

# Overview of California Water Plan Update 2013

*Prepared for:*  
**Mountain Counties Water  
Resources Association**

February 6, 2015



# State of California Taking Action

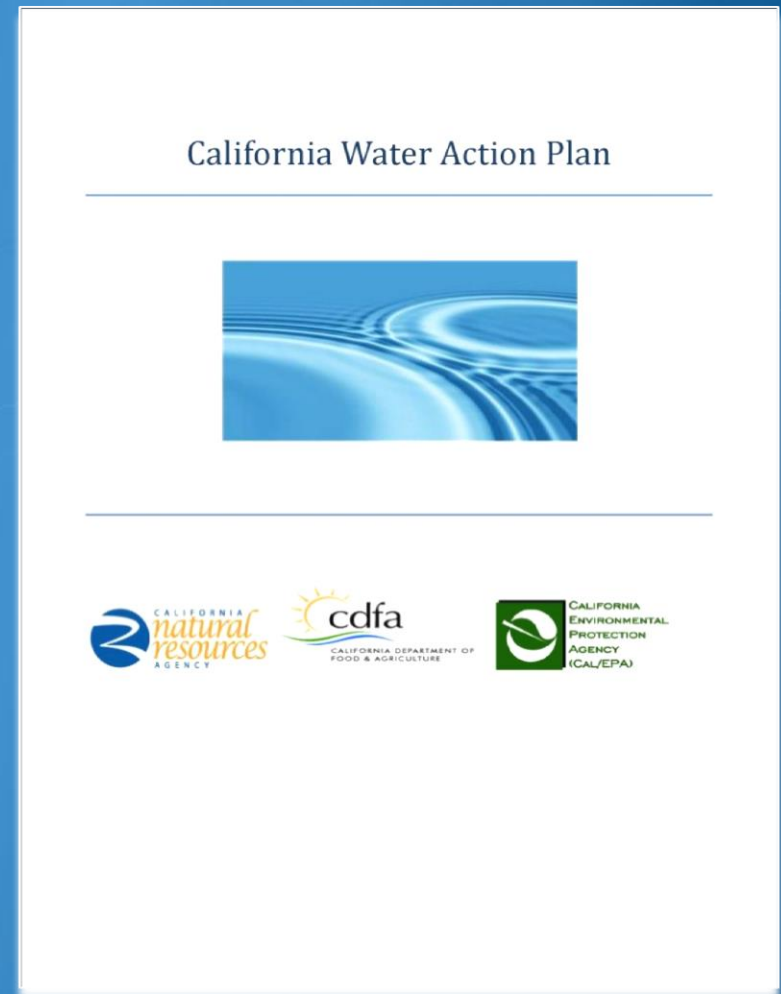
- PRD Governor's Water Action Plan & CA Water Plan Update 2013 (Oct 2013)
- State Drought Task Force Established (Dec 2013)
- Governor's Drought Proclamation & Water Action Plan (Jan 2014)
- Drought Emergency Funding (March)
- Groundwater Legislation (Sept)
- CA Water Plan 2013 (Oct 2014)



# Governor's Water Action Plan

## A 5-Year Plan to Meet 3 Broad Goals

- **Reliability** --  
more reliable water supplies  
for  
our farms & communities
- **Restoration** --  
restoring important  
wildlife habitat & species
- **Resilience** --  
more resilient, sustainably  
managed water systems  
& environment (supply,  
quality, flood protection &  
ecosystems)



# Governor's Water Action Plan

## A Diverse Water Portfolio of 10 Priority Actions

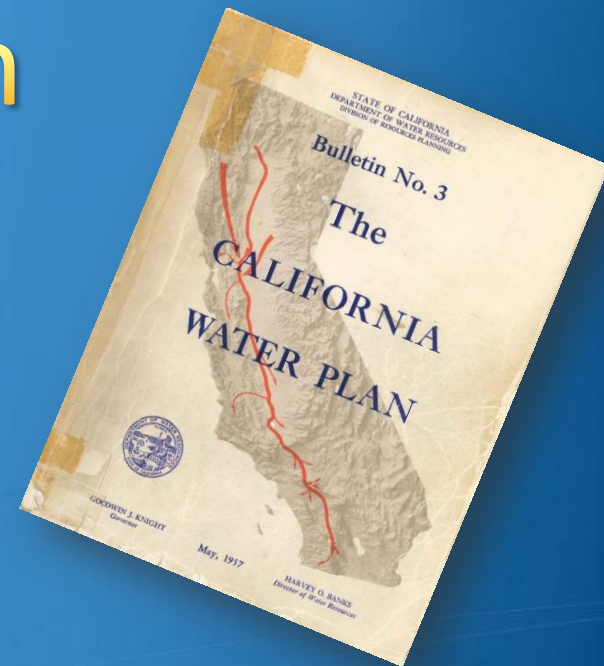
1. Make conservation a California way of life
2. Increase regional self-reliance and integrated water management across all levels of government
3. Achieve the co-equal goals for the Delta
4. Protect and restore important ecosystems
5. Manage and prepare for dry periods
6. Expand water storage capacity and improve groundwater management
7. Provide safe water for all communities
8. Increase flood protection
9. Increase operational and regulatory efficiency
10. Identify sustainable and integrated financing opportunities





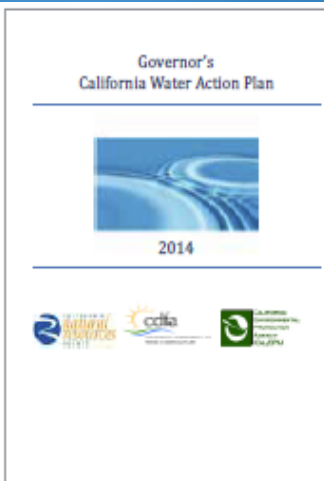
# The California Water Plan

- First published in 1957 as Bulletin 3
- Water Code requires DWR to update Water Plan every 5 years – updated 10 times (Bulletin 160)
- Strong nexus with Governor's Water Action Plan
- Tool for guiding investment priorities and legislative action
- Update 2013 lays out recommendations -- no mandates or appropriations



# Update 2013 informed & helps implement 5-year Water Action Plan

- Roadmap for Action  
17 Objectives & 350+ Actions
- 30 Resource Management Strategies
- 12 Regional Reports
- Water Portfolios & Balances
- Future Scenarios & Responses
- Reference & Technical Guides



# A Resource for Implementing the Governor's Water Action Plan

## Water Action Plan's 10 Essential Actions

Make conservation a California way of life

Invest in integrated water management and increase regional self-reliance

Achieve the coequal goals for the Delta

Protect and restore important ecosystems

Manage and prepare for dry periods

Expand water storage capacity

Provide safe drinking water and secure wastewater systems to all communities

Increase flood protection

Improve operational and regulatory efficiency

Identify sustainable and integrated financing opportunities

## How the 10 Essential Actions Are Advanced in Update 2013

### Update 2013 Objectives (Volume 1, Chapter 8)

See foldout 11A-11B for an explanation of all Update 2013 Objectives

#2 – Use and Reuse Water More Efficiently

#1 – Strengthen Integrated Regional Water Management Planning

#10 – Improve Data, Analysis, and Decision-Support Tools

#17 – Improve Integrated Water Management Finance Strategy and Investments

#7 – Manage the Delta to Achieve the Coequal Goals for California

#4 – Protect and Restore Surface Water and Groundwater Quality

#5 – Practice Environmental Stewardship

#9 – Reduce the Carbon Footprint of Water Systems and Water Uses

#14 – Public Access to Waterways, Lakes, and Beaches

#2 – Use and Reuse Water More Efficiently

#3 – Expand Conjunctive Management of Multiple Supplies

#7 – Manage the Delta to Achieve the Coequal Goals for California

#8 – Prepare Prevention, Response, and Recovery Plans

#3 – Expand Conjunctive Management of Multiple Supplies (includes groundwater and surface storage)

#4 – Protect and Restore Surface Water and Groundwater Quality

#12 – Strengthen Tribal/State relations and Natural Resources Management

#13 – Ensure Equitable Distribution of Benefits

#6 – Improve Flood Management Using an Integrated Water Management Approach

#3 – Expand Conjunctive Management of Multiple Supplies

#16 – Strengthen Alignment of Government Processes and Tools

#17 – Improve Integrated Water Management Finance Strategy and Investments

### Resource Management Strategies (Volume 3)

- Ag Water Use Efficiency
- Urban Water Use Efficiency
- Recycled Municipal Water
- Outreach and Engagement
- Economic Incentives

All 30+ RMSs can enhance regional self-reliance, depending on where they are implemented and how the benefits are allocated.

All 30+ RMSs have the potential to help meet Delta coequal goals, depending on where they are implemented and how the benefits are allocated.

- Six RMSs pertaining to water quality
- Ag Lands Stewardship
- Ecosystem Restoration
- Forest Mgmt.
- Land Use Planning and Mgmt.
- Recharge Area Protection
- Sediment Mgmt.
- Watershed Mgmt.

- (Partial list)
- Ag Water Use Efficiency
  - Urban Water Use Efficiency
  - Recycled Municipal Water
  - Conjunctive Mgmt. of Surface and Groundwater
  - CALFED/Local/Regional Surface Storage

- Conjunctive Mgmt. of Surface and Groundwater
- CALFED Surface Storage
- Local/Regional Surface Storage
- System Reoperation

Nearly all 30+ RMSs can help provide safe water and wastewater to all communities, depending on where they are implemented and how the benefits are allocated.

- Flood Management
- Land Use Planning and Management
- Sediment Management
- Watershed Management
- Urban Stormwater Runoff Management
- Forest Management

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

### Cross-Cutting Objectives (Volume 1, Chapter 8)

- #10 – Improve Data, Analysis, and Decision-Support Tools
- #11 – Invest in Water Technology and Science
- #12 – Strengthen Tribal/State Relations and Natural Resources Management
- #13 – Ensure Equitable Distribution of Benefits

- #15 – Strengthen Alignment of Land Use Planning and Integrated Water Management
- #16 – Strengthen Alignment of Government Processes and Tools
- #17 – Improve Integrated Water Management Finance Strategy and Investments

# Water Plan Highlights

- Core Messages
- **Why We Should Care**
- What We Should Do
- **How We Should Invest in IWM**
- What We Must Know
- **What Happens If We Delay**
- The Path Forward





# Core Messages

## ► **Water is the Essence of Life for California.**

Every living thing in the state, as well as our economy, depends on reliable, clean water to thrive. There are greater demands for water in our state than ever before.

## ► **California's Complex Water System is in Crisis.**

Our interconnected system of water resources — natural and human made — is severely threatened on many fronts, with significant risks to our health, safety, economic well-being, and quality of life.

## ► **A Diverse Portfolio Approach is Required.**

The complexity of our water resources systems and the associated risks demand a diverse set of actions and investment strategies. There is no silver bullet.

## ► **Solutions Require Integration, Alignment, and Investment.**

Commitment to the IWM approach, alignment toward a common vision, and stable financing are essential to ensuring future resiliency — the ability to adapt to change.

## ► **We All Have a Role to Play in Securing Our Future.**

Decision-makers, resource agencies, water resource managers, interest groups, and water users at the State, federal, tribal, and local levels need to actively engage in the solutions.

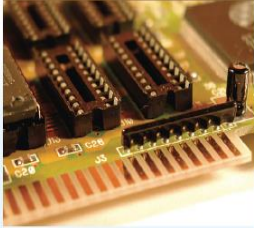
# Why We Should Care

# Water is the Essence of Life

Production of food and fiber



Jobs



Drinking water



Hydropower



Recreation



Transportation



Riparian habitat



PUBLIC SAFETY

ENVIRONMENTAL STEWARDSHIP

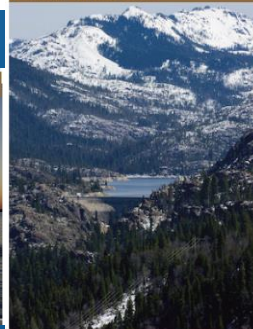
ECONOMIC STABILITY

- *Reduce flood risk Statewide.*
- *Provide safe drinking water.*
- *Improve water quality for fisheries and recreation.*
- *Clean, safe water supplies.*

- *Enhance Bay -Delta ecosystem.*
- *Restore terrestrial and aquatic habitats.*
- *Improve watershed management.*
- *Raise awareness and increase stewardship.*

- *Enhance State economic output.*
- *Contribute to job creation and security.*
- *Promote food production security.*
- *Provide stable funding for infrastructure.*

Healthy watersheds



Landscaping and beautification



Aquatic habitat



Aesthetics and spiritual well being



# A System in Crisis

## Reduced Prosperity for Future Generations

- Greater Drought Impacts - Unreliable Water Supplies
- Increasing Flood Risk
- Groundwater Depletion and Subsidence
- Degraded Water Quality
- Declining Environmental Conditions
- Aging Infrastructure

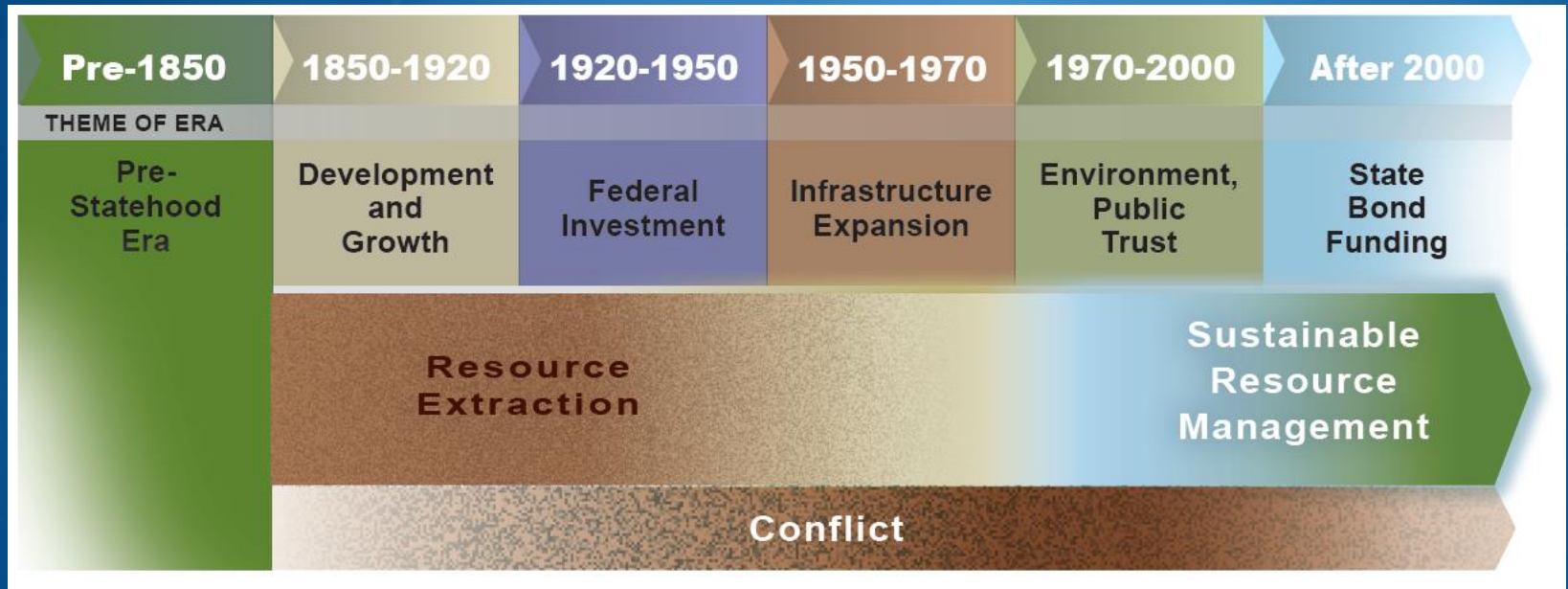


*Low water level at Folsom Lake (January 2014)*



# How We Got Here

## Past Choices Shaped Today's Water Challenges





# What We Should Do

# Roadmap for Implementing Integrated Water Management

## ► VISION & MISSION

Update 2013 provides a vision for more sustainable and reliable water resources and management systems. Mission statement describes collaborative efforts to prepare for California's most pressing statewide and regional water management issues and challenges.

## ► 10 GUIDING PRINCIPLES

Ten guiding principles express the core values and philosophies for making decisions about how the vision, mission, and goals will be achieved.

## ► 30+ RESOURCE MANAGEMENT STRATEGIES

More than 30 resource management strategies are described as tools for diversifying water portfolios and implementing integrated water management.

## ► 7 GOALS

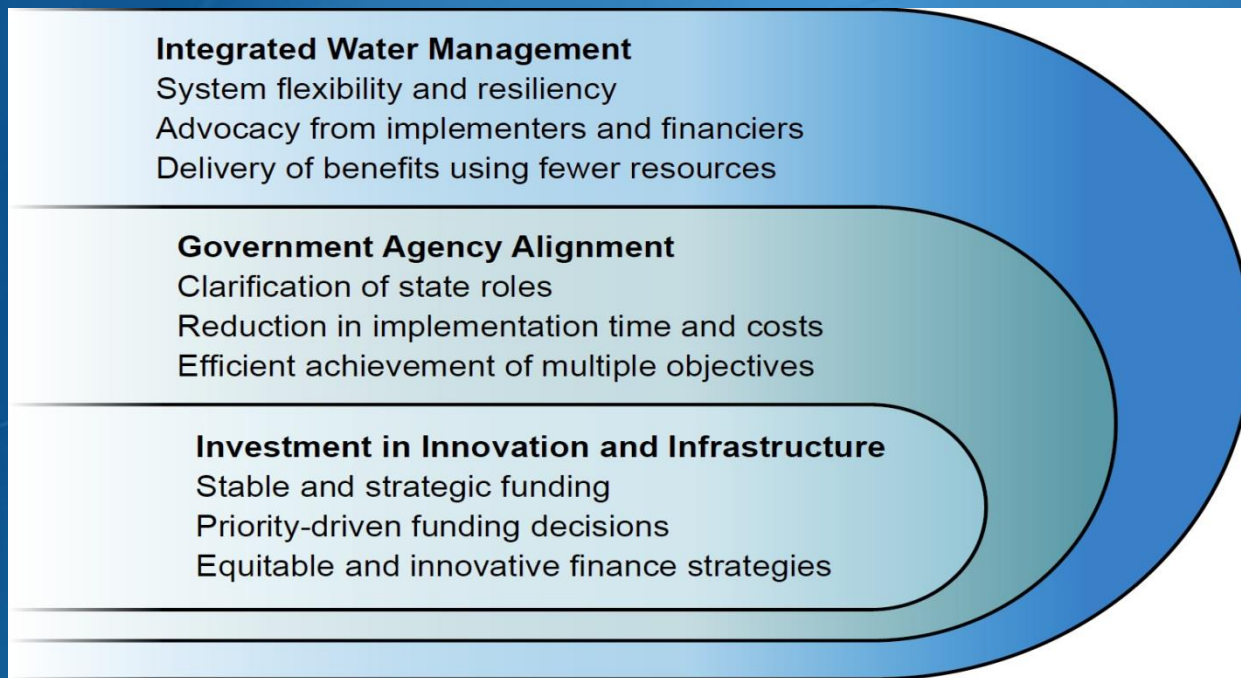
Seven goals set forth the desired outcomes of Update 2013.

## ► 17 OBJECTIVES 350+ RELATED ACTIONS

Seventeen objectives and their 350-plus related actions are geared toward fulfilling the vision, mission, goals, and principles.

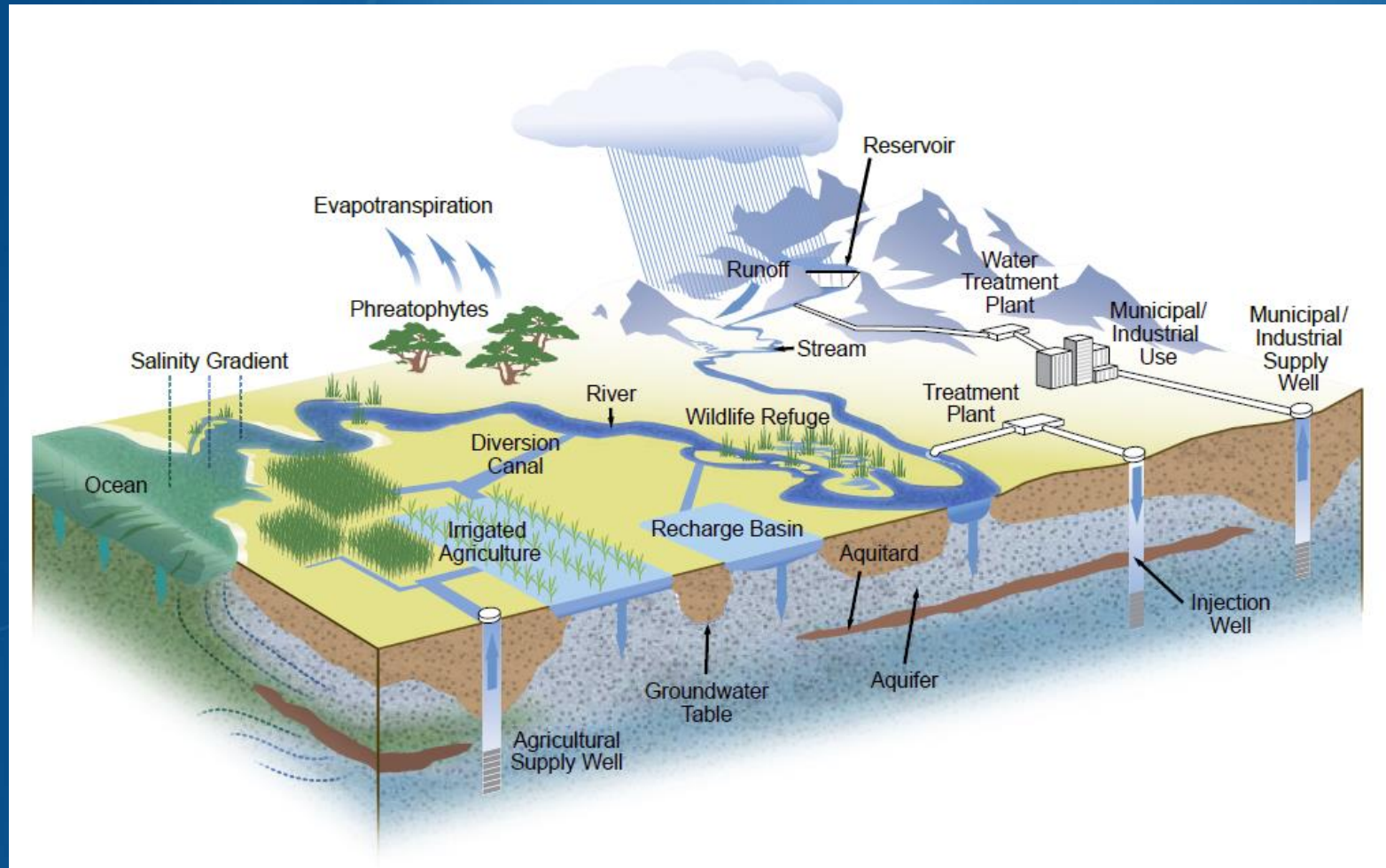
# Three Themes of Update 2013

- Commit to Integrated Water Management
- Strengthen Government Agency Alignment
- Invest in Innovation and Infrastructure



# A Call to Integrate

## Interconnected Systems Require Integrated Solutions





# A Call to Align Agency Alignment Is Critical

Expediting and reducing the cost of implementation through:

- Principles for improving alignment
- Actions for Aligning Government Agencies

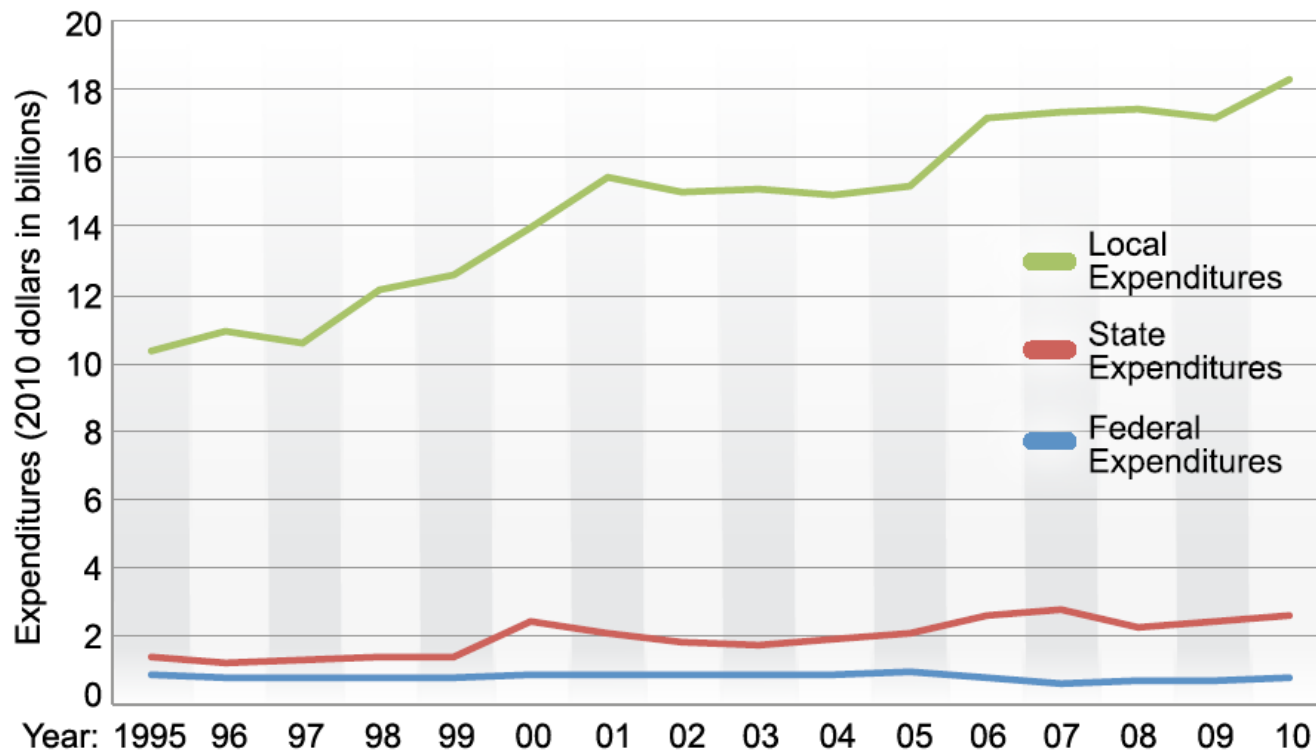




# A Call to Invest

## Resiliency Requires Sustained Investment

### Investments Over Previous Decade: A Good Down Payment



*Despite significant local investments and State bonds, management of California's water resources remains underfunded.*

# How We Should Invest

## Recommended Financing Strategies

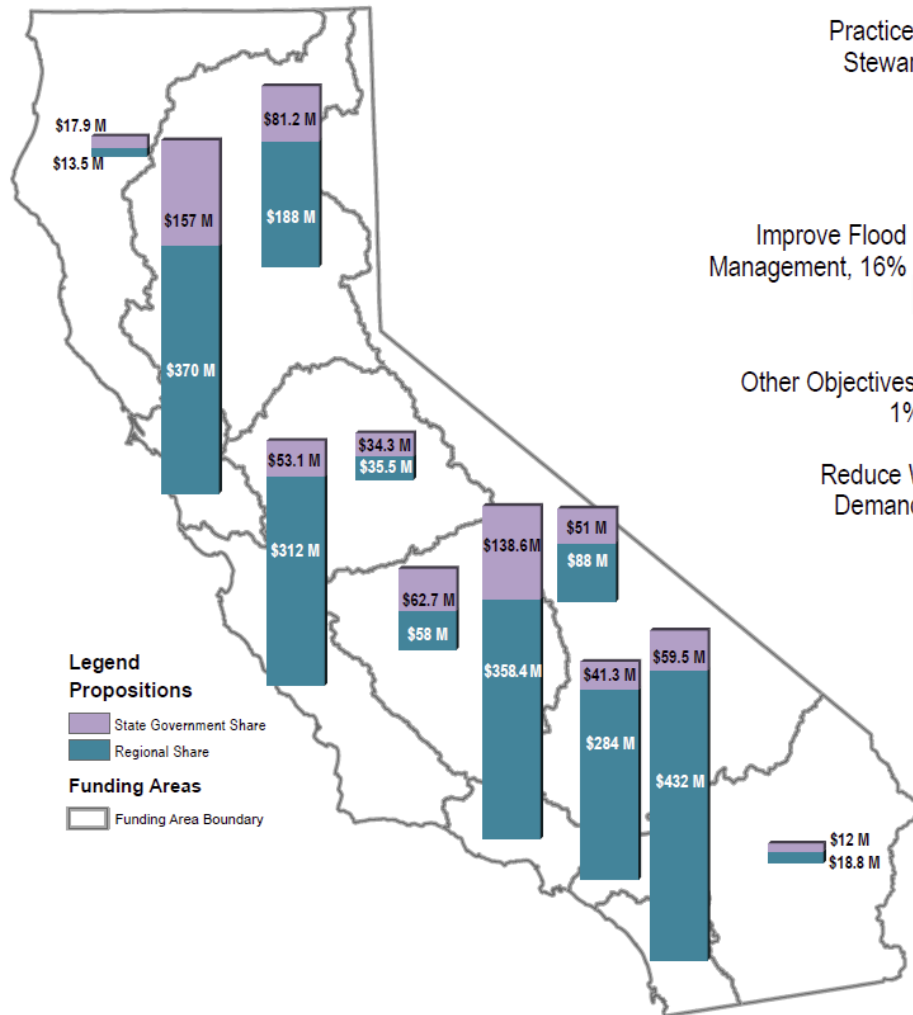
- Shared Values For Guiding State Investment
- Attributes of Future Finance Strategies
- Actions for Developing State Finance Strategies
- Menu of Funding and Finance Alternatives



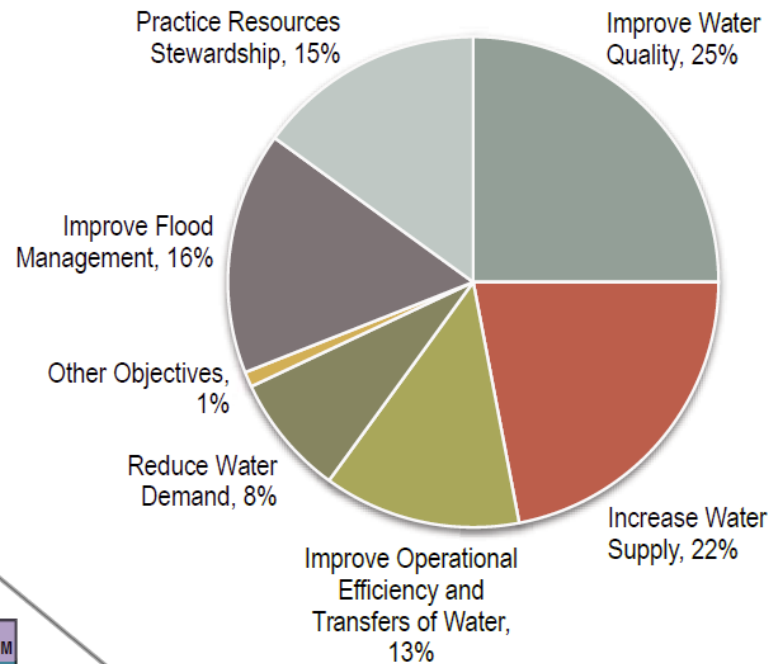
# A Decade of Regional Investment

## Regional Diversity Requires Regional Solutions

*Investing in California's Regions*

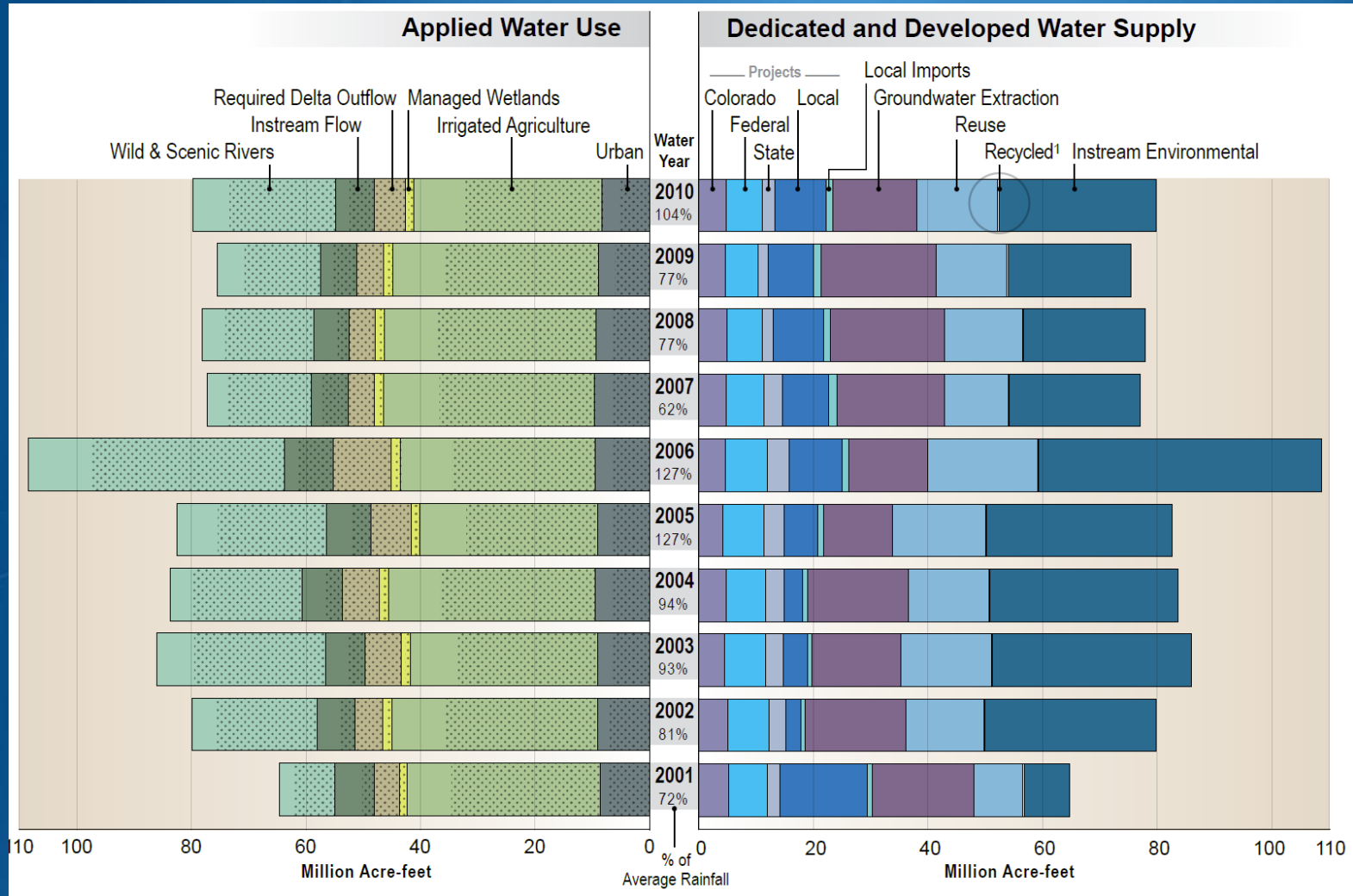


*Achieving Multi-Benefits*



# What We Must Know

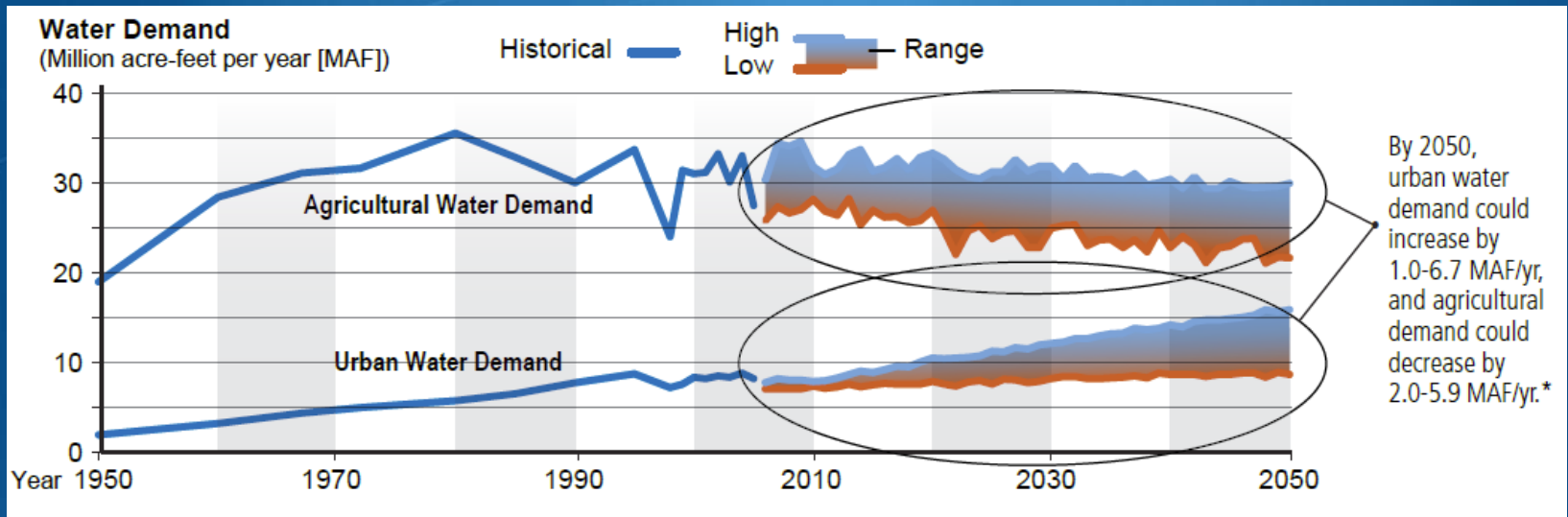
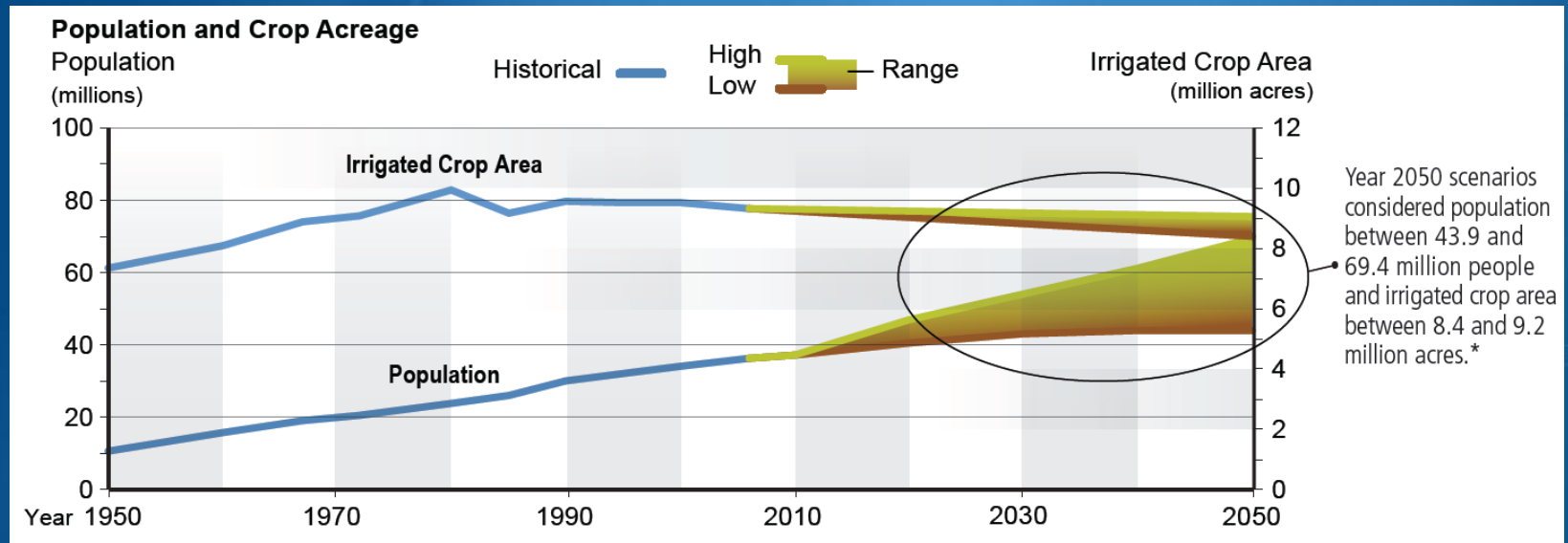
# Understanding How We Use and Supply Water





# Water Scenarios 2050

## Extreme Uncertainty in Future Demands



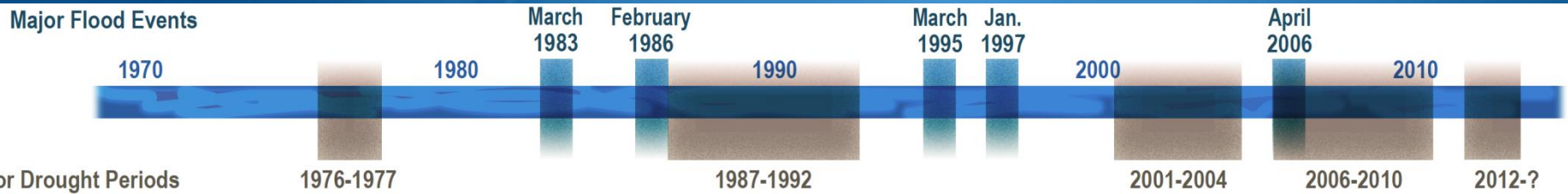
# Value of Public Investment

## Using Data and Tools to Evaluate Performance

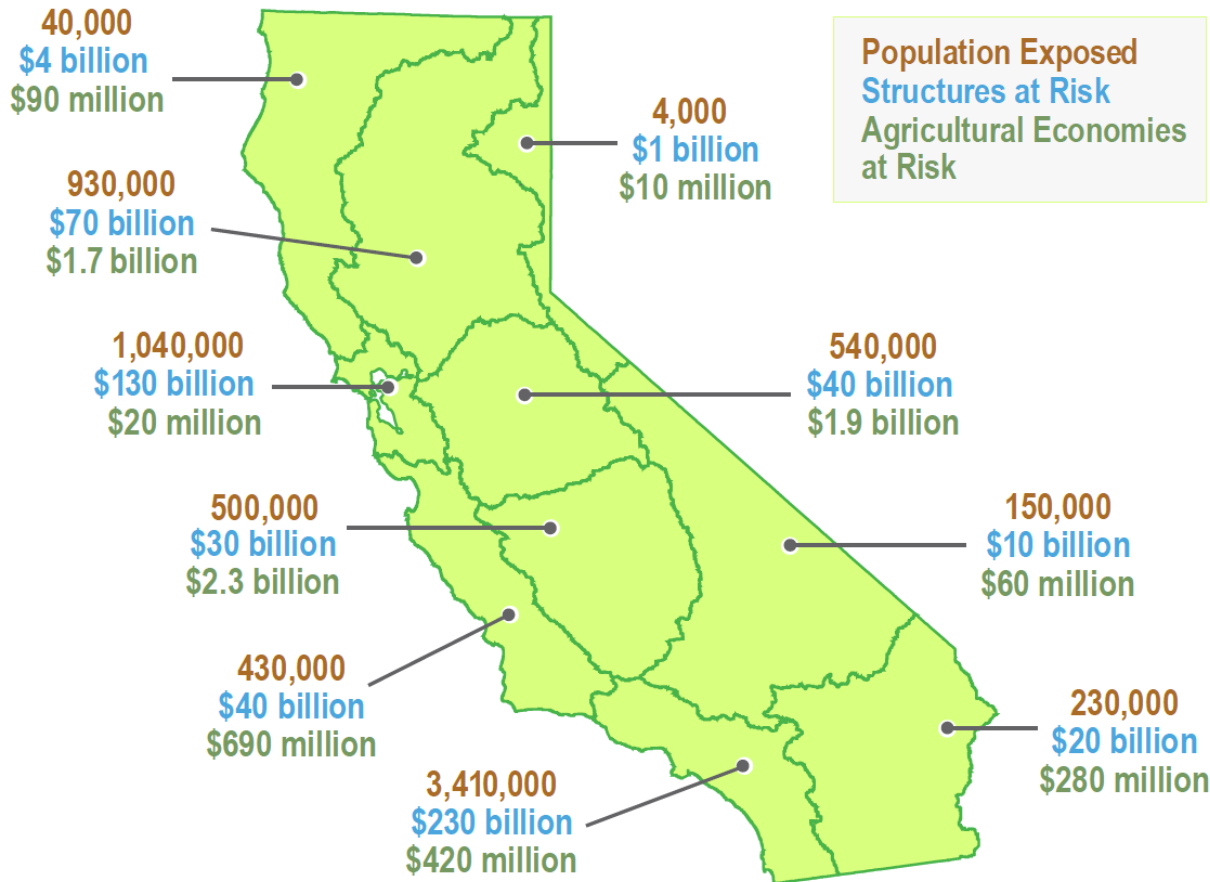
### *Increasing Resilience in the San Joaquin Region<sup>1</sup>*

Response Package	Urban Supply Reliability	Agricultural Supply Reliability	Change in Ground-water Conditions	Meeting New Ecosystem Flows	Average Annual Cost above Current Plan
Currently Planned	High	Medium	High-Medium	Low	\$0
+ Conservation + Recycling + Groundwater Banking + Groundwater Recovery Targets + New Ecosystem Flow Targets	High	High	High	High	\$400 Mil.

# Delay At Our Own Peril



## 7 Million People and \$600 Billion in Assets in Floodplains



*Droughts and floods are inevitable in California, but drought and flood impacts don't have to be.*

# Conclusion - The Path Forward

- (1) Recommended Actions
- (2) Resource Management Strategies

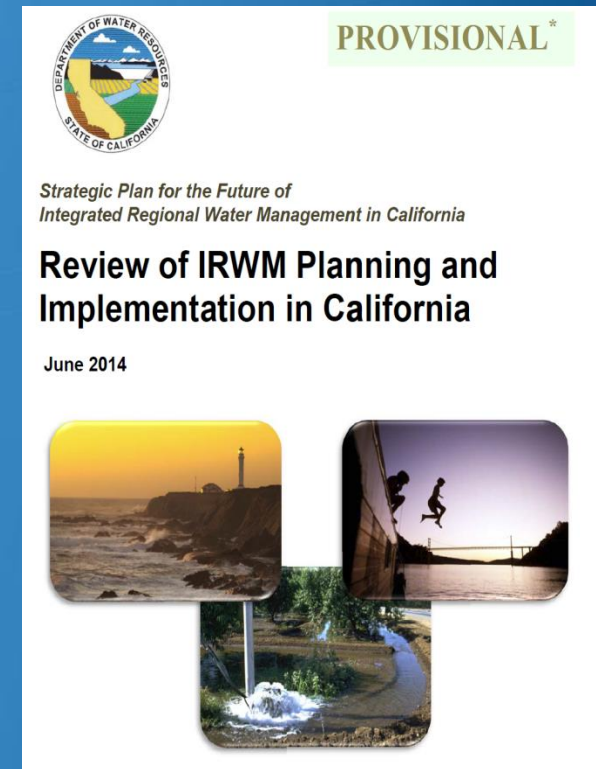
# Update 2013 Objectives & Actions

- Objective 1 – Strengthen IRWM
- Objective 2 – Use and Reuse Water More Efficiently
- Objective 3 – Expand Conjunctive Management of Multiple Supplies
- Objective 4 – Protect and Restore Surface Water and Groundwater Quality
- Objective 5 – Practice Environmental Stewardship
- Objective 6 – Improve Flood Management Using an IWM Approach
- Objective 7 – Manage the Delta to Achieve the Coequal Goals for California
- Objective 8 – Prepare Prevention, Response, and Recovery Plans
- Objective 9 – Reduce the Carbon Footprint of Water Systems and Water Uses
- Objective 10 – Improve Data, Analysis, and Decision-Support Tools
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- Objective 13 – Ensure Equitable Distribution of Benefits
- Objective 14 – Protect & Enhance Public Access to State's Waterways, Lakes, and Beaches
- Objective 15 - Strengthen Alignment of Land Use Planning and IWM
- Objective 16 - Strengthen Alignment of Government Processes and Tools
- Objective 17 - Improve IWM Finance Strategy and Investments



# Objective 1 – Strengthen integrated regional water management to enhance partnerships and improve regional self-reliance.

- 8 Related Actions to:
  - Develop Strategic Plan for IRWM
  - Encourage & support RWM groups
  - Improve IRWM processes to encourage broad participation



# Objective 16 – Strengthen Alignment of Government Processes and Tools

## ● 5 Related Actions to:

- Advance IWM through government alignment
- Use collaborative & outcome-based approach to set consistent/aligned water policies & regs
- Convene regulatory working groups to improve/streamline permitting of IWM projects.



State agencies are working to align policies, planning, regulations, funding, and implementation of Update 2013 objectives and related actions. At the regional level, local governments and private entities are collaborating in the same way. At both levels of government, the common goal is to expedite and reduce the cost of projects that deliver multiple, diverse benefits.

# 30 Tools for Diversifying Regional Water Portfolios

## 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 & Sea Water)
- Precipitation Enhancement
- Municipal Recycled Water
- Surface Storage – CALFED
- Surface Storage – Regional / Local

## Improve Flood Management

- Flood Management

## Improve Water Quality

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

## Practice Resource Stewardship

- Agricultural Land Stewardship
- Ecosystem Restoration
- Forest Management
- Land Use Planning & Management
- Recharge Area Protection
- Sediment Management \*\*
- Watershed Management

## People & Water

- Economic Incentives  
(Loans, Grants & Water Pricing)
- Outreach & Engagement \*\*
- Water & Culture \*\*
- Water-Dependent Recreation

\*\* New for Update 2013

# California Water Plan Update 2013

## Forest Management RMS

- Includes meadow restoration, vegetation management, fire/fuels, road improvement & removal, riparian forests, and urban forests
- 26 Recommendations addressing:
  - Monitoring & research, coordination, regulatory requirements and addressing commercial-scale marijuana cultivation





# California Water Plan Update 2013

## Watershed Management RMS

- Includes managing at the watershed level, altered hydrologic cycles, altered nutrient cycles, fire & water, and climate change
- 26 Recommendations addressing:
  - Track & report watershed changes, support adaptive management, align agency goals, and use watershed approach



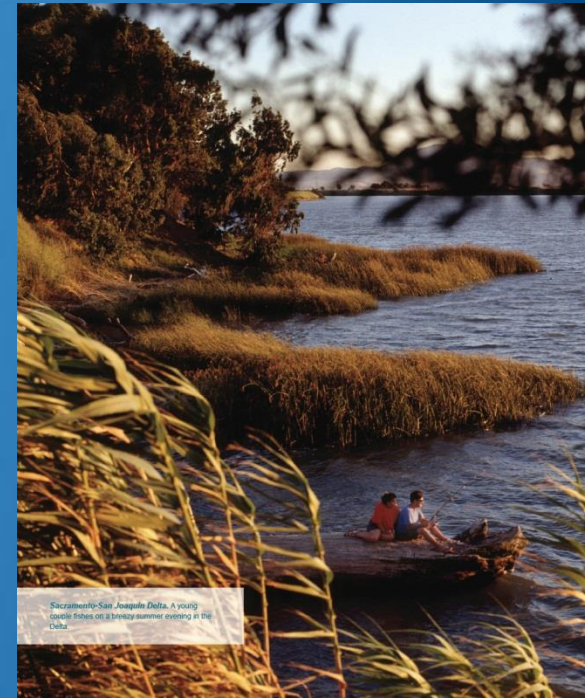
Plumas National Forest: Various meadow restoration projects, particularly those related to the Mountain Fire of 2007, have delivered excellent results in the area surrounding Antelope Lake, a small, remote lake popular with hikers and anglers in the northeastern portion of the Mt. Shasta Ranger District.



# California Water Plan Update 2013

## Water-Dependent Recreation RMS

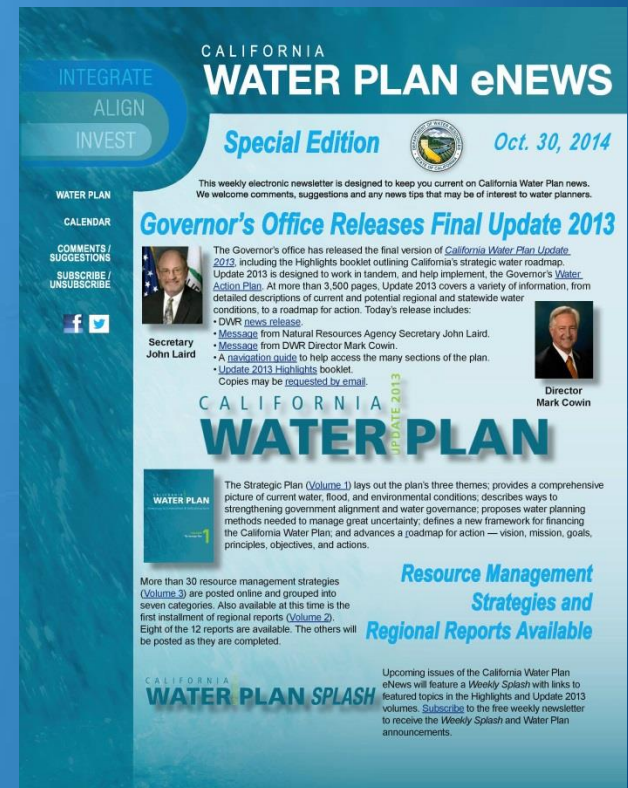
- Includes recreation opportunities, importance of recreation facilities, water managers' role in recreation planning, and health, social, & economic benefits
- 77 Recommendations addressing:
  - Lack of funding, natural resources degradation, invasive species impacts, WQ impacts & changes, and agency coordination



Sacramento-San Joaquin Delta. A young couple fishes on a hot summer evening in the Delta.

# Ways to Access Water Plan Information

- Visit the *Water Plan Web Portal*  
[www.waterplan.water.ca.gov](http://www.waterplan.water.ca.gov)



- Subscribe to *Water Plan eNews*  
a weekly electronic newsletter  
[www.waterplan.water.ca.gov/enews](http://www.waterplan.water.ca.gov/enews)