

California **Water Plan** Highlights

California Water Plan



Integrated Water Management & Sustainability

INTEGRATED WATER MANAGEMENT



Update 2009 • Department of Water Resources

SWRR Meeting
December 6, 2011

Imperative to Act to Keep Pace w/ Changes



- Population growth & movement
- **Shift to permanent crops**
- Increasing flood risk
- **Declining Delta & watersheds**
- Impaired water bodies
- **Climate Change profoundly impacting water systems**
- Aging water & flood systems challenged by legal remedies & regulatory protections
- **Growing economic & societal consequences of declining water reliability and degraded quality of surface & groundwater supplies**

Imperative to Act to Keep Pace w/ Changes

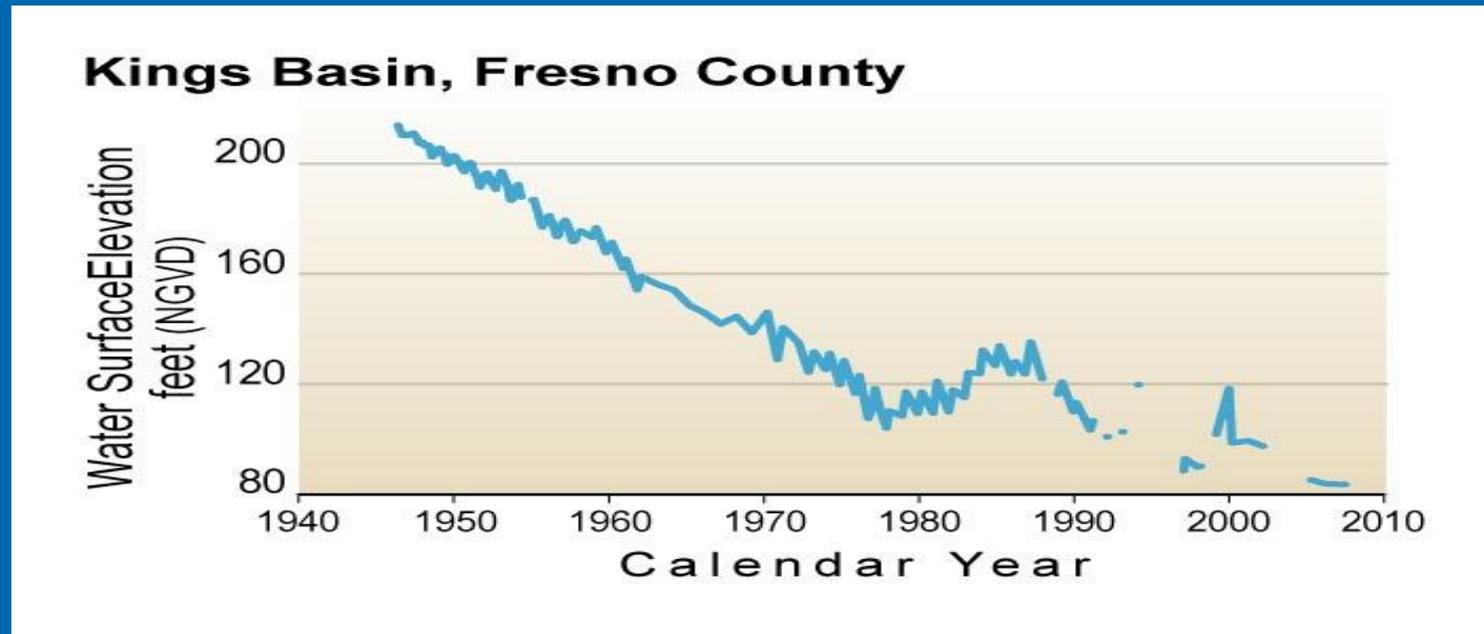
The *Entire* System –

water & flood facilities,
watersheds & ecosystems

– has lost resilience and is
changing in undesirable ways.



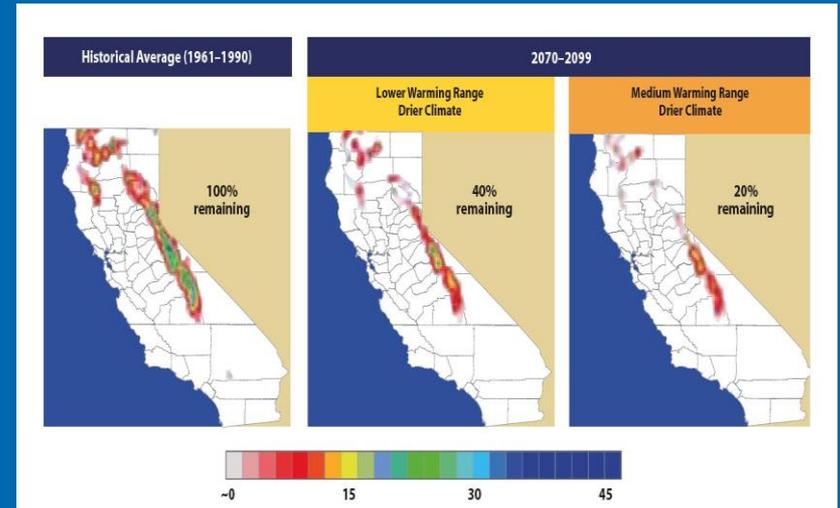
Groundwater Overdraft is Deficit Spending



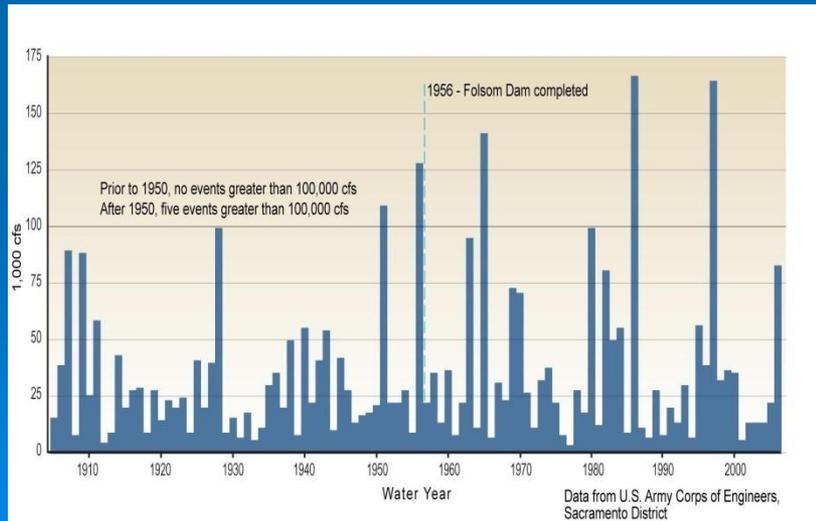
Climate Change: Future Hydrology Unlike the Past



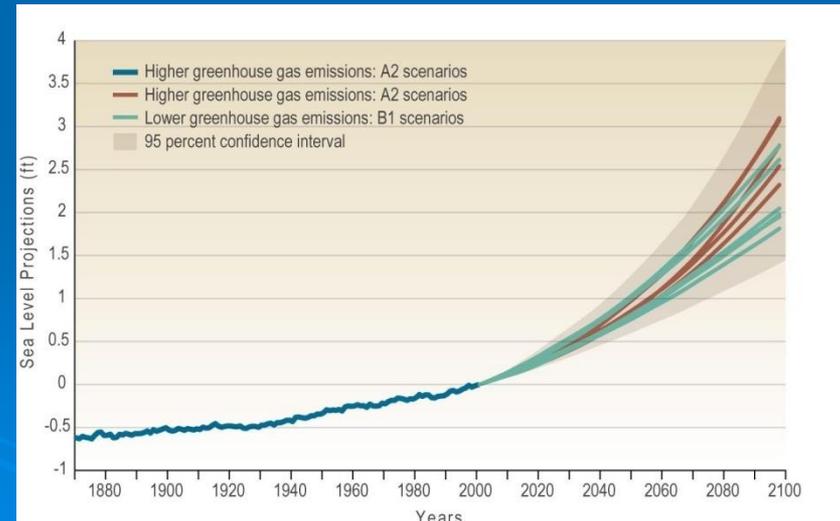
Higher air & water temperature



Early snowmelt & less snowpack



Changing runoff pattern



Rising sea level

3 Future Scenarios: Key Factors of Uncertainty

2050
Planning
Horizon

Factors of Uncertainty

Population

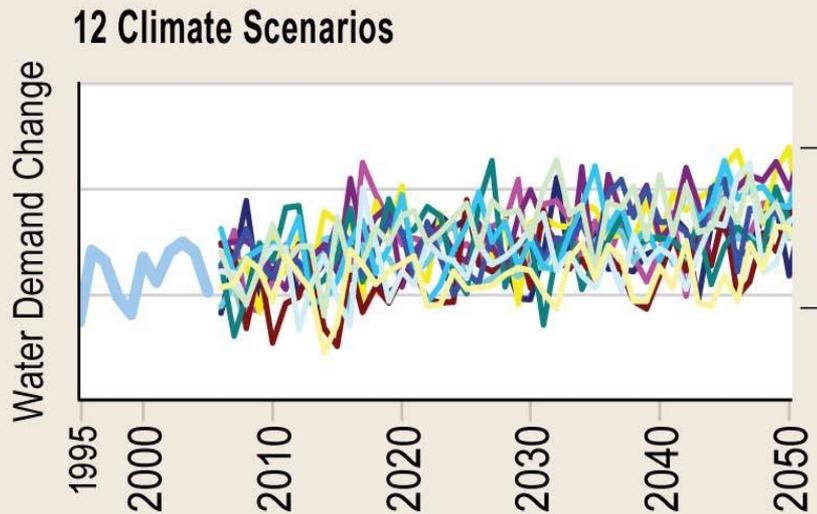
Land Use

Irrigated Crop Area

Environmental Water

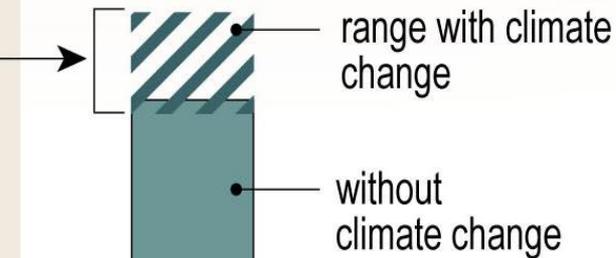
Background Water
Conservation

How Will Climate Change Variability Change Water Demands ?



Water demand change:

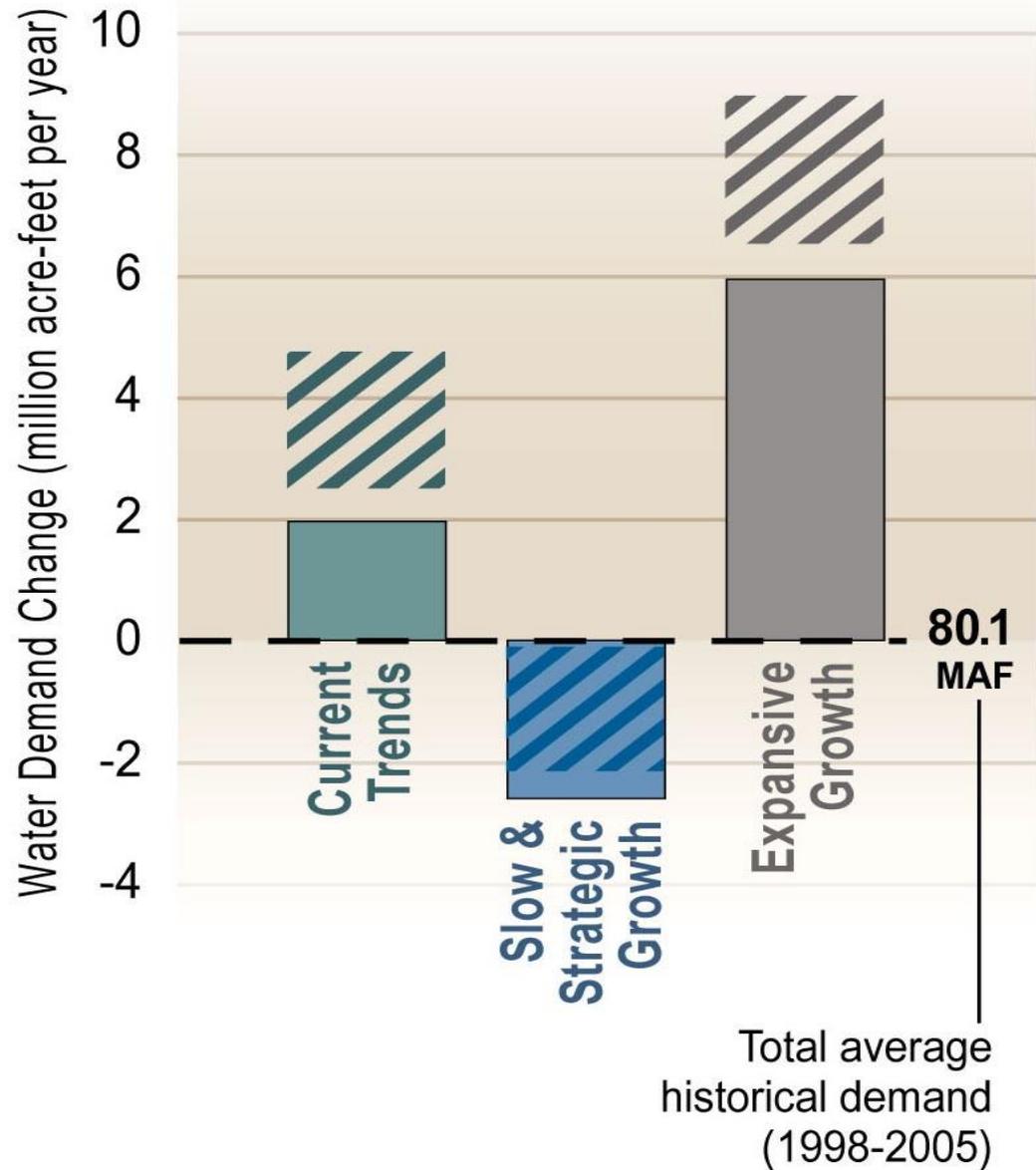
Average projected future demand (2043-2050)



0 baseline = Average historical demand (1998-2005)

Statewide Water Demand Change for 2050 Scenarios

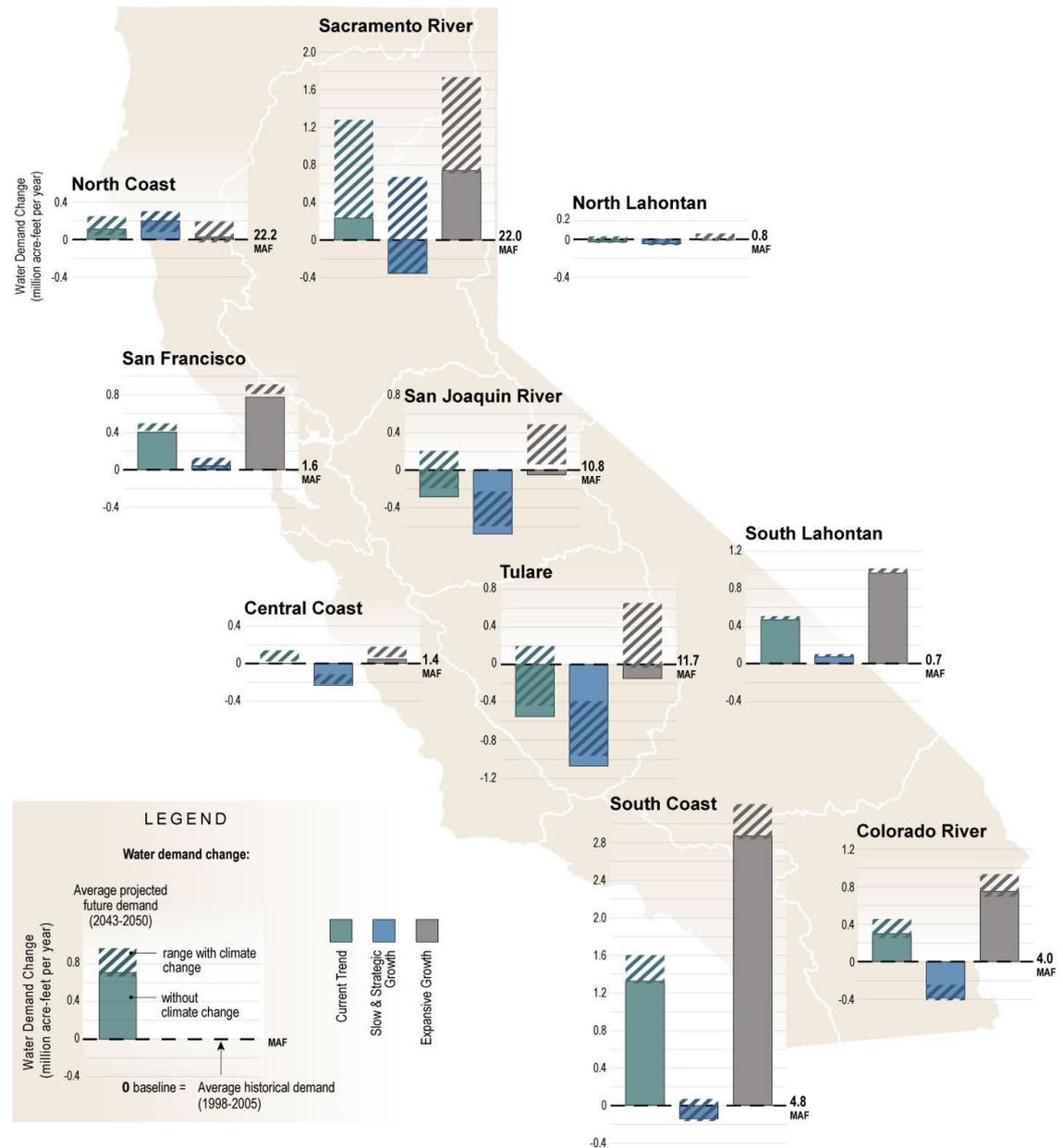
Without & With
Climate Change



Water Demand Change for 2050 Scenarios

From a Regional Perspective

Wide-ranging climate variability



Update 2009 – State's Blueprint Integrated Water Management & Sustainability

VISION

- Public Health, Safety, Quality of Life
- Vitality, Productivity, Economic Growth
- Healthy Ecosystem, Cultural Heritage

Foundational Actions for SUSTAINABLE WATER USES

- Use Water Efficiently
- Protect Water Quality
- Expand Environmental Stewardship

Initiatives for RELIABLE WATER SUPPLIES

- Expand Integrated Regional Water Management
- Improve Statewide Water and Flood Management Systems



Strategic Plan Elements

see Highlights double foldout

➤ Desired future for CA water & Purpose of Water Plan

Vision & Mission

➤ Desired outcomes for the 2050 planning horizon

7 Goals

➤ Core values & philosophies

10 Guiding Principles

➤ Statements of intent / Focus on what & when

13 Objectives & 115+ Actions

➤ Removing impediments & leveraging opportunities

9 Recommendations

3 I's - Invest in Innovation & Infrastructure

California State Government in partnership with others should invest in water innovation & infrastructure to support integrated water management and sustainable outcomes

➤ Innovation

- Governance improvements
- Planning & public process improvements
- Information technology (data & tools)
- Water technology / R&D

➤ Infrastructure

- Regional projects
- Inter-regional projects
- Statewide systems

➤ State Investments - Finance Plan

- Stable funding with focus on innovation investments
- Seed money to incentivize infrastructure improvements



Integrated Regional Water Management

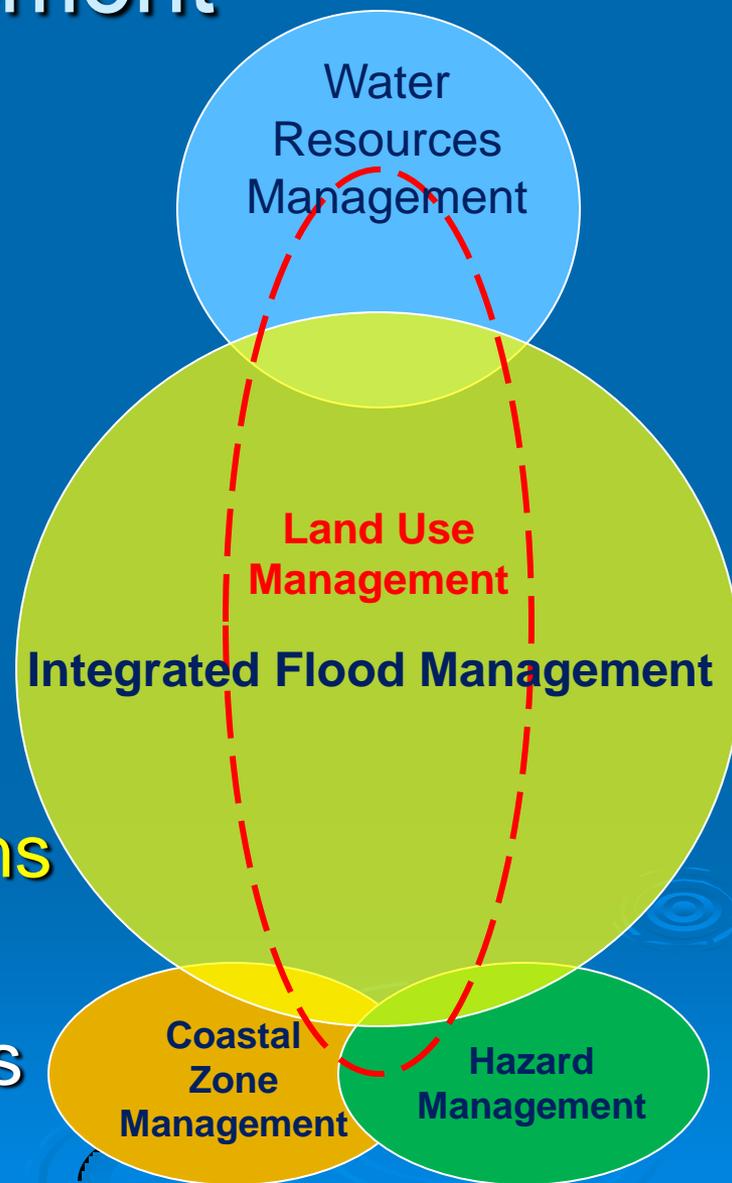
48 Regional Water Mgmt Groups



- Foster partnerships & promote regional solutions
- Diversify water portfolios & integrate supplies
- Leverage economies of scale to reduce costs
- Integrate data, tools & resources
- Invest in multi-benefit projects with sustainable outcomes
- Increase regional self-sufficiency

Integrated Flood Management

- Comprehensive approach to flood management
- **Considers land & water resources at watershed scale**
- Minimizes loss of life and property damage from flooding
- **Maximizes benefits of floodplains**
- Recognizes benefits to ecosystems from periodic floods



Improve Coordination Land Use Planning & Water Management



- Land use planning is controlled locally
- Water management is decentralized -- over 2,300 counties, cities, public agencies, and private water companies
- Use IRWM to coordinate land use planning with water supply, quality, flood management, and climate adaptation
- State Government provides technical assistance and financial incentives
- Improve coordination among State agencies and with IRWM Partnerships

27 Resource Management Strategies

A Range of Choices

Reduce Water Demand

- Agricultural Water Use Efficiency
- Urban Water Use Efficiency

Improve Operational Efficiency & Transfers

- Conveyance – Delta
- Conveyance – Regional / Local
- System Reoperation
- Water Transfers

Increase Water Supply

- Conjunctive Management & Groundwater Storage
- Desalination –Brackish & Seawater
- Precipitation Enhancement
- Recycled Municipal Water
- Surface Storage – CALFED
- Surface Storage – Regional / Local

Improve Flood Management

- Flood Risk Management

Improve Water Quality

- Drinking Water Treatment & Distribution
- Groundwater / Aquifer Remediation
- Matching Quality to Use
- Pollution Prevention
- Salt & Salinity Management
- Urban Runoff Management

Practice Resource Stewardship

- Agricultural Lands Stewardship
- Economic Incentives
(Loans, Grants & Water Pricing)
- Ecosystem Restoration
- Forest Management
- Land Use Planning & Management
- Recharge Areas Protection
- Water-Dependent Recreation
- Watershed Management

Other-- Crop idling, dew vaporization, fog collection, irrigated land retirement, rainfed agriculture, waterbag transport

Framing Sustainability in Update 2009

A Key Goal

California is prepared for climate uncertainty by developing adaptation strategies and investing in a diverse set of actions that reduce the risk and consequences posed by climate change, that make the system more resilient to change, and that increase the sustainability of water and flood management systems and the ecosystems they depend on.

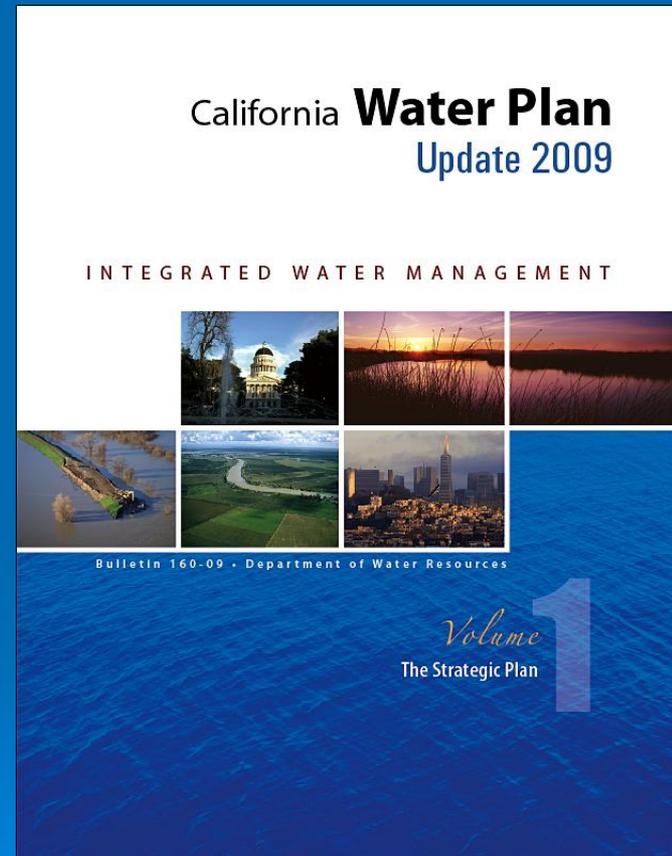
A Guiding Principle

Determine values for economic, environmental, and social benefits, costs, and tradeoffs to base investment decisions on sustainability indicators.

California Water Plan Update 2009

Managing for Sustainability

- Assign greater value to **sustainable outcomes** than water supply extraction
- **Future scenarios** to consider uncertainty, risk & resource sustainability in water & flood planning
- **Showcase SWRR**
 - Mission, history & activities
 - 4 Sustainability Principles
 - 14 Sustainability Indicators
- **California examples**
 - Strategic Growth Council
 - ACWA Sustainability Policy Principles



We are working on Update 2013



California Water Plan Update 2013

California Water Plan Update 2013 (Update 2013) is currently being developed by staff from the Department of Water Resources (DWR) and other agencies through rigorous public involvement and State and federal agency coordination processes. It will build on the contents of the previous update — the five-volume *California Water Plan Update 2009*, which provided a strategic plan, a suite of resource management strategies, reports on California's hydrologic regions, and reference and technical guides — and will introduce a number of key additions and enhancements in response to stakeholder recommendations and evolving decision-maker information needs.

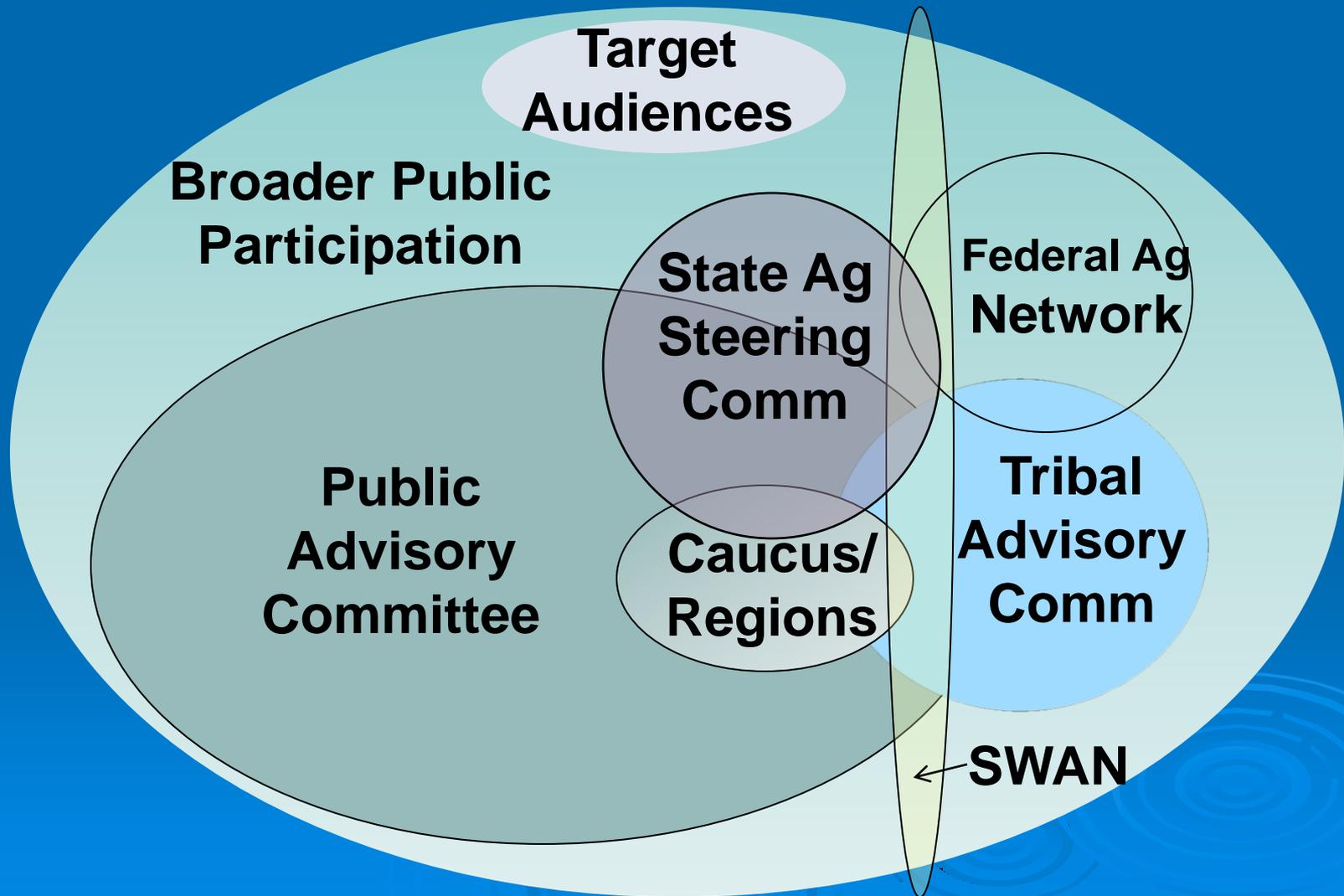
Integrated water management is a collection of policies, practices, and tools applied to water resources planning and management to achieve multiple objectives and enhanced outcomes.

Water Plan Framework for Integrated Water Management and Sustainability



Investing in Innovation and Infrastructure

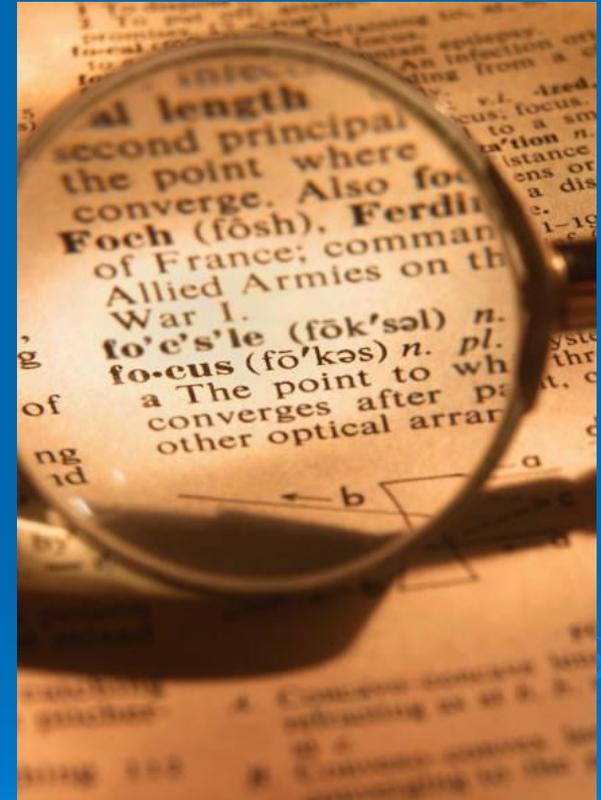
Update 2013 Collaboration Venues



California Water Plan Update 2013

Topic Caucuses & Focus Areas

- Finance Plan
- Groundwater
- Water Quality
- Integrated Flood Management
- Water Technology / R&D
- DAC / Environmental Justice
- Sustainability Indicators
- Scenarios – Planning for Future Uncertainty



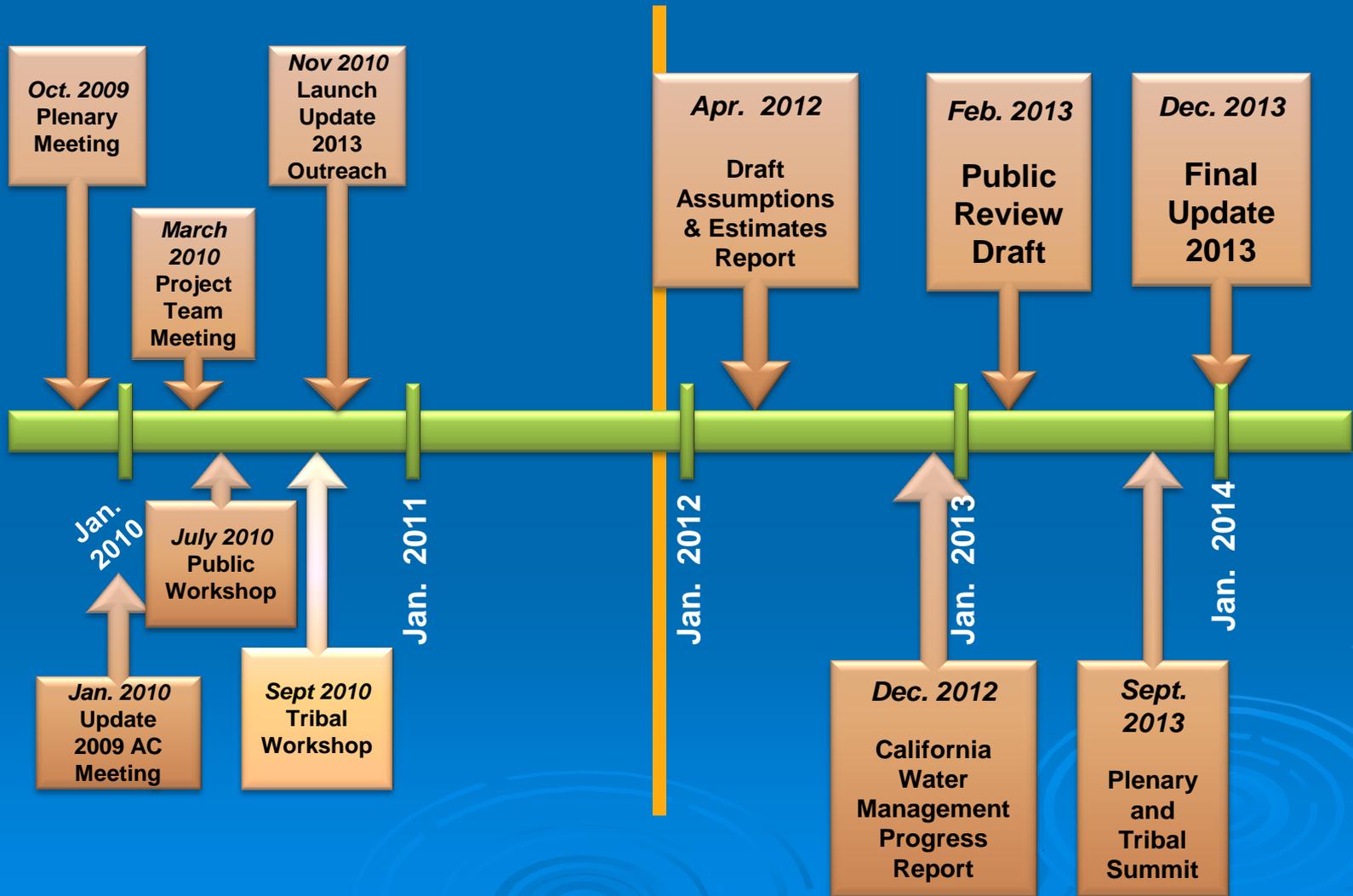
A Recurring Question ...

“How can we ascertain if the resource management strategies and objectives of the CA Water Plan will provide sustainable water uses and supplies for the State and its various hydrologic regions?”

... the Update 2013 response is up next

Update 2013 Scoping & Deliverables

We Are Here



Ways to Access Water Plan Information

➤ Visit the **Water Plan Web Portal**
www.waterplan.water.ca.gov

California Water Plan eNews
Special Edition
 March 30, 2010

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California Water Plan Update 2009 released
 Integrated Water Management
 Bulletin 160-09 Department of Water Resources

Today, the California Department of Water Resources released the California Water Plan Update 2009 – a product of four years of collaboration. It is a water plan for the entire state and is available online. Integrated water management and sustainability is the thread of continuity throughout Update 2009. It gives all Californians a new direction for water decisions about such challenges as threatened ecosystems, the uncertainties of climate change and a rising sea level, and population growth. It spells out the urgencies that demand

- [Read Press Release](#)
- [Read Special Flier](#)

The Water Plan came from a steering committee representing 21 State agencies, a 45-member public advisory committee, nearly 40 regional workshops held around the state, about 150 meetings with more than 25,500 person-hours of conversations about our water. Update 2009 is the State's blueprint for sustainability and integrated water management and marks a significant new chapter in the way California manages its water resources.

Secretary's Message
 Secretary of California Natural Resources Agency Lester Snow delivers his message about Update 2009.

Highlights Issues
 The Highlights section of Update 2009 provides an easy-to-read overview of the document.

Strategic Plan, Volume 1
 Update 2009 includes a strategic plan with a vision, mission, goals, recommendations, and implementation plan.

Reservoir Management Strategies, Volume 2
 Think of these strategies as tools in a tool kit. There are nearly 30 strategies for attaining integrated water management.

Director's Message
 Director of California Department of Water Resources Mark Cowin writes the foreword to Update 2009.

Click on links below for more information.

[Upcoming Meetings](#) [Water Plan Web site](#)



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California Home Governor Home Amber Alert Tuesday, April 27, 2010

Welcome to **California**

DWR Home
DPLA Home
Water Plan Home
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 Advisory Committee
 Administrative Corner
 Regional Outreach
 SWAN
 Tribal Communication
 Contacts and Comments

California Water Plan Update 2009
 Integrated Water Management
 Bulletin 160-09 Department of Water Resources

Release and Contact Information

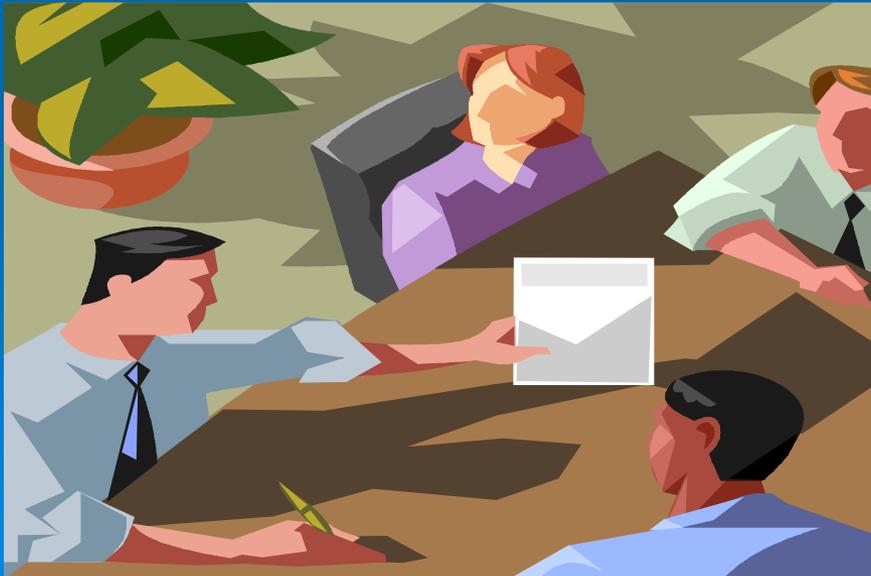
	eNews Special Edition		1.1 MB
	Rollout Flier		0.9 MB

Secretary's Message

The strategies outlined in these pages provide the means to manage resources comprehensively, from snowmelt to estuary, from field to tap, and all of the uses within the watershed.

[Video of former Director Snow giving his address at the Planning meeting on](#)

Questions & Comments



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