

Evaluating Resource Management Strategies for the California Water Plan



Presentation Overview

- ◆ Introduction to the California Water Plan
- ◆ Quantitative Deliverables
- ◆ Collaboration Efforts
- ◆ Focus for today



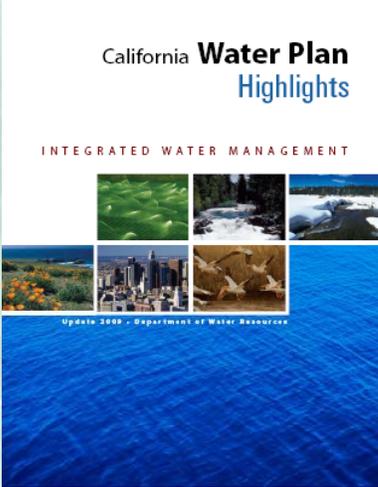
2

The California Water Plan

Est. 1957

- Introduction to the California Water Plan
- Quantitative Deliverables
- Collaboration Efforts
- Focus for today

- First published in 1957
- Updated 9 times; last one in 2009
- DWR required by law (Water Code) to update the Water Plan every 5 years; next one in 2013
- Growing interest by Legislature and stakeholders
- Not a mandate & No appropriation




California Water Plan

State's Blueprint for 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**

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



Strategic Plan Elements

- ◆ Desired future for CA water & Purpose of Water Plan
- ◆ Desired outcomes for the 2050 planning horizon
- ◆ Core values & philosophies
- ◆ Statements of intent / Focus on what & when
- ◆ Removing impediments & leveraging opportunities

Vision & Mission

7 Goals

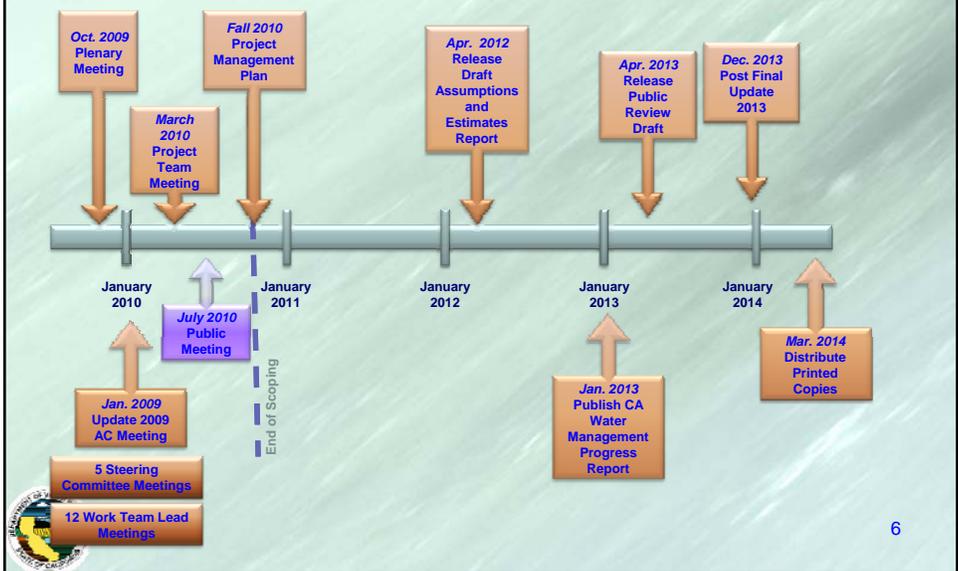
10 Guiding Principles

13 Objectives & 100 Actions

9 Recommendations



Water Plan Update 2013 Timeline and Major Deliverables



Content Enhancements

- ◆ **Integrated Water Management**
 - Expand on water quality
 - Continue integrated flood mgmt
 - Expand on groundwater
 - Add near coastal resources
- ◆ **Regional Planning**
 - Expand on land use & water mgmt nexus
 - Incorporate UWMP content
 - Expand economic & financial planning
- ◆ **Data, Metrics & Analysis**
 - Improve data mgmt & sharing
 - Enhance inter-disciplinary technical analyses
 - Develop metrics & sustainability indicators
 - Develop CA Water Mgmt Progress Report
- ◆ **Adaptive Management**
 - Revisit environmental water concept
 - Use Living Document approach
 - Use multiple & shorter planning horizons
 - Identify outdated water codes & laws




7

Vision & Purpose for Analytical Tool and Data Improvements

- ◆ **Support decision making in light of uncertainties**
 - Promote collaborative decision making, Shared Vision Planning
- ◆ **Support integrated water management regionally and statewide**
 - Supply reliability, flood management, environmental restoration, water quality, economic efficiency, social equity

- ◆ Introduction to the California Water Plan
- ◆ Quantitative Deliverables
- ◆ Collaboration Efforts
- ◆ Focus for today



8

Complex Questions the Water Plan Should Answer

- ◆ How does water scarcity affect the economy and all beneficial uses?
- ◆ How does water quality affect water management and vice versa?
- ◆ How does land use affect water management?



9

Complex Questions Continued

- ◆ How should local, regional, and state agencies manage water during multiple year droughts?
- ◆ How will climate change affect water management?
- ◆ What are some of the costs, benefits, and tradeoffs between different water management strategies?



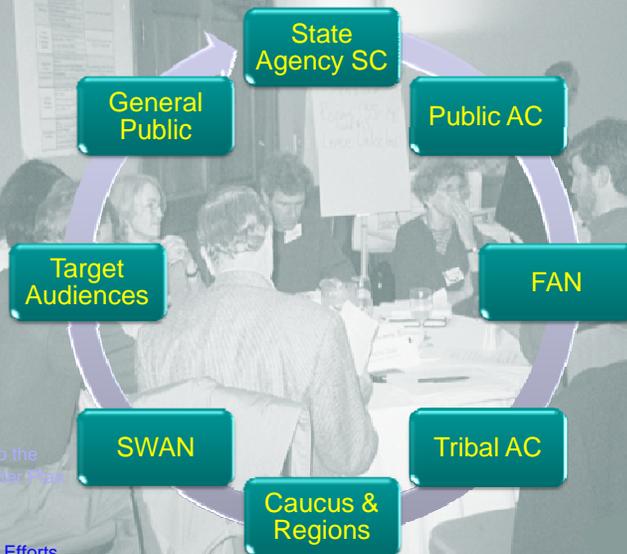
10

Water Plan Quantitative Deliverables

- ◆ Accurately describe recent water management conditions (Water Portfolios)
- ◆ Develop multiple baseline future conditions (Scenarios)
- ◆ Identify alternative water management response packages (management strategies)
- ◆ Evaluate performance of strategies in terms of benefits, costs, and tradeoffs
- ◆ Evaluate interaction between local, regional, and statewide water management
- ◆ Support Water Planning Information Exchange



Update 2013 Collaboration Venues



- ◆ Introduction to the California Water Plan
- ◆ Quantitative Deliverables
- ◆ Collaboration Efforts
- ◆ Focus for today

SWAN's Role in Update 2013



- ◆ Technical advisory group for the California Water Plan
 - Provide recommendations on improvements to analytical tools and data
 - SWAN recommendations brought to Water Plan policy advisory groups
 - Through Water Plan, recommendations will guide other statewide and regional planning efforts



13

When We Last Met August 2010

- ◆ Summarized technical activities and issues from Update 2009
- ◆ Presented proposal to develop Proof of Concept for Update 2013
- ◆ Voted on technical priorities for enhancing the analytical framework



14

Central Valley Basin Study

Proposed Collaboration by Reclamation

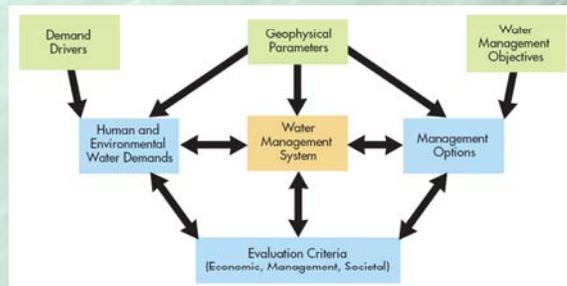
- ◆ A Basin Study is comprised of four main elements:
 - Projections of water supply and demand
 - Study how infrastructure and operations will perform under changing conditions
 - Development of options and mitigation strategies
 - Trade-off analysis



The Focus for Today

- ◆ Introduction to the California Water Plan
- ◆ Quantitative Deliverables
- ◆ Collaboration Efforts
- ◆ Focus for today

Analytical and Decision Support Framework for the California Water Plan





The collage consists of four images arranged in a 2x2 grid. Top-left: An aerial view of a flooded residential area with houses partially submerged in water, labeled 'FLOODS'. Top-right: A close-up of a fish swimming in a tank with colorful gravel, labeled 'DECLINING ECOSYSTEMS'. Bottom-left: A view of a dry, rocky riverbed with a small pool of water, labeled 'DROUGHT'. Bottom-right: Silhouettes of oil pumpjacks against a sunset sky, labeled 'ENERGY CRISIS'.

Managing an Uncertain Future

Risk, Uncertainty, and Sustainability

Preparing for an Uncertain Future

- ◆ Update 2009 Identifies over two dozen resource management strategies
- ◆ Regional water management plans must satisfy multiple water management objectives
- ◆ Each region must consider costs, benefits, and tradeoffs to choose effective responses



18

Evaluating Resource Management Strategies and Supporting Decisions

- ◆ Resource Strategy Performance
 - Quantifying benefits
- ◆ Resource Strategy Robustness
 - Through application of scenarios
 - Robust decision making
- ◆ Decision Support



19

Some Limitations

- ◆ More comprehensive look at three regions in Central Valley
- ◆ Cannot represent all strategies
- ◆ Cannot quantify all strategy benefits
- ◆ Coarse representation of regional groundwater system



Ways to Access Water Plan Information



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



Subscribe to Water Plan eNews
 a weekly electronic newsletter
www.waterplan.water.ca.gov/eneews



Contact Information

Rich Juricich

o juricich@water.ca.gov

o (916) 651-9225

SWAN

<http://www.waterplan.water.ca.gov/swan>

