# Senate Natural Resources and Water Committee

## Hearing on Governor's Delta Actions

## March 11, 2008

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Director, Department of Water Resources

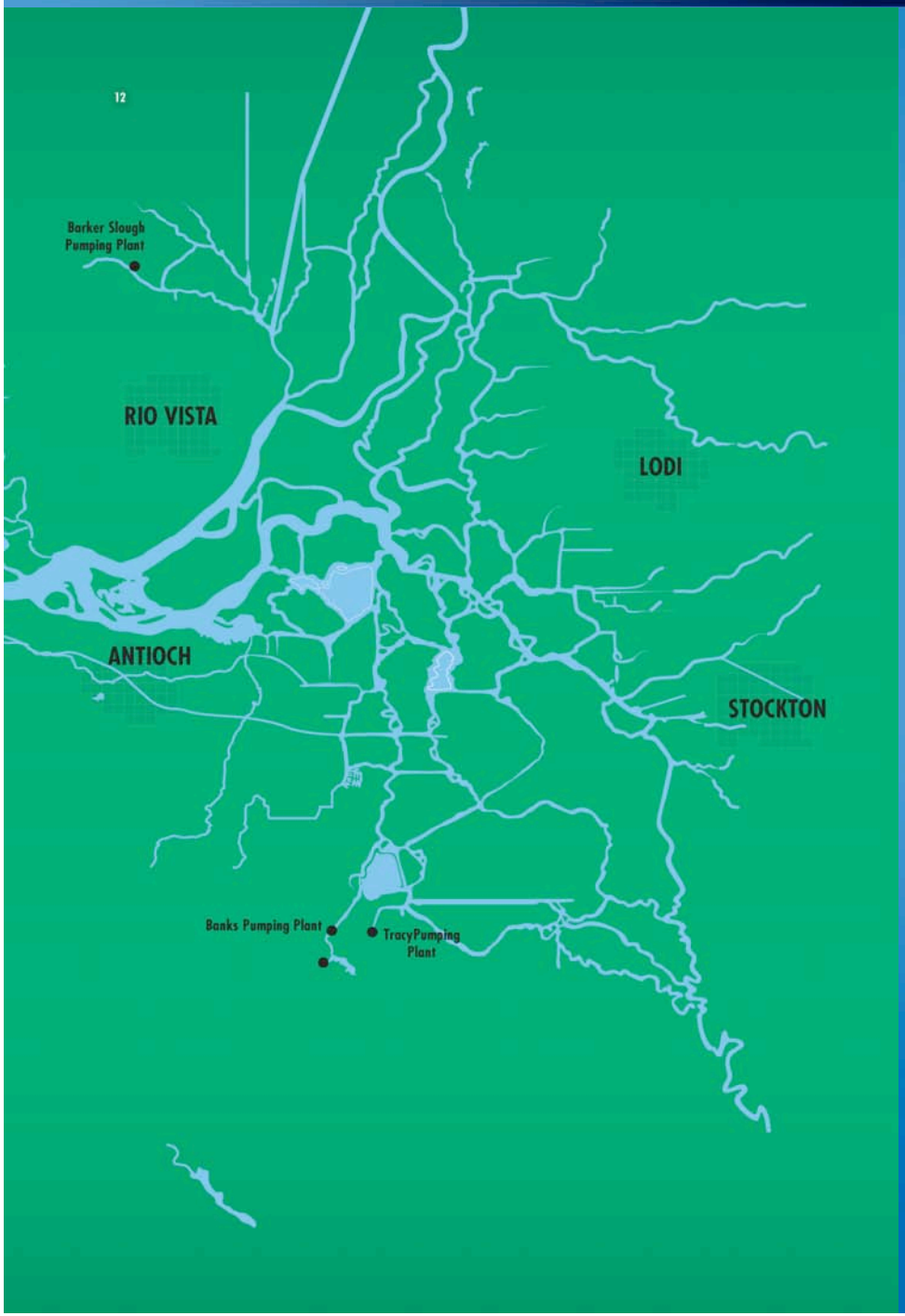
# Defining the Delta Crisis

Ecosystem Decline:
California Bay-Delta's ecosystem is declining with many fish populations at record lows

Unreliable Water Supply:
Water supplies from the Delta are not reliable

Degraded Water Quality:
Poor Delta water quality makes it difficult and expensive to meet drinking water standards

Flood Risks:
Delta levee failures threaten agricultural, urban and environmental uses

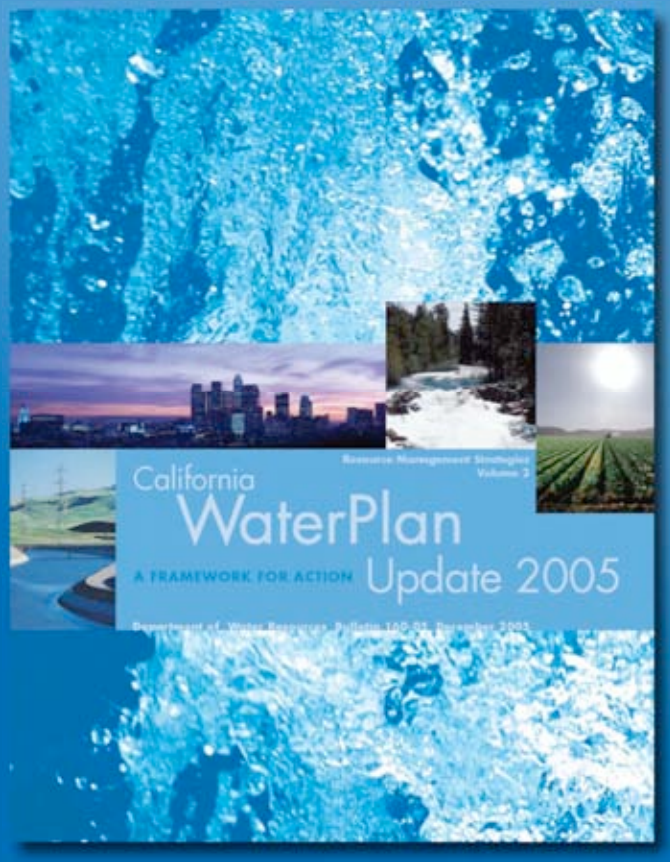



# Delta Challenges

- Subsidence
- Earthquakes
- Climate Change
  - Sea Level Rise
  - More Powerful Storms
- Declining Species
- 162 Levee Failures in 100 Years

"64% chance of catastrophic failure due to earthquake or storm in the next 50 years."

# California Water Plan




## Key Initiatives:

- Integrated Regional Water Management
- Statewide Water Management

# Integrated Regional Water Management

- Water management actions and issues are interconnected
- No single strategy can meet all needs
- Integrated, diverse strategies contribute to sustainable solutions

# Overview of the Governor's Delta Actions

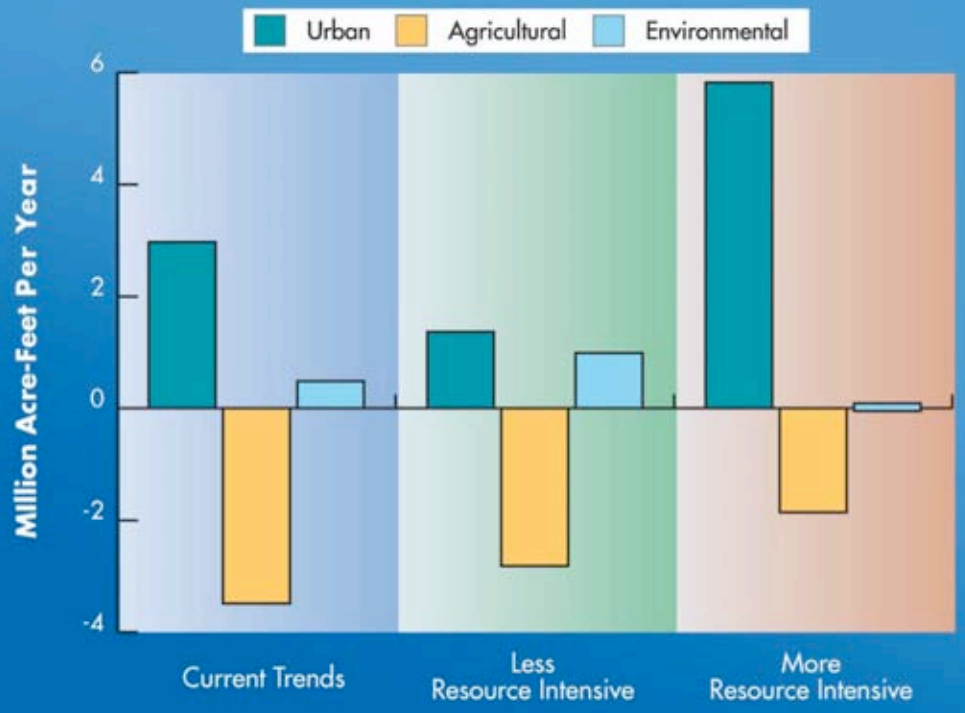
- California's water system, anchored by the Sacramento-San Joaquin Delta, is headed toward disaster without a comprehensive solution
- Any solution must restore its ecosystem and protect its water supply reliability
- The Governor's Delta plan is consistent with the California Water Plan and Blue Ribbon Task Force's Delta Vision
- The Governor has outlined a proposal for the Delta that includes actions that need to move forward now and that are consistent with any long-term strategic plan

# Governor's Delta Actions

- Conservation
- Protection of the Delta
- Water Quality
- Environmental Studies
- Interim Actions
- Water Storage

# Conservation & Water Management

# Conservation and Water Management




- Conservation, efficiency and sustainable use must drive California water policy
- CA Water Plan projects urban use of water increasing and agricultural use decreasing
- IRWM will integrate conservation into regional planning

# Conservation and Water Management

- Increasing water conservation is an essential element of fixing the Delta
- The Governor has called for a 20% per capita reduction in urban water use statewide
- DWR will work with the Agricultural Water Management Council and the California Urban Water Conservation Council to develop strategies for implementing water conservation actions

# Conservation and Water Management

- Since 2001, over $800 million in state grants have been issued for conservation and water management programs, which are expected to result in nearly a million acre feet/year of water supply benefit and demand reduction.
- In 2007-08 $5.5 M for conservation. In 2008-09 $35 million in water conservation grant funding (Prop 50) to local water agencies for urban and residential uses.
- More than $400 M is available in 2008-09 for IRWM

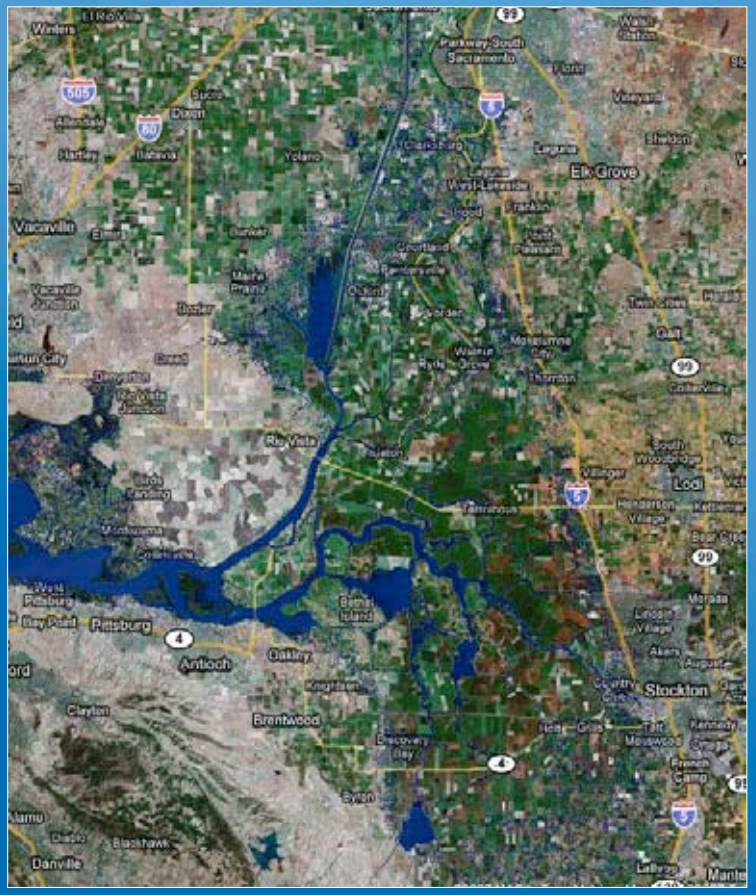
# Conservation and Water Management

- 20% reduction in urban per capita consumption can be achieved through:
  - IRWM will provide additional funding to support conservation projects and programs
  - DWR will change IRWM funding guidelines to require agencies to demonstrate the efficient use of water before being eligible for grant funding
  - AB 1420 requires water agencies to implement conservation measures to be eligible for grant funds
  - New model Water Efficient Landscape ordinance is under development for use by local communities
  - DWR is upgrading the California Irrigation Management Information System (CIMIS) to help manage irrigation of crops and landscapes
- Water Plan Advisory Committee will discuss strategy for achieving the 20% reduction on March 20 and 21 in Sacramento

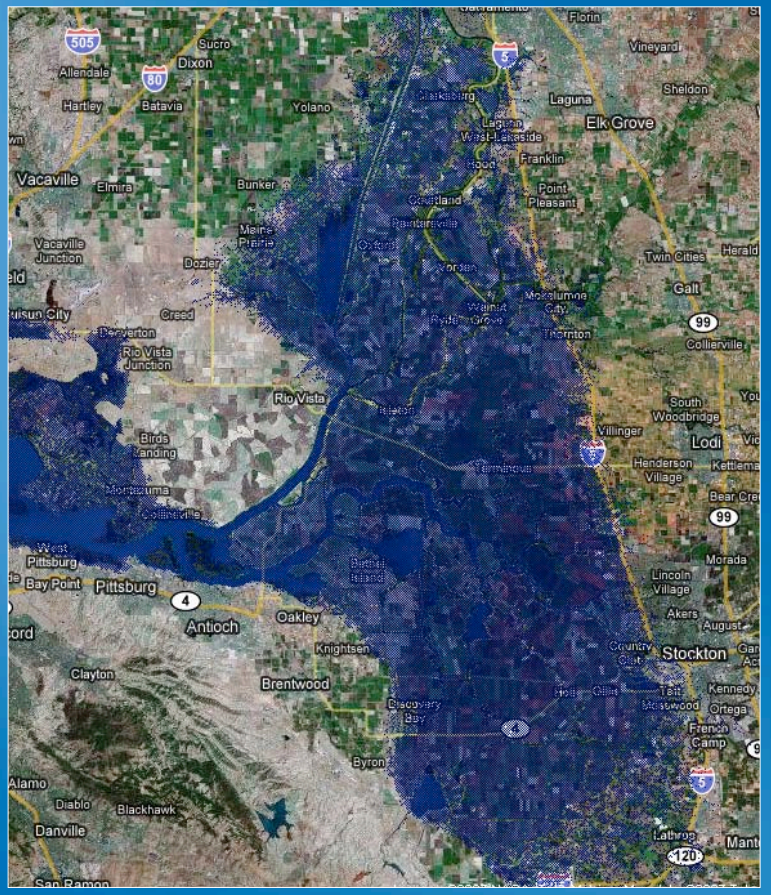
# Protection of the Delta

# California's Delta

Today

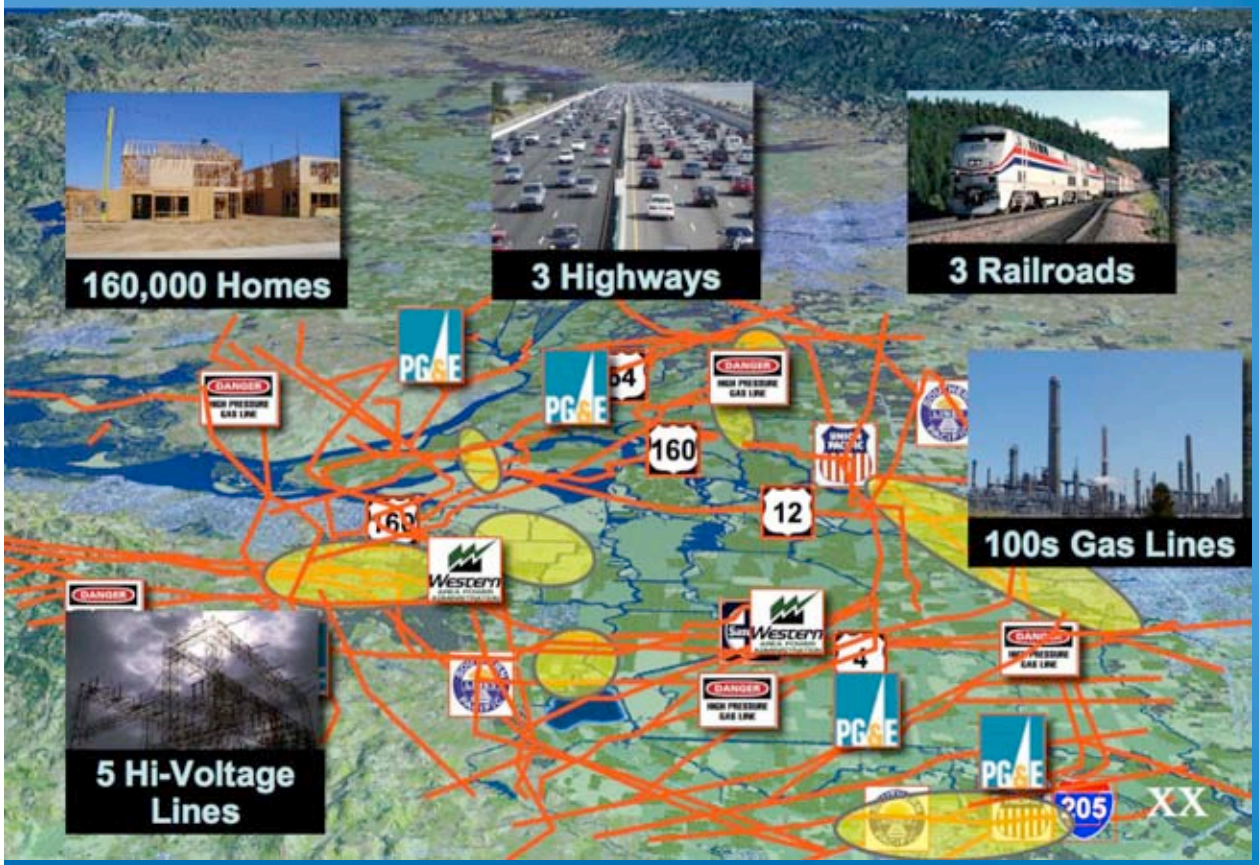



With 1 meter sea level rise




Source: Google Earth

# Delta Land Use




The Delta is a unique and historic place that must be protected. Valuable Delta resources include legacy communities, agriculture, transportation, recreation, communications, industrial infrastructure and environmental resources.

# Land Use and Resource Management Plan Update

- DPC is updating its Land Use and Resource Management Plan for the Primary Zone of the Delta that was completed in 1995 pursuant to the provisions of the Delta Protection Act
- The state agencies (6), counties (5), regional governments (3), and water agencies (4) who are members of the DPC are contributing to funding support for the update
- Project will start 7/08 unless funding is available sooner
- Aggressive schedule – completion by 12/08
- Estimated cost about $130k to $230k

# Levee Protection and Standards

- Standards for project levees within the Delta are developed by the US Army Corps of Engineers
- Most levees in the Delta are non-project levees or private levees that were built to varying standards
- There are four State-recommended levee standards:
  - Three agricultural standards set by both State and federal agencies
  - One urban standard set by the federal agencies and include the FEMA National Flood Insurance Program

# Levee Protection and Standards

- OPR to develop model land use guidelines
- DWR to establish recommended standards for Delta Levees based on the results of the Delta Risk Management Strategy
- Public review of Phase 2 Report May/June 2008 and Final August 2008
- Recommended standards for Delta levees by December 2008

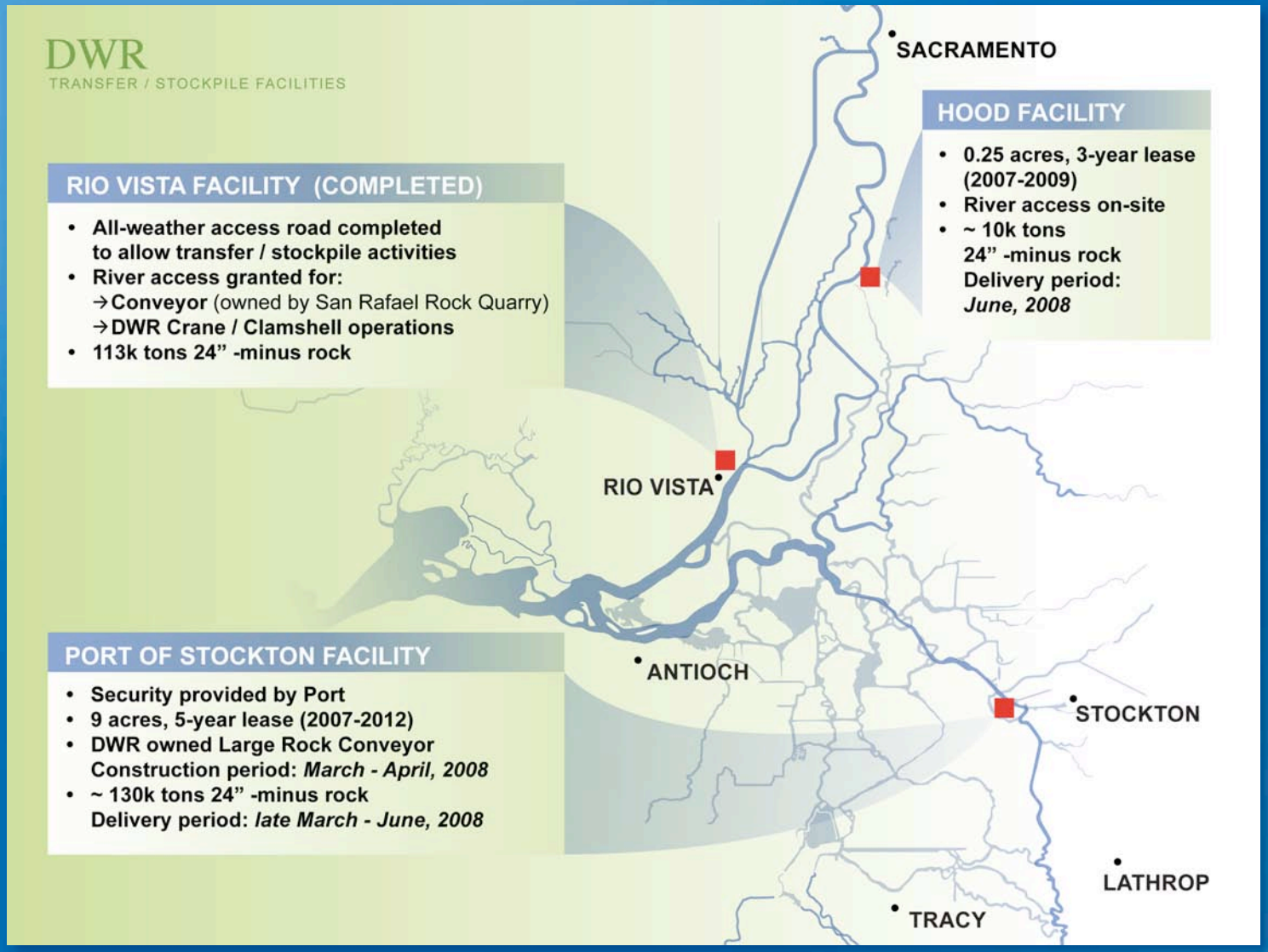
# Emergency Response Plan

- Stock piling of materials
- Delta recovery planning, bringing the Delta back on line following a disaster
- Assessment of all local emergency plans and gap analysis
- Coordination of local emergency response plans
- Participation by multiple State, federal and local agencies

# Emergency Response Plan

- DPC and OES in coordination with DWR and other emergency response agencies to develop an emergency response plan for the Delta and conduct a multiagency disaster planning exercise
- DWR will expedite additional placement of emergency response materials in the Delta, with $12 million dollars from Prop 1E to pre-deploy over 200,000 tons of large rock in three Delta locations with more to follow
- Put in place tools to allow for rapid response in emergencies such as contracts for equipment, barges and materials

# Emergency Response Plan



# Water Quality

# Water Quality

- Water quality and salinity levels must support both native species and urban and agricultural use
- In December 2007 the SWRCB adopted a comprehensive resolution to protect Delta water quality and address water quality issues
- SWRCB will develop and implement a comprehensive water quality program for the Delta, and its strategic workplan for the Delta will be final in June 2008
- Water quality objectives and/or TMDLs are being considered for OP pesticides, dissolved oxygen, salt, boron, mercury, pathogens and PCB in the Delta
- The plan will also address monitoring, data assessment, invasive species, Delta smelt refuge population and conservation

# Water Quality

The SWRCB will hold a workshop to receive information on development of the strategic workplan for Delta Water Quality on March 19, 2008. More information can be found at:

http://www.waterrights.ca.gov/baydelta/Notices/2008/revised_notice_baydelta_workshop.pdf

# Environmental Studies

# Environmental Studies

- Environmental documents (NEPA/CEQA) will be prepared to support the co-equal values of ecosystem restoration and water supply reliability
- The Bay-Delta Conservation Plan (BDCP) is focused on water supply reliability and the recovery of listed species through a HCP under Federal law and an NCCP under State law

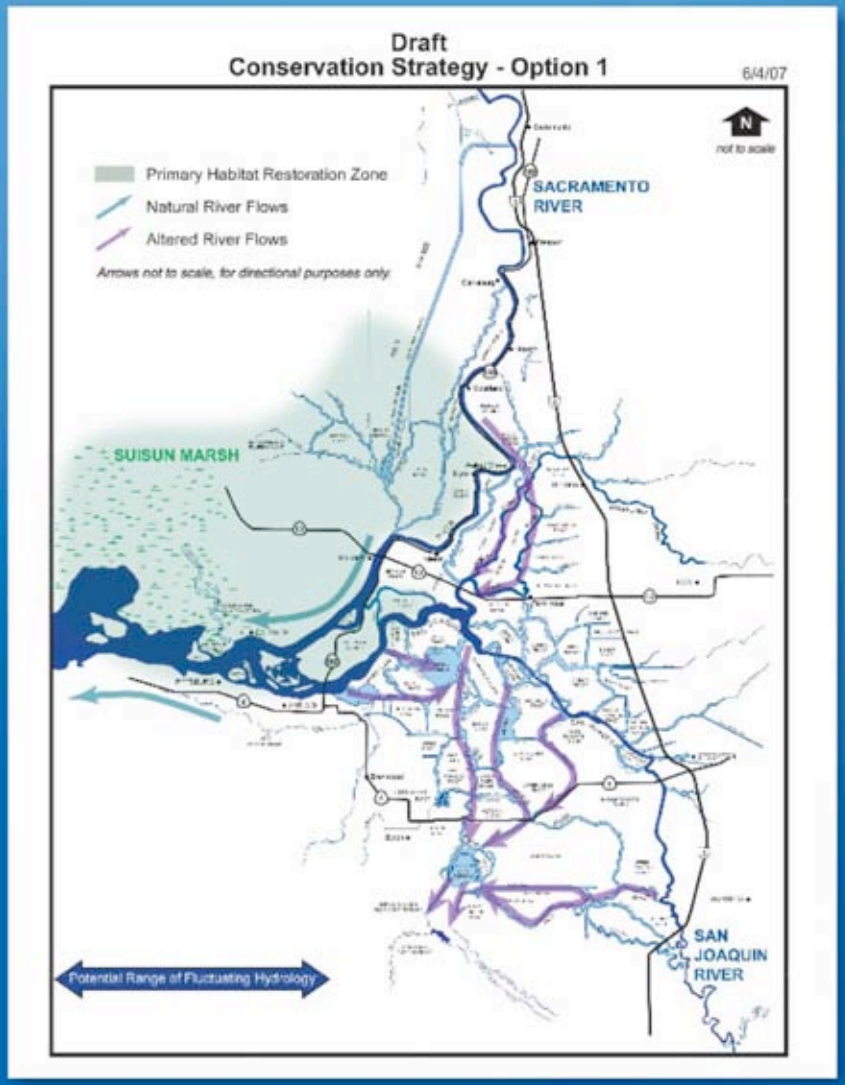
# Environmental Studies

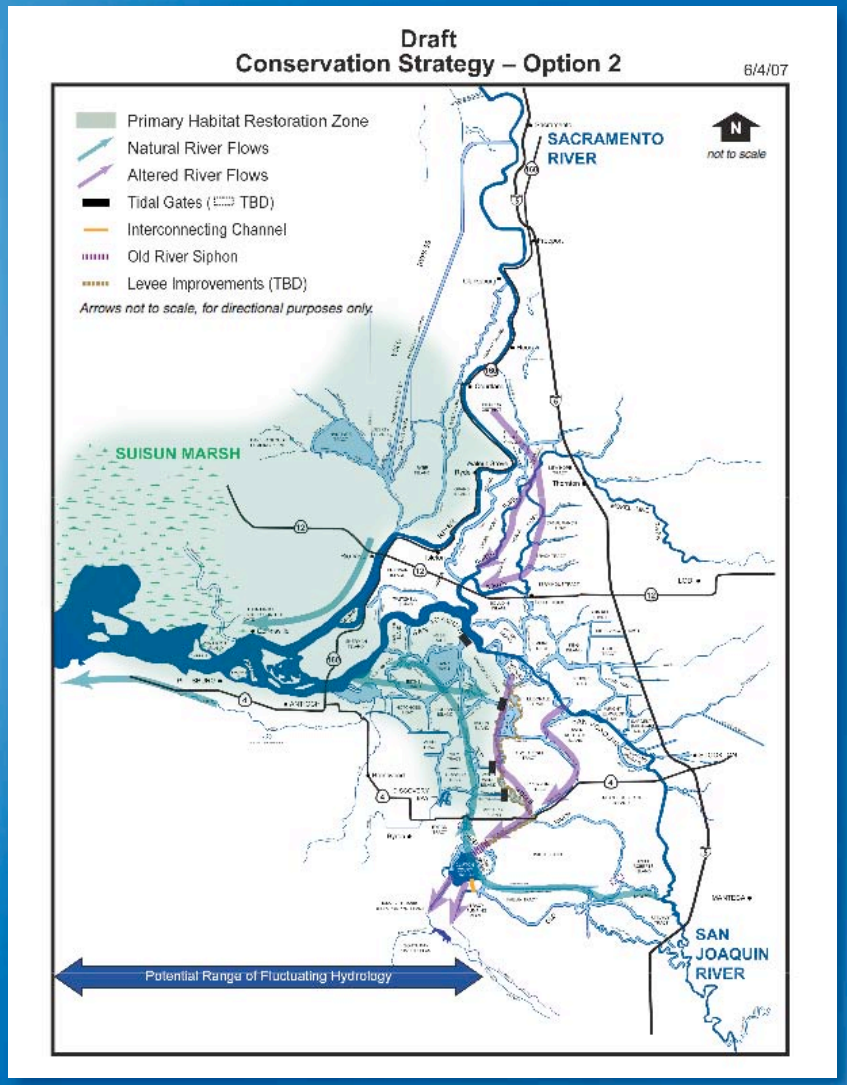
- BDCP will evaluate alternatives necessary to restore and protect the Delta ecosystem in the context of options for water conveyance
- The BDCP will include a wide range of conservation actions including:
  - Protected and restored habitat
  - Improved water quality
  - Control of invasive species
  - Better protection of resident and anadromous fish

# Environmental Studies

- Alternative Conveyance Options
  - No new Delta conveyance
  - Dual conveyance
  - Isolated facility
  - Through Delta solution
  - Plus alternatives which may result from scoping

# Environmental Studies



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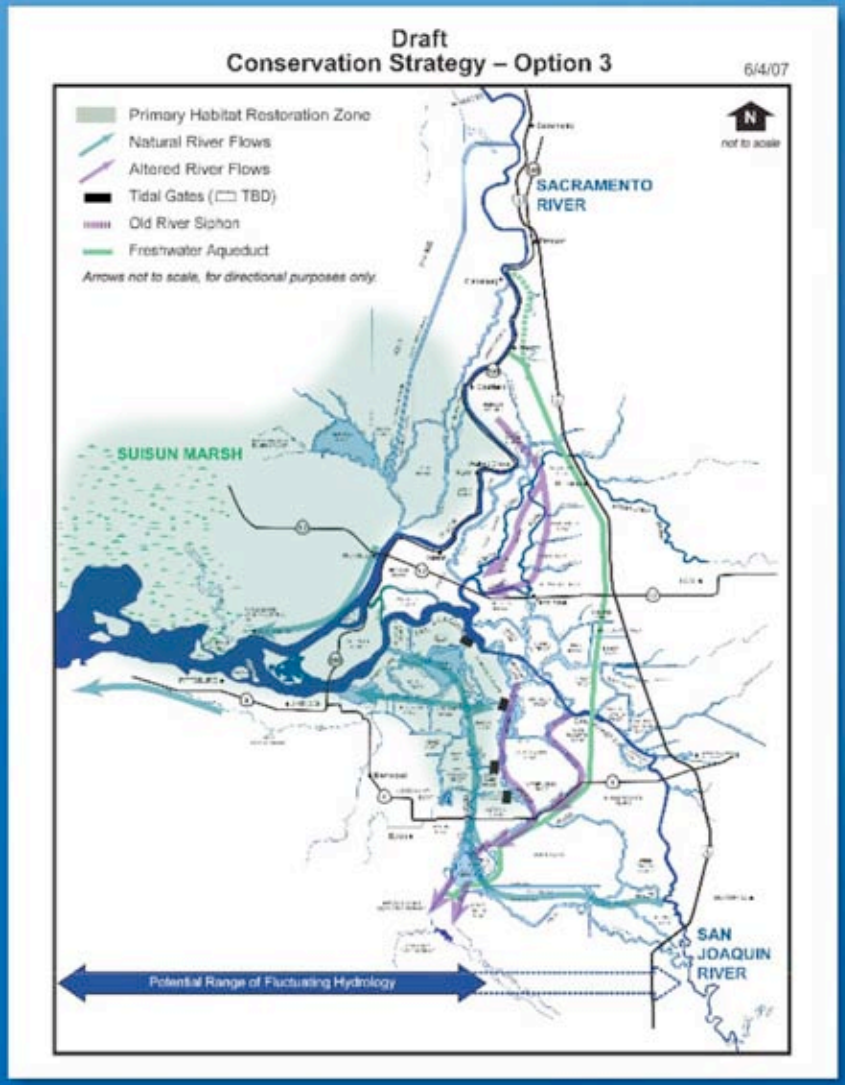
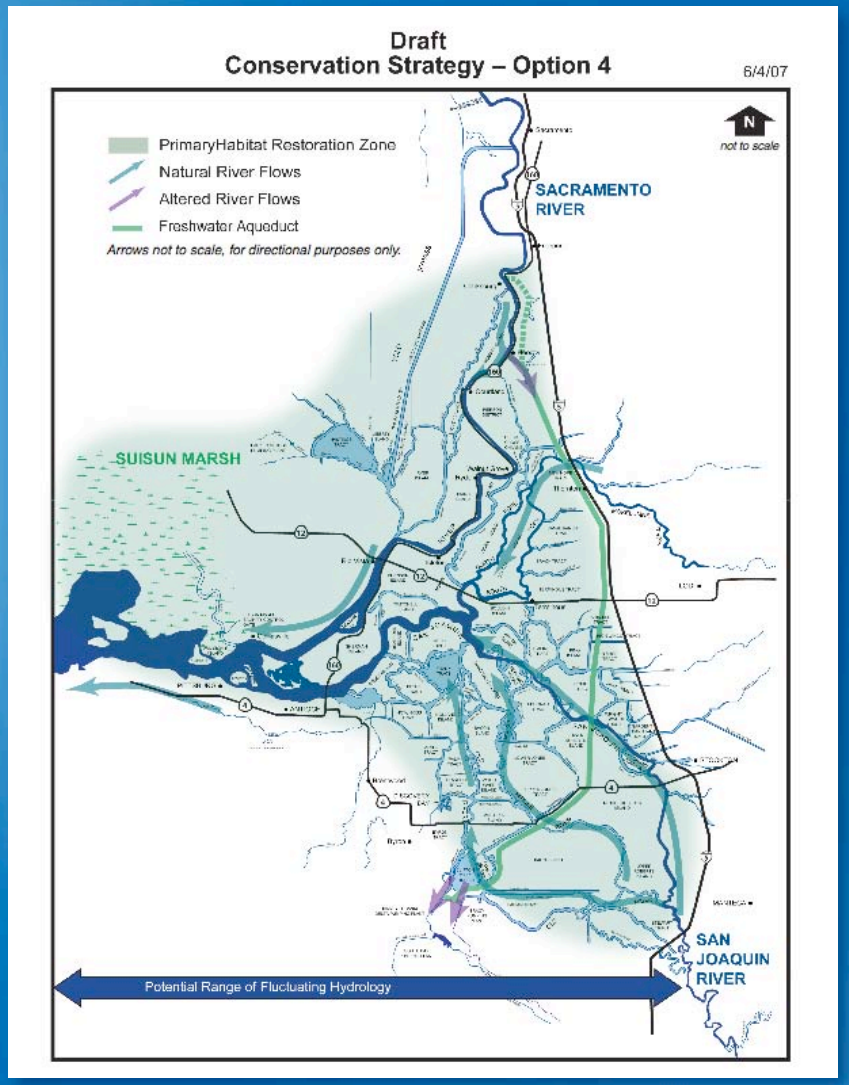


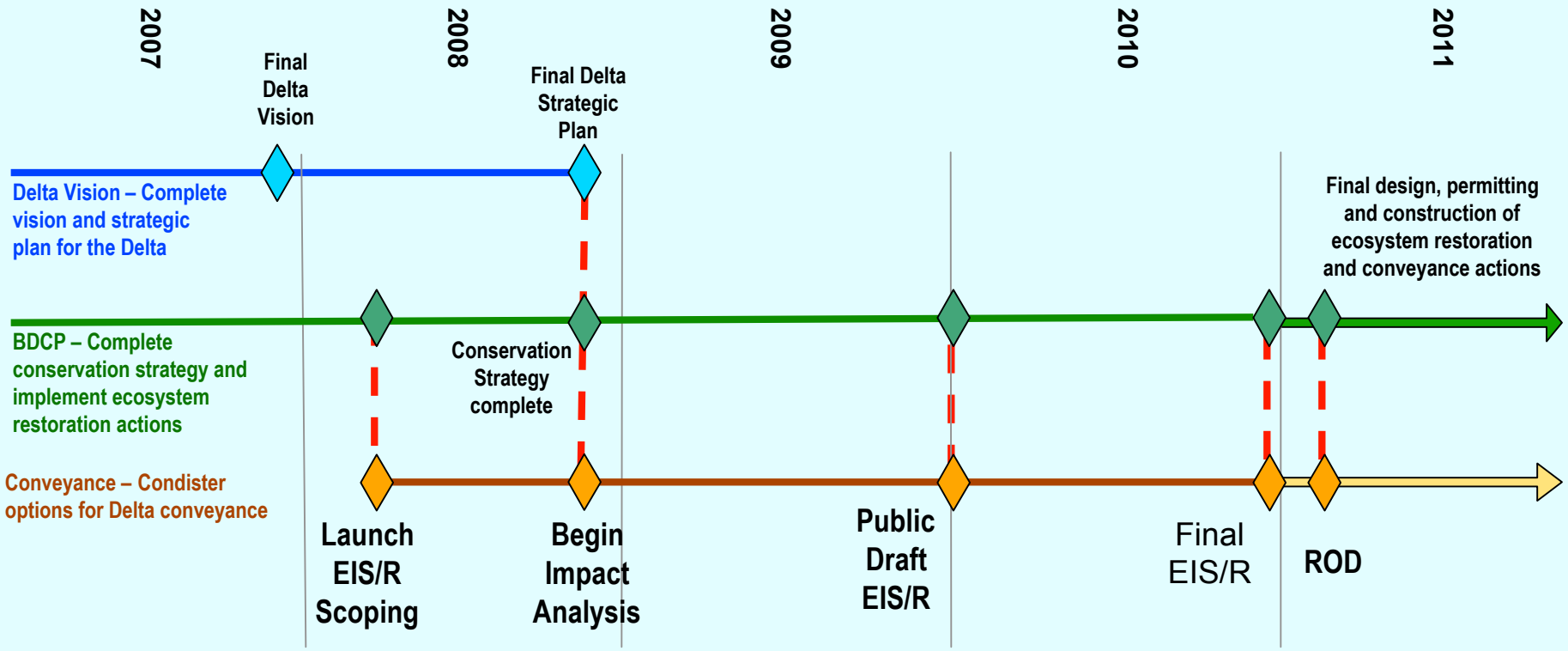
# Environmental Studies

- Start formal NEPA/CEQA public process March 2008 – file NOP and hire consultant
- Public scoping meetings April/May 2008
- Conservation strategy complete by end of 2008
- Draft environmental document complete by end of 2009
- Final conservation plan and necessary environmental documents by end of 2010

# Environmental Studies

- Estimated cost to complete environmental documents $25 to $40 million, subject to a competitive contracting process

# Environmental Study Schedule



# Interim Actions

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Types of actions that are underway

- Ecosystem restoration
- Water supply reliability
- Water quality
- Levee stability

# Screen Intakes on Sherman and Twitchell Islands

- Field reconnaissance completed
- 5 sites on Sherman and 5 sites on Twitchell selected
- Preliminary design is underway
- Estimated cost of $2.5 million
- Projected completion fall 2009

# Restore Habitat at Cache Slough

- Cache Slough is an important ecological region
- DWR is working with local landowners to develop project concepts
- Estimated cost $12 million
- Projected completion fall 2012

# Restore Habitat at Dutch Slough

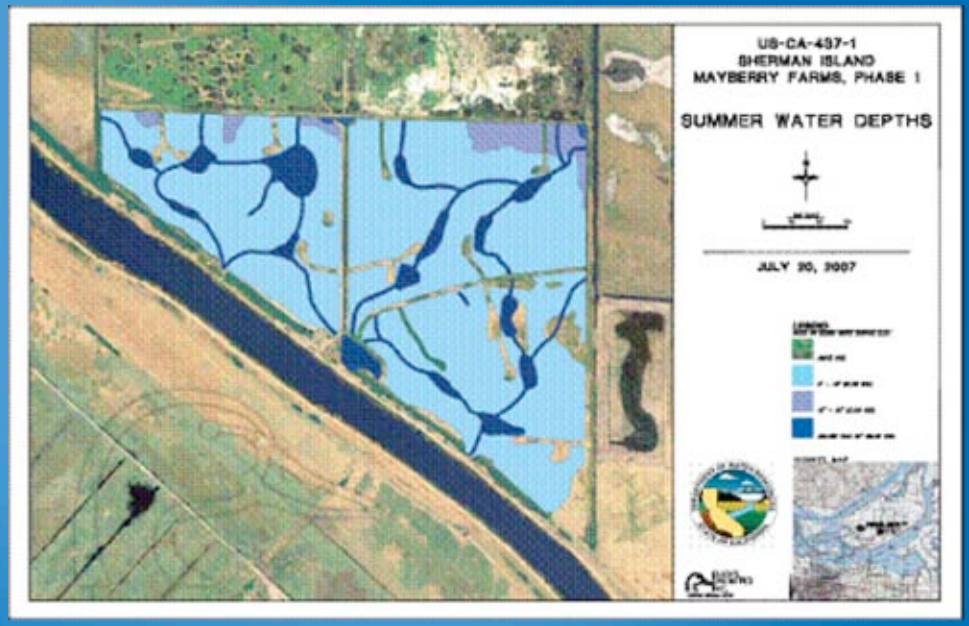
- 1,200 acre Dutch Slough site acquired by DWR in 2003
- Restoration plan is complete with focus on generation of information for future use
- Public draft environmental documents are nearly complete
- Estimated project cost $36 million
- Projected completion 2012

# Franks Tract

- Modeling of the Franks Tract project has shown significant water quality benefits
- Franks tract would be operated to manage Delta salinity levels
- Project planning and environmental planning are underway with a cost of $4.8 million and total project cost of $60 to $80 million
- Projected completion of fall 2012

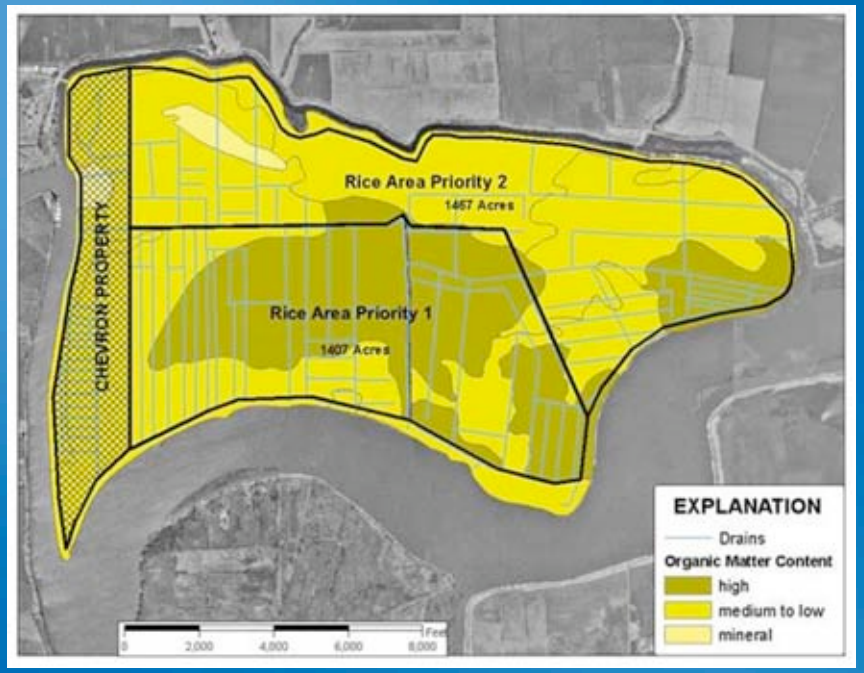
# Permanent Wetland for Waterfowl

- 307 acres on Sherman Island
- Subsidence control, carbon farming and sequestration benefits
- Currently in design phase
- Construction to begin in spring of 2008
- Completed in fall 2008



# Farm Scale Rice Demonstration Project

- Reduce subsidence and facilitate carbon sequestration while maintaining farm economy
- 300 acres of rice on Twitchell Island
- Construction - Summer 2008
- Farm Rice - Spring 2009 (and continue annually)
- Research Activities - Spring 2008 to 2013



# Water Storage

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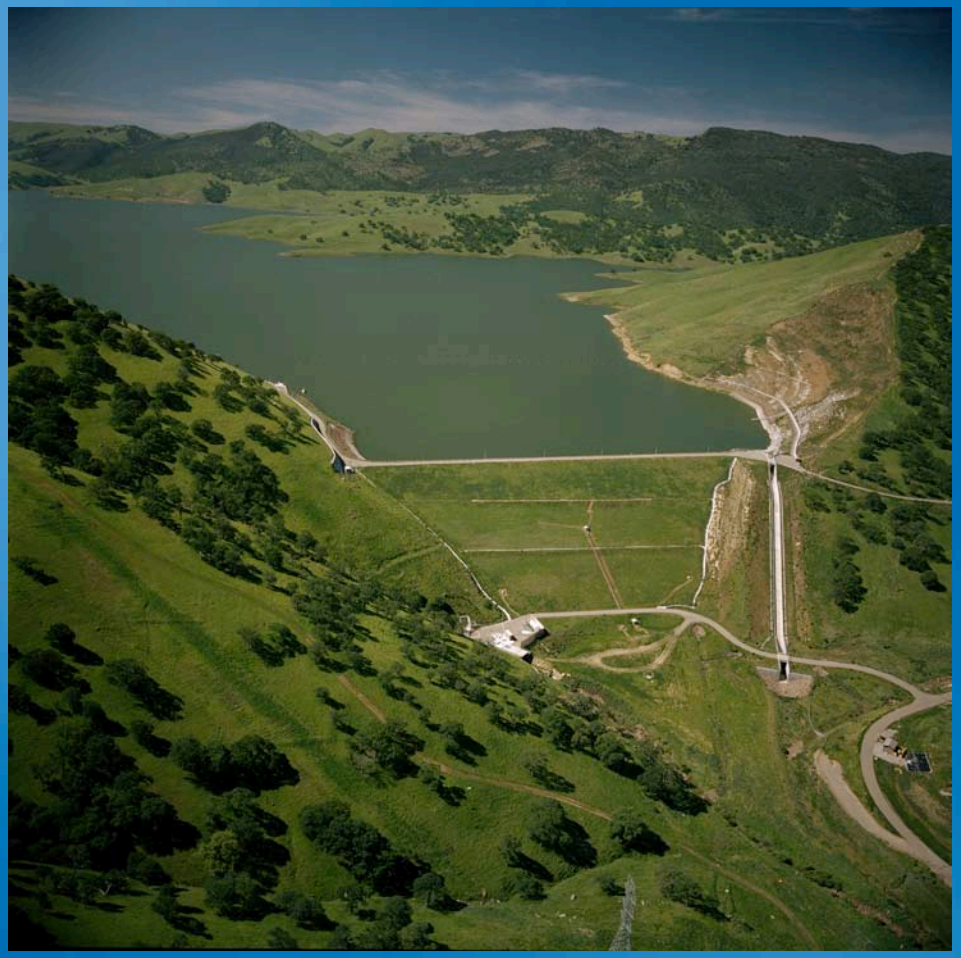
Additional storage capacity is needed to reduce system conflict and manage increased risk and uncertainty



# Need for Water Storage in California

- Added flexibility to decrease conflict between water uses
- Adaptation to climate change
- Changing water needs
- Dry year / drought needs
- Emergency storage needs
- Complements other programs statewide

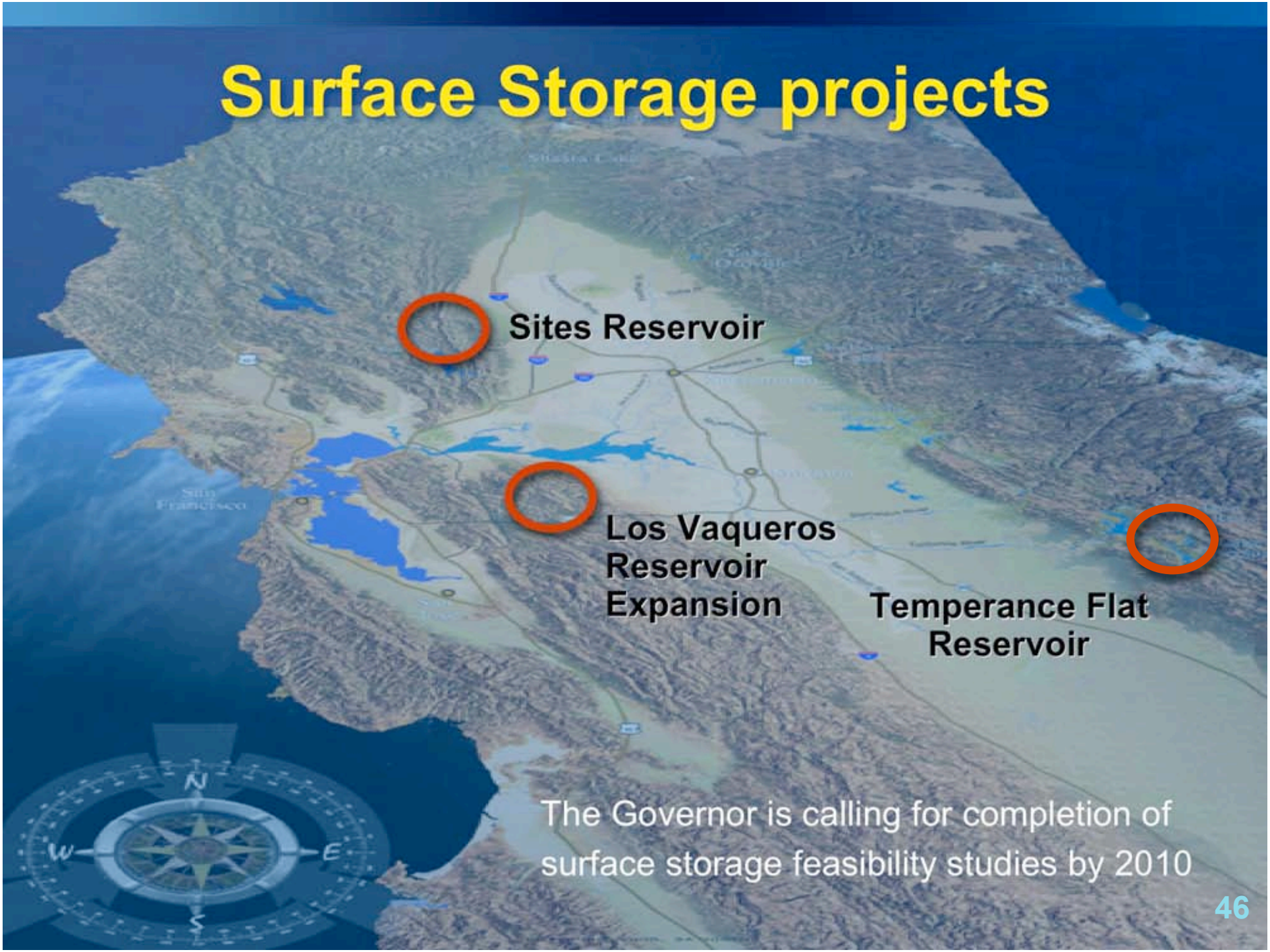
# Groundwater Storage

- The Governor has called for an increase in implementation of groundwater projects
- Prop 13 - $230 million = $1 billion invested and 300,000 acre feet of conserved water
- Prop 50 - 40% of $500 million of IRWM used for groundwater projects

# Groundwater Storage

- Last round of groundwater project funding generated 122 projects only 24 to be funded
- Additional projects are ready to go
- Prop 84 - IRWM $1 billion, 40% for groundwater projects.  Guidelines to be developed over the next 6 months

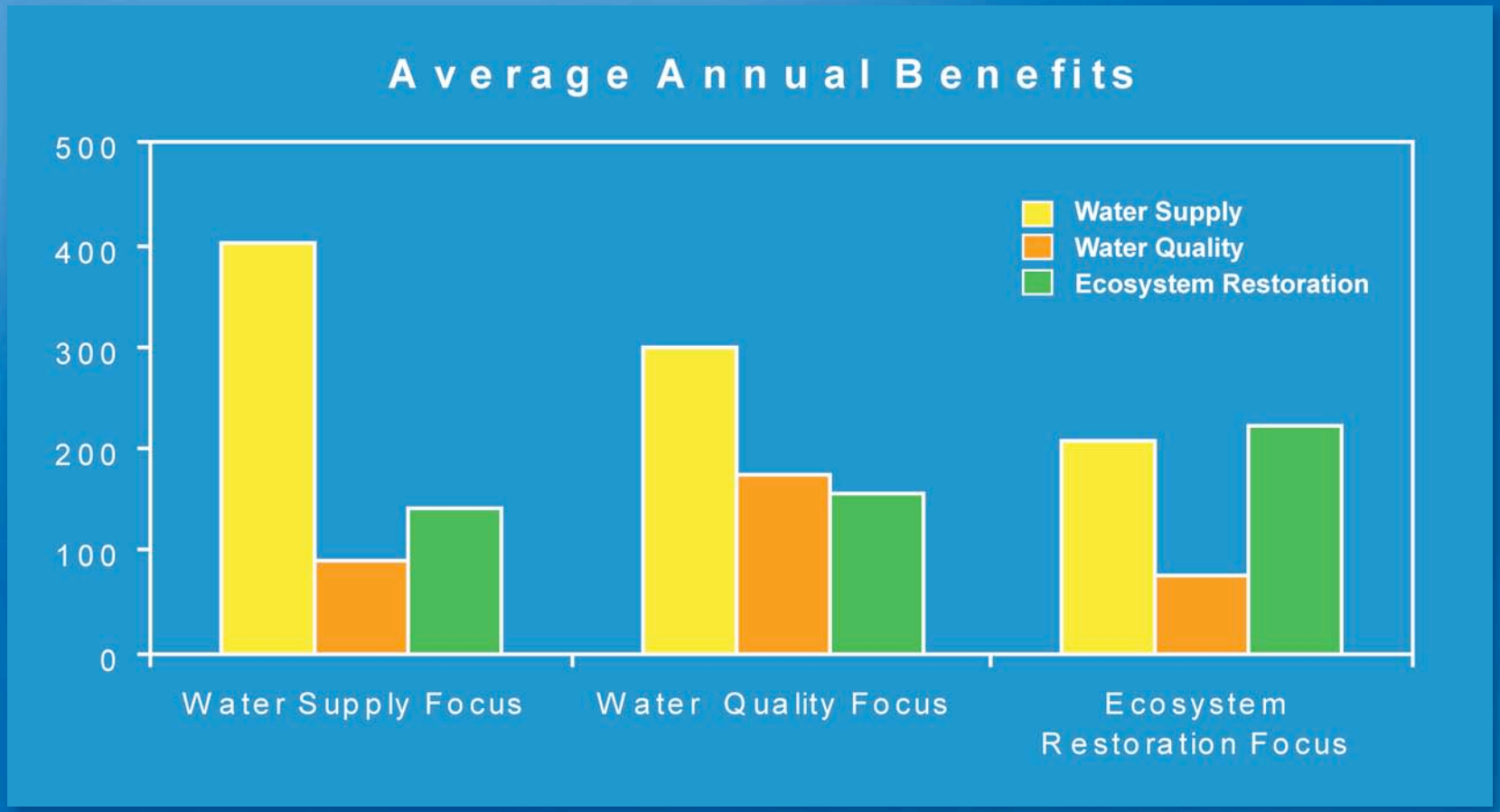
# Surface Storage projects




The Governor is calling for completion of surface storage feasibility studies by 2010

# Estimated Water Benefits

## Under Various Operational Scenarios



# Surface Storage Schedule

| | Reports | | | |
|---|---|---|---|---|
| **Project** | **Plan Formulation Report** | **State Feasibility Study Report** | **Draft Feasibility Study Report / EIS-EIR** | **Final Feasibility Study Report / EIS-EIR** |
| **North-of-the-Delta Offstream Storage (Sites Reservoir)** | March 2008 | September 08 | November 20, 08 | June 2010 |
| **Los Vaqueros Reservoir Expansion** | July 2006 * | April 20, 08 | May 20, 08 | January 2010 |
| **Upper San Joaquin River Basin Storage Investigation** | July 2008 | June 2009 | July 2009 | July 2010 |

* An Initial Economic Evaluation for Plan Formulation was completed in lieu of a typical Plan Formulation Report.