

State of California  
California Natural Resources Agency  
Department of Water Resources

# California **Water Plan** Update 2009

Integrated Water Management

## Volume 1 - The Strategic Plan

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## Foreword

Water Plan Update 2009 epitomizes collaboration. It reflects the perspectives of many and varied individuals, groups, and government entities representing the full spectrum of issues, concerns, and visions for the future of water management in California. Update 2009 has been enhanced by the leadership of 21 State agencies and departments that oversee or carry out water-related activities. Federal, Tribal, regional, and local entities helped shape the strategic plan—its goals, objectives, and recommendations—and 27 resource management strategies that are key to success.

Update 2009 reflects a new reality for resource management, a blueprint for sustainability, and a new direction for water decisions. This reality includes significant challenges: ecosystems in peril, the uncertainties of climate change and sea level rise, and population growth to name just a few. Update 2009 also spells out the urgencies that demand action: dealing with longer and more pronounced droughts, increased flood risk, threats to the environment, impaired water bodies, and aging infrastructure.

The Water Plan's outreach to Native American Tribes brought about a Tribal Communication Plan and culminated in the first of its kind California Tribal Water Summit in 2009. Update 2009 also introduces new water planning methods with the use of scenarios and response packages while evaluating the effects of future climate change.

This Water Plan marks a dynamic new approach to the way California manages its water resources—statewide and regionally. We must adapt California's water systems more quickly and effectively to keep pace with ever-changing conditions. With new urgency, regions must develop and implement truly integrated regional water management plans as roadmaps to meeting future water demands in sustainable ways. We must also continue our efforts at the statewide level to develop and implement plans for a sustainable Delta and to improve our flood management system. To assure balanced, effective solutions are implemented, we must develop long-term, reliable funding methods to make necessary system improvements and to invest in the continued resilience of California's water resources and the ecosystem that supports them.

In November 2009, the Legislature passed and Governor Schwarzenegger signed a comprehensive water package which is integral to Update 2009. Today, State government has the responsibility and opportunity to work with local partners within a new Delta governance structure to complete and implement plans for improving both the Delta ecosystem and the reliability of water supply derived from the Delta. We also must step up our efforts to integrate this work with our ongoing responsibilities to develop a Central Valley Flood Protection Plan, implement the FloodSAFE California initiative, and improve water storage statewide.

Regional water planning and management is essential for solving California's water issues. Local governments, agencies, and stakeholders have the best understanding of their water management challenges. DWR and other State agencies must partner with local agencies and governments to advance Integrated Regional Water Management, and to implement the new requirements for water conservation and groundwater monitoring. State government can provide expertise, technical assistance, and other essential support activities.

The California Water Plan Update 2009 will help chart our course toward more sustainable, integrated resources management. In broad strokes, this means considering water supply reliability, flood protection, water quality, and environmental stewardship in all resource management decisions. By doing so, we increase our chances of realizing the Water Plan's vision: a productive economy, healthy ecosystem, and desirable quality of life for all Californians.



Mark W. Cowin, Director



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We worked individually and came together as groups—water suppliers and customers; urban and rural residents; environmental advocates; agriculture and other industry representatives; flood protection agencies and organizations; private and public groups; and local, regional, State, federal, and Tribal governments. Strengthened by the progress of Update 2005, but in only half the time, we significantly increased the number of collaborative hours dedicated to discussion, debate, and decision-making as we developed Update 2009. Our perspectives were varied, but we found common ground and our intentions were one—find ways to manage California's precious resource in a way that meets today's demands and the needs of generations to come.

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### Tribal Water Plenaries - Sponsors

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Campo Kumeyaay Nation  
EPA Region 9 Tribal Environmental Conference  
Floodplain Management Association  
Hoopa Tribe  
Inter-Tribal Council of California  
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The Water Plan teams are grateful to the many commentators who contributed to our understanding of California's water resource and its uses. The public took advantage of several opportunities to review and comment on five versions/drafts of Update 2009. DWR received and considered about 335 comment letters and e-mails in preparing this update. Comments came from State, federal, Tribal, and local governments and agencies, nongovernmental organizations, private organizations, and individuals. Find these written comments on the Web at <http://www.waterplan.water.ca.gov/comments/update2009/index.cfm?sort=noid>.

## Contents

### Volume 1

Chapter 1 Introduction.....	1-1
Chapter 2 Imperative to Act .....	2-1
Chapter 3 Companion State Plans.....	3-1
Chapter 4 California Today .....	4-1
Chapter 5 Managing an Uncertain Future .....	5-1
Chapter 6 Integrated Data and Analysis .....	6-1
Chapter 7 Implementation Plan.....	7-1

### Volume 2

Chapter 1 Introduction

#### **Reduce Water Demand**

Chapter 2 Agricultural Water Use Efficiency

Chapter 3 Urban Water Use Efficiency

#### **Improve Operational Efficiency and Transfers**

Chapter 4 Conveyance — Delta

Chapter 5 Conveyance — Regional / Local

Chapter 6 System Reoperation

Chapter 7 Water Transfers

#### **Increase Water Supply**

Chapter 8 Conjunctive Management and Groundwater

Chapter 9 Desalination

Chapter 10 Precipitation Enhancement

Chapter 11 Recycled Municipal Water

Chapter 12 Surface Storage — CALFED

Chapter 13 Surface Storage — Regional/Local

#### **Improve Water Quality**

Chapter 14 Drinking Water Treatment and Distribution

Chapter 15 Groundwater and Aquifer Remediation

Chapter 16 Matching Water Quality to Use

- Chapter 17 Pollution Prevention
- Chapter 18 Salt and Salinity Management
- Chapter 19 Urban Runoff Management
- Practice Resources Stewardship**
- Chapter 20 Agricultural Lands Stewardship
- Chapter 21 Economic Incentives
- Chapter 22 Ecosystem Restoration
- Chapter 23 Forest Management
- Chapter 24 Land Use Planning and Management
- Chapter 25 Recharge Areas Protection
- Chapter 26 Water-dependent Recreation
- Chapter 27 Watershed Management
- Improve Flood Management**
- Chapter 28 Flood Risk Management
- Other**
- Chapter 29 Other Strategies

### **Volume 3**

- North Coast Hydrologic Region
- San Francisco Hydrologic Region
- Central Coast Hydrologic Region
- South Coast Hydrologic Region
- Sacramento River Hydrologic Region
- San Joaquin River Hydrologic Region
- Tulare Lake Hydrologic Region
- North Lahontan Hydrologic Region
- South Lahontan Hydrologic Region
- Colorado River Hydrologic Region
- Sacramento-San Joaquin Delta
- Mountain Counties

## Acronyms and Abbreviations

A&E	Assumptions and Estimates (Report)
AB	Assembly bill
AB 32	Global Warming Solutions Act of 2006
ACWA	Association of California Water Agencies
B/C ratio	benefit/cost
BDCP	Bay Delta Conservation Plan
BLM	US Bureau of Land Management
Cal EMA	California Emergency Management Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALSIM	DWR water resources simulation model
CALVIN	UC Davis statewide economic engineering water model
CASA	California Association of Sanitation Agencies
CAT	Climate Action Team
CDPH	California Department of Public Health
CEC	California Energy Commission
CLCA	California Land Conservation Act of 1965 (Williamson Act)
CLD	California Levee Database
CORP	California Outdoor Recreation Plan (State Parks)
CPUC	California Public Utilities Commission
CTP	California Transportation Plan
CVP	Central Valley Project (federal)
CVPM	Central Valley Project Model
CWEMF	California Water and Environmental Modeling Forum
DAU	detailed analysis unit
Delta	Sacramento-San Joaquin River Delta (also referred to as California Delta)
DFG	California Department of Fish and Game
DOF	California Department of Finance
DRMS	Delta Risk Management Strategy
DV BRTF	Delta Vision Blue Ribbon Task Force
DWR	California Department of Water Resources
EO	executive order
EPA	US Environmental Protection Agency
ERP	CALFED Ecosystem Restoration Program
ET	evapotranspiration
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
GHG	greenhouse gas
HEC-FDA	Flood Damage Assessment software (USACE)
IEPR	2007 Integrated Energy Policy Report
IEUA	Inland Empire Utilities Agency
IRP	Integrated resources planning
IRWM	Integrated Regional Water Management
IWRIS	Integrated Water Resources Information System
JOC	Joint Operations Center (relative to State and federal collaboration to serve California's water supply and flood management needs.)

## Acronyms and Abbreviations (cont'd)

LCPSIM	Least-Cost Planning Simulation Model
LGC	Local Government Commission
NAHC	Native American Heritage Commission
NFMS	National Marine Fisheries Service
NOAA	National Oceanographic and Atmospheric Administration
OPR	Governor's Office of Planning and Research
PA	planning area
PPIC	Public Policy Institute of California
RAP	region acceptance process (related to IRWM planning)
RDM	Robust Decision-making
Regional Water Board	Regional Water Quality Control Board
ROD	CALFED Bay-Delta Program's Record of Decision
SB	Senate bill
SEI	Stockholm Environment Institute
SGP	Governor's Strategic Growth Plan
SHMP	2007 Enhanced State of California Multi-Hazard Mitigation Plan
State Parks	California Department of Parks and Recreation
State Water Board	State Water Resources Control Board
SVP	Shared Vision Planning
SWAN	Statewide Water Analysis Network
SWAP	Statewide Agricultural Production Model
SWP	State Water Project
SWRR	Sustainable Water Resources Roundtable
TAG	Technical Advisory Group
TCC	Tribal Communication Committee
UC	University of California
USACE	US Army Corps of Engineer
USBR	US Bureau of Reclamation
USDA	US Department of Agriculture
UWMP	Urban Water Management Plan
Water PIE	Water Planning Information Exchange
WEAP	Water Evaluation and Planning System
WETCAT	Water-Energy subgroup of Governor's Climate Actin Team

