

# Agenda Item 4

## Overview of PRD & Highlights Brochure

# California **Water Plan** Highlights

INTEGRATED WATER MANAGEMENT



Update 2009 • Department of Water Resources

## California Water Plan Update 2009

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## Overview of PRD & Highlights Brochure

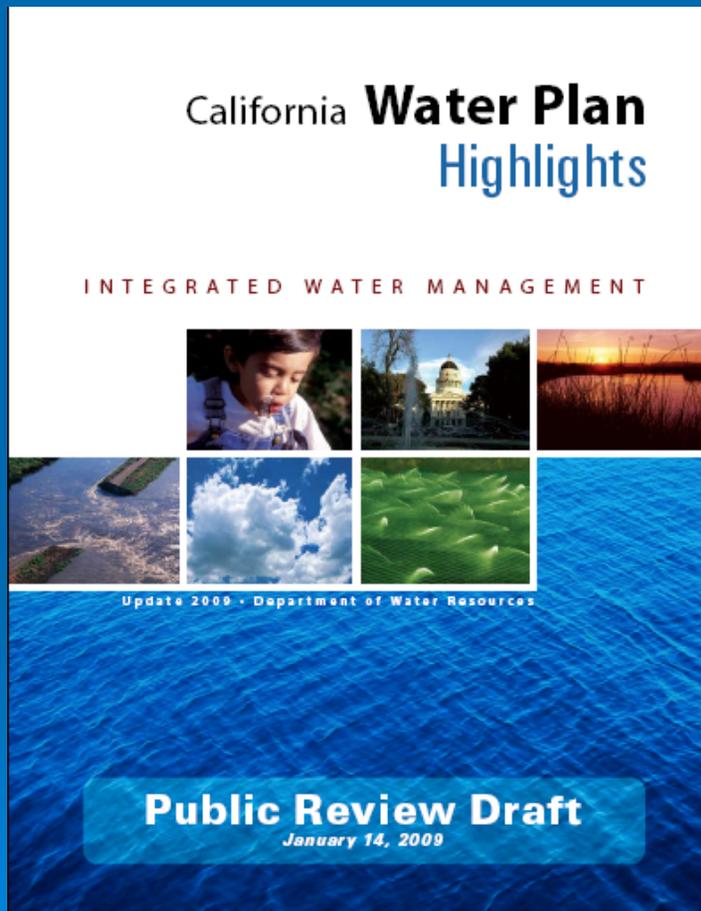
Regional Workshops  
April - May 2009

**Public Review Draft**

*January 14, 2009*

# Water Plan Update Organization

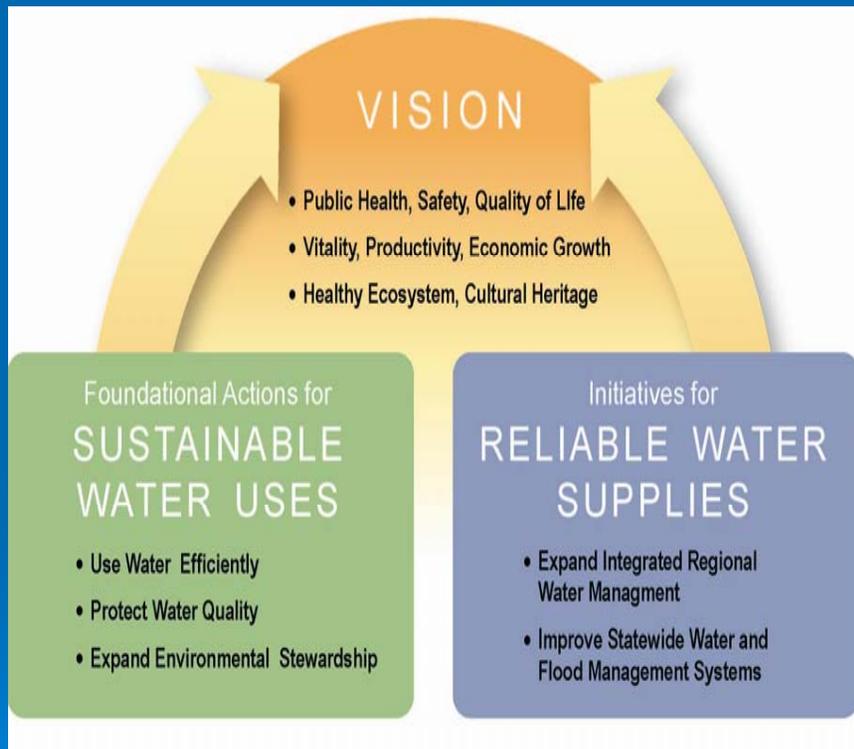
## Inside Front Cover



- Water Plan Highlights (with CD)
- Vol. 1 > The Strategic Plan
- Vol. 2 > 27 Resource Management Strategies
- Vol. 3 > 12 Regional Reports
- Vol. 4 > Reference Guide - *coming* (Online articles)
- Vol. 5 > Technical Guide - *coming* (Online documentation)

# Imperative to Act to Keep Pace w/ Changes

pages 4 - 5



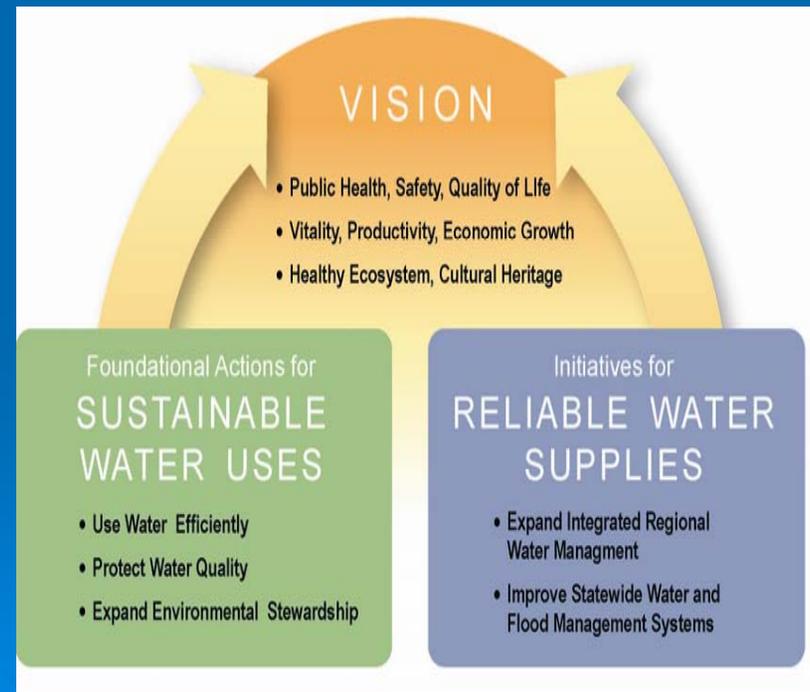
- Population growth
- Shift to permanent crops
- Delta & watersheds in decline
- Climate Change profoundly impacting water systems
- Aging water & flood systems challenged by legal remedies & regulatory protections
- Growing economic & societal consequences of declining water reliability and degraded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

# Imperative to Act to Keep Pace w/ Changes

## The *Entire System* –

water & flood management,  
watersheds & ecosystems

– has lost resilience and is  
changing in undesirable ways.

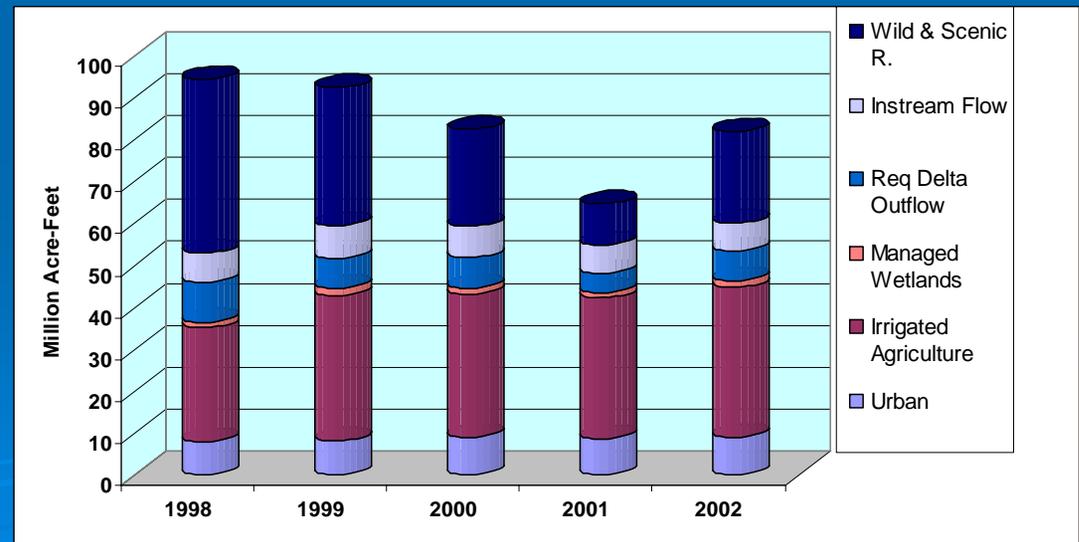
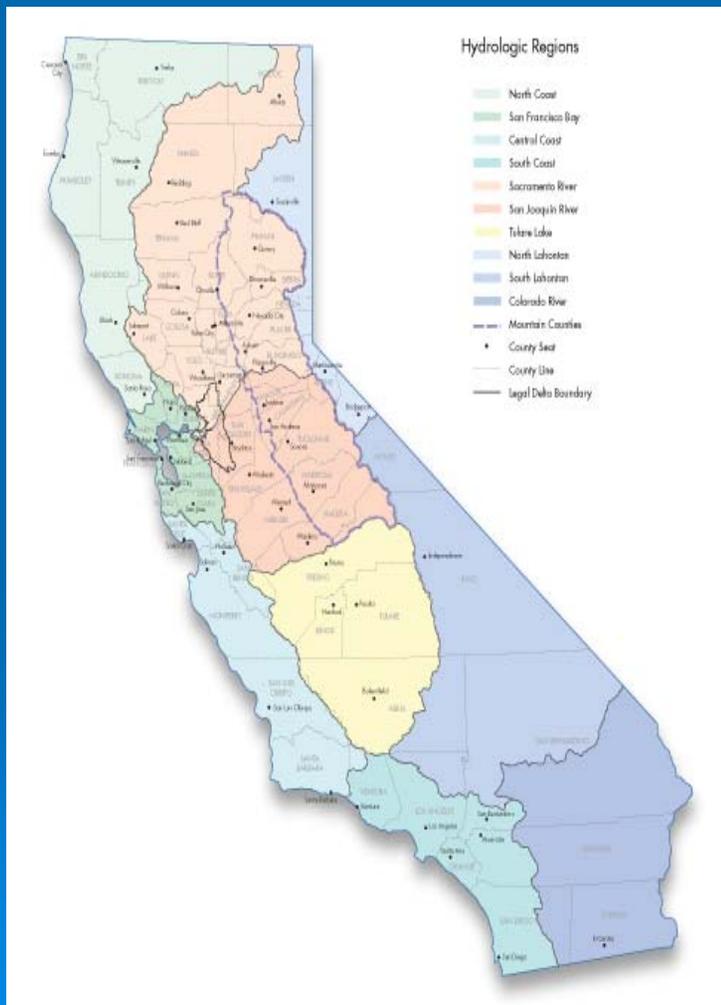


# CA Water -- Variable & Extreme

pages 6 - 7

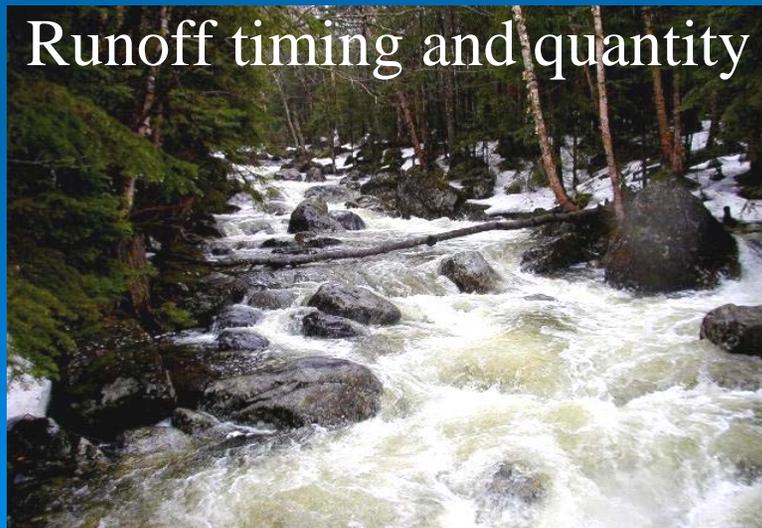
## Water Portfolios

80 data categories for 1998 - 2005



# Climate Change Increasing Stress on System

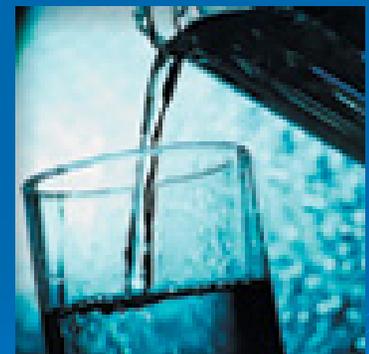
pages 8 - 9



# We Expect Many Water Resource Consequences



- Flood Management
- Water Supplies
- Water Quality
- Water Demands
- System Operations
- Ecosystems



# How Climate Change Impacts California's Water Resources



- *Reduced snowpack* impacting water supply and hydropower
- *Earlier snowmelt* increasing flood control portion of reservoir space
- *Higher water temperatures* degrading aquatic ecosystems
- *Rising sea level* threatening the Delta, bays, estuaries & coastline
  - destabilizing levees
  - increasing SW/GW salinity
- *Higher water demand* all sectors

# Update 2009 – State's Blueprint Integrated Water Management & Sustainability pages 10 - 11



# Strategic Plan Elements

double foldout 10A – 10D

➤ 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 & 100 Actions

➤ Removing impediments & leveraging opportunities

9 Recommendations

## 13 Linked Objectives & 100 Related Actions

1. Expand integrated regional water management
2. **Use and reuse water more efficiently**
3. Expand conjunctive management of multiple supplies
4. **Protect surface and groundwater quality**
5. Expand environmental stewardship
6. **Practice integrated flood management**
7. Manage a sustainable California Delta
8. **Prepare prevention, response & recovery plans**
9. Reduce energy consumption of water systems & uses
10. **Improve data & analysis for decision-making**
11. Invest in new water technology
12. **Improve Tribal water & natural resources**
13. Ensure equitable distribution of benefits

# 3 Water Scenarios

## A Range of Considerations thru 2050

pages 12 - 13

### Many Factors

What will be California's water demands in 2050? The Water Plan looks at 80 factors that can affect water use. They fit into these categories. Assumptions about how these factors may change—using future scenarios—can help us plan for future water demands.



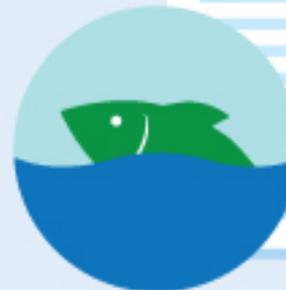
**Economic & Financial**



**Technological**



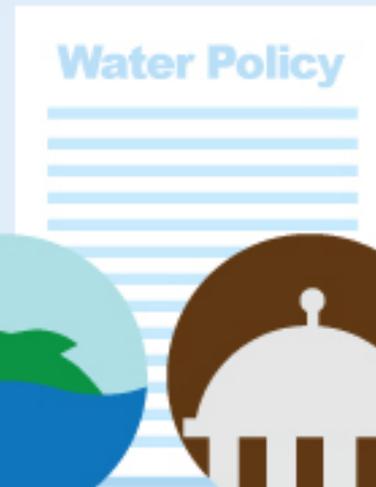
**Social Practices**



**Natural Systems**



**Institutional & Political**



- **Current Trends** – Recent trends continue into the future
- **Blueprint Growth** – Coordinated planning & development
- **Expansive Growth** – More resource intensive conditions

# 27 Resource Management Strategies

## A Range of Choices [ pages 14 – 15 ]

### 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 and 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, and Water Pricing)
- Ecosystem Restoration
- Forest Management
- Land Use Planning & Management
- Recharge Areas Protection
- Water-Dependent Recreation
- Watershed Management

# Variable Conditions & Unique Responses

## 12 Regional Reports

pages 16 - 17

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- Setting
  - Regional Water Conditions
  - Relationship with Other Regions
  - Regional Water and Flood Planning and Management
  - Looking to the Future
  - Water Portfolios 1998-2005
  - Selected References

## Recommendations [ page 19 ]

1. Implement Water Plan's actions
2. **Need finance plan with stable/continuous funding**
3. Ecosystem health & water reliability are co-equal
4. **State govt leads, assists & oversees regions**
5. State & federal govt lead & support research for climate adaptation and mitigation
6. **Improve coordination of land use policies, economic development & water/flood/resource management**
7. Renovate & improve aging water, wastewater & flood infrastructure
8. **Articulate & update roles, authorities & responsibilities**
9. Increase public water awareness

# Questions & Discussion A

