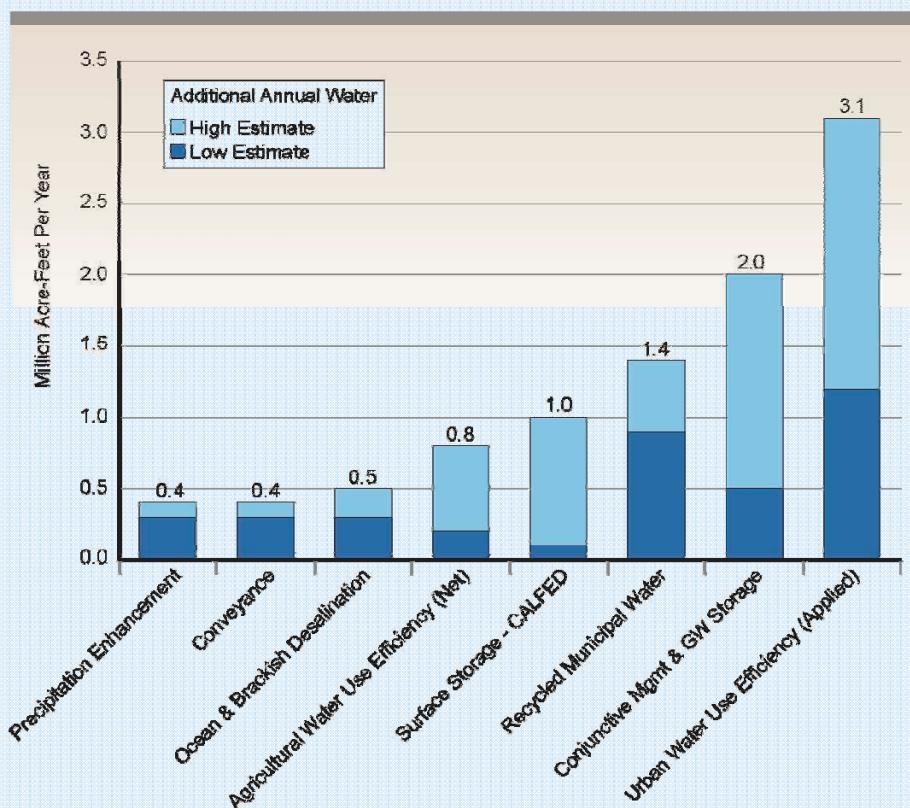


Trends in Destinations and Uses

Period	Average Annual Total (MAF)	Outflow	In-Delta	Exports	Delta Watershed
1930 to 1949	25.80	81%	5%	0%	14%
1950 to 1969	31.71	67%	4%	4%	24%
1970 to 1989	34.34	51%	5%	15%	29%
1990 to 2005	32.85	48%	4%	17%	31%

Recommendation # 6

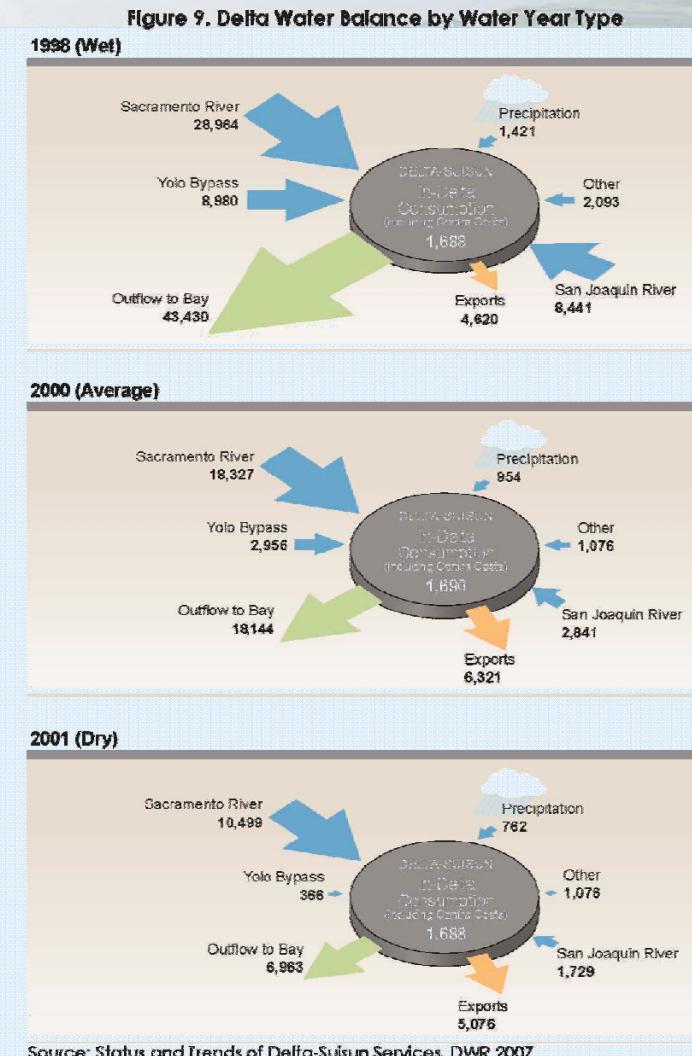
Figure 11. Strategies to Reduce Demand for or Increase Supply of Water



“The goals of conservation, efficiency, and sustainable use must drive California water policies”

Recommendation #7

“A revitalized Delta ecosystem will require reduced diversions, or changes in patterns and timing of those diversions, upstream, within the Delta and exported from the Delta at critical times.”





Recommendation #8



“New facilities for conveyance and storage, and better linkage between the two, are needed to better manage California’s water resources, the estuary and exports.”

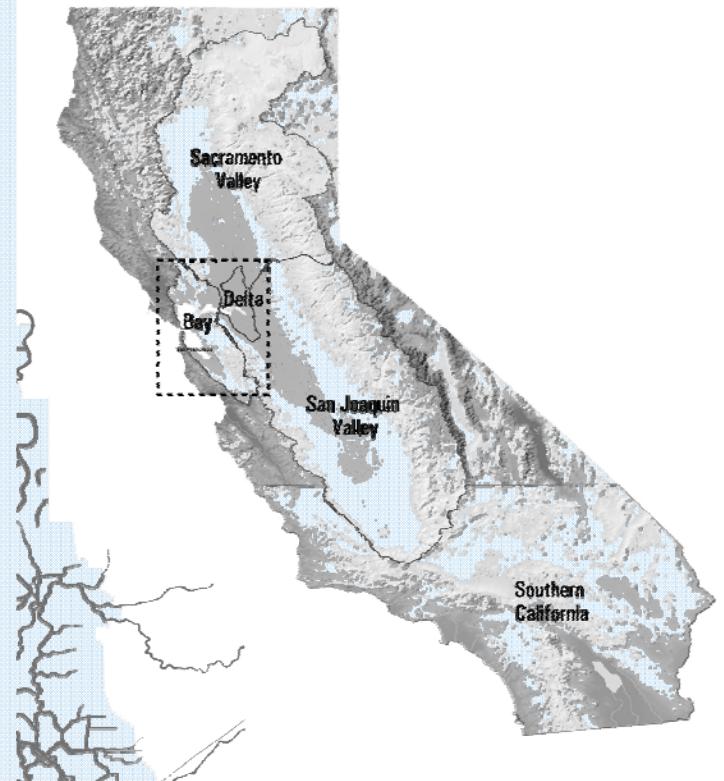
Recommendation #9

“Major investments in the California Delta and the statewide water management system must be consistent with, and integrate specific policies in this vision. In particular, these strategic investments must strengthen selected levees, improve floodplain management and improve water circulation and quality.”





Recommendation #10



“It is essential to have an independent body with authority to achieve the co-equal goals ... while also recognizing the importance of the Delta as a unique and valued area.”



Recommendation #11

“Discouraging inappropriate urbanization of the Delta is critical both to preserve the Delta’s unique character and to ensure adequate public safety.”





Recommendation #12



“Institutions and policies for the Delta should be designed for resiliency and adaptation.”



7 Near-term Actions

1. Acquire floodplain easements
2. Consider inappropriate Delta use
3. Set levee standards
4. Develop emergency plans
5. Include sea level rise in plans
6. Pursue ecosystem revitalization projects
7. Improve water conveyance and storage





Key Conclusions

- Legacy of change and future changes make the Delta unsustainable for all stakeholders
- Dynamic Delta that adapts to future conditions makes economic and ecologic sense
- Array of promising alternatives exist
- Solutions will involve difficult trade-offs
- Delta cannot be fixed in Delta alone – requires comprehensive solutions



Next Steps/Resources

- Delta Vision Strategic Planning component under way
- Strategic Plan completed October 31, 2008
- Report to Governor and Legislature by year's end
- Delta Vision: www.deltavision.ca.gov