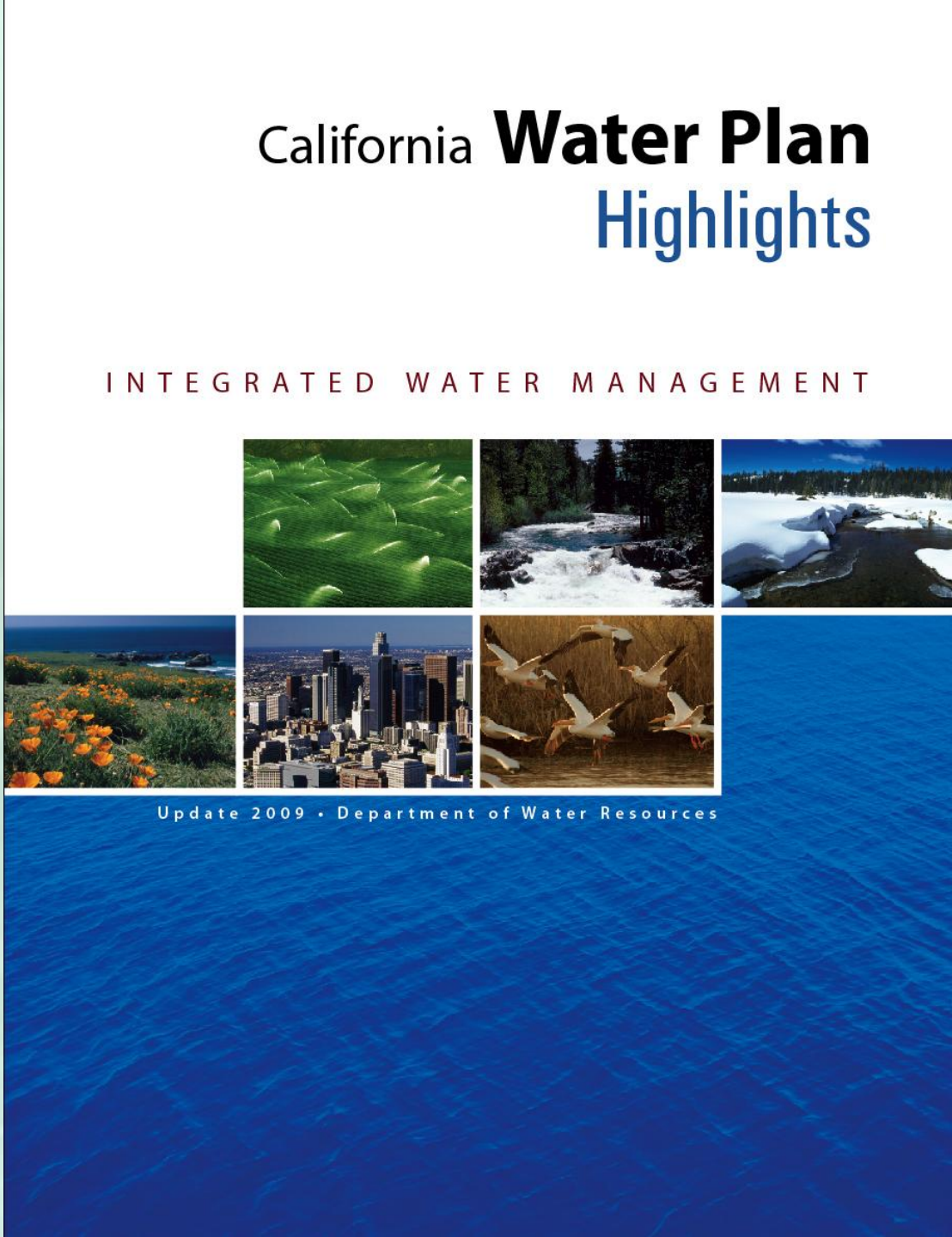
California Water Plan Update 2009

Sustainable Water Resources Roundtable

At the Freshwater Society

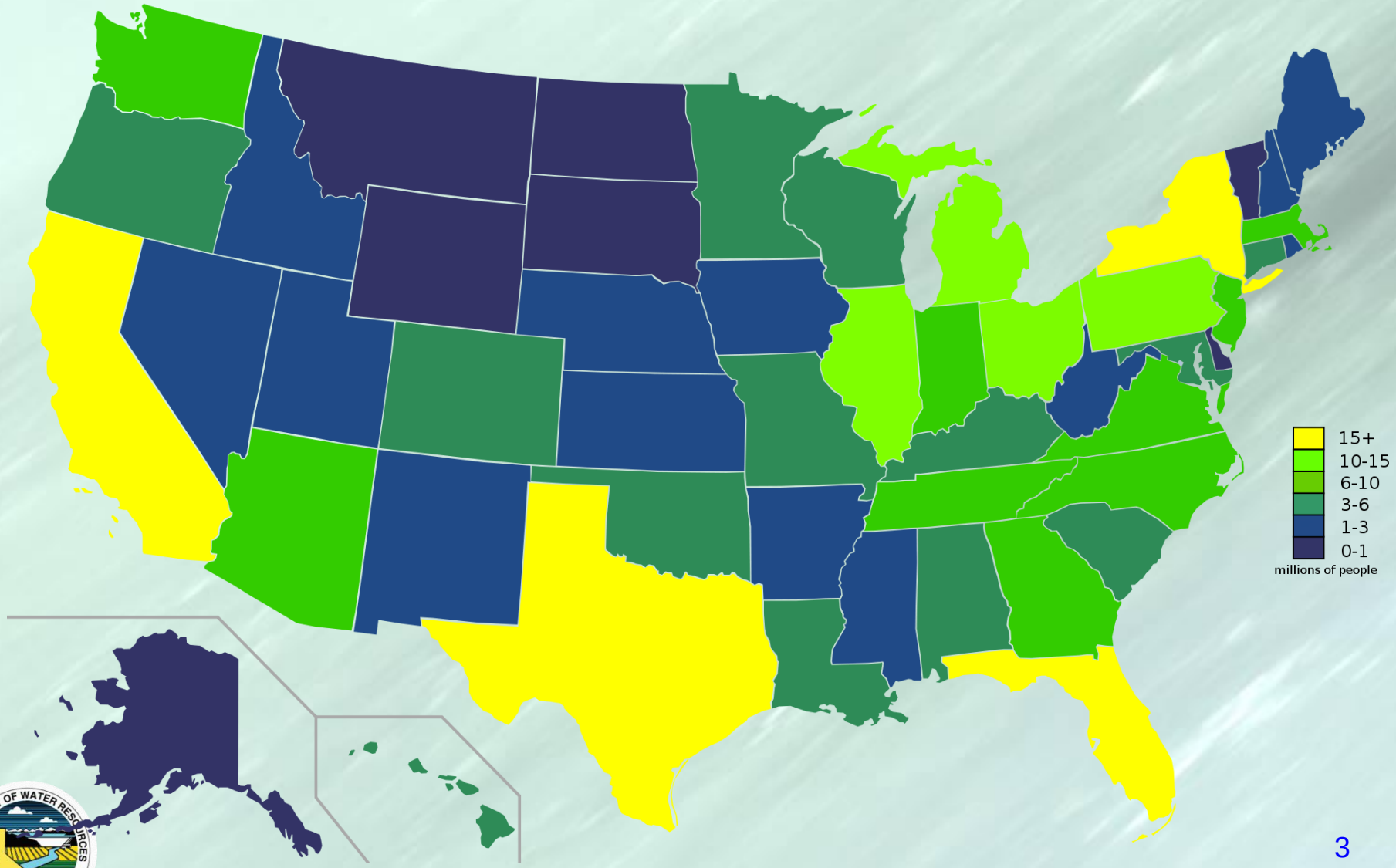
October 21-22, 2010



Presentation Overview

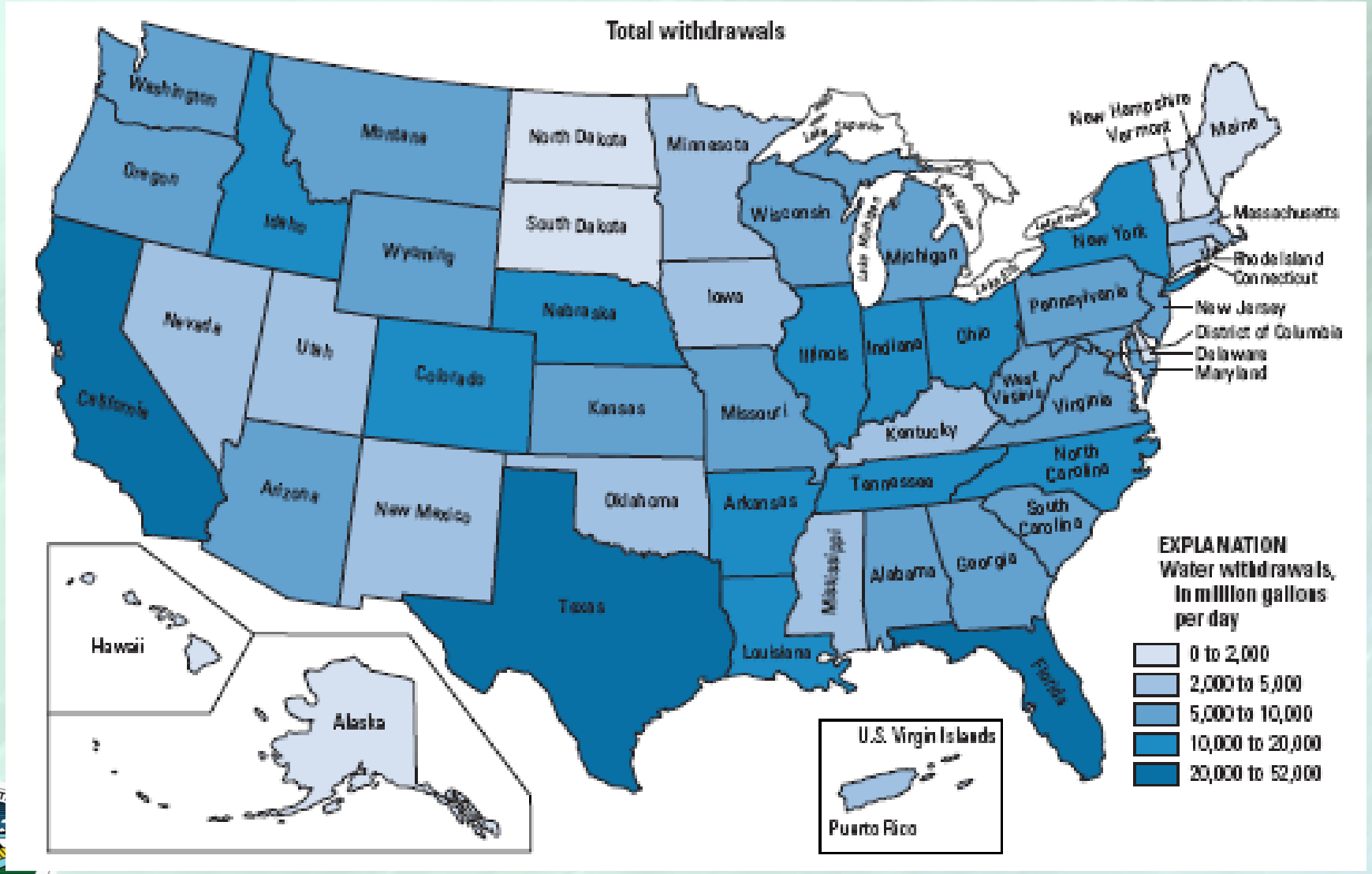
- California relative to the rest of the United States
- CA Water Plan Update 2009 Highlights
- Sustainability Initiatives at CADWR

Population



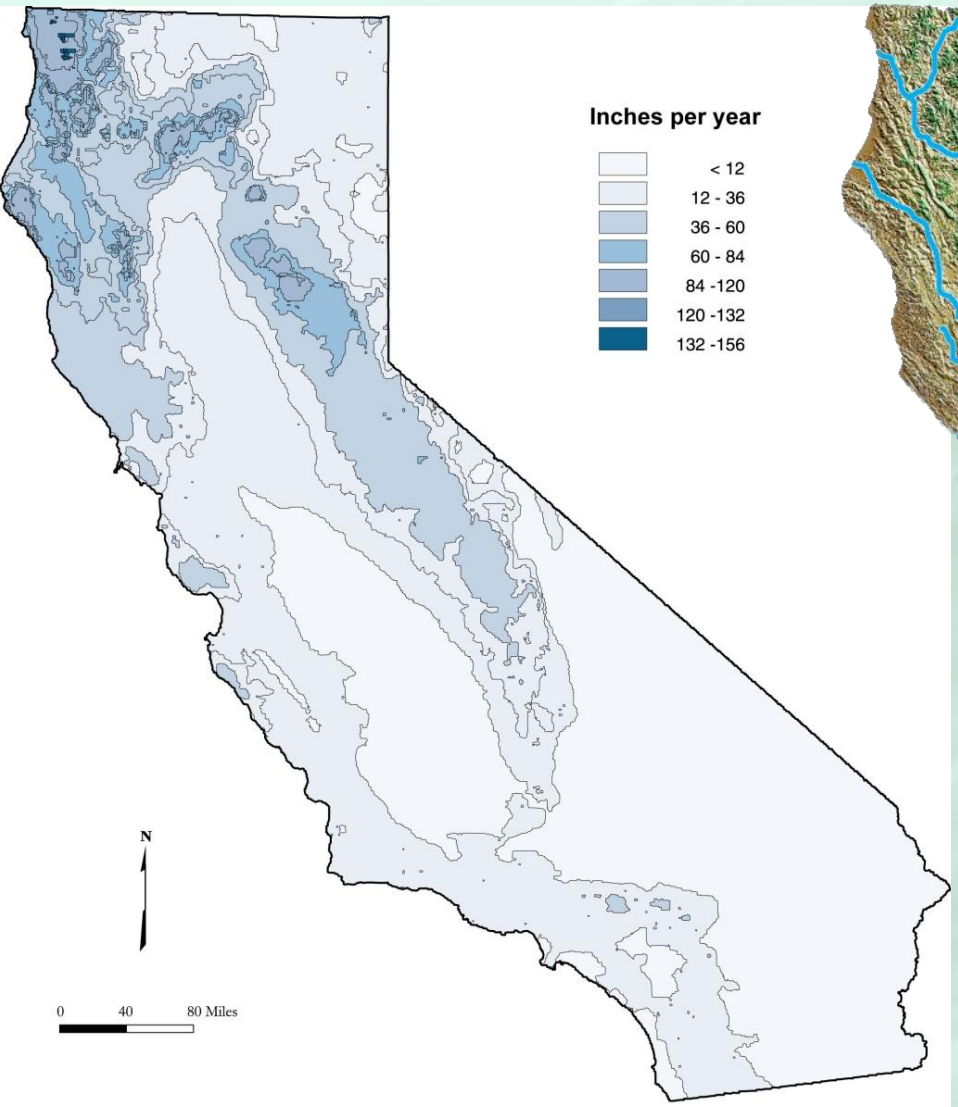
http://en.wikipedia.org/wiki/File:USA_states_population_map_2007_color.svg

Water Withdrawals



From USGS 2000

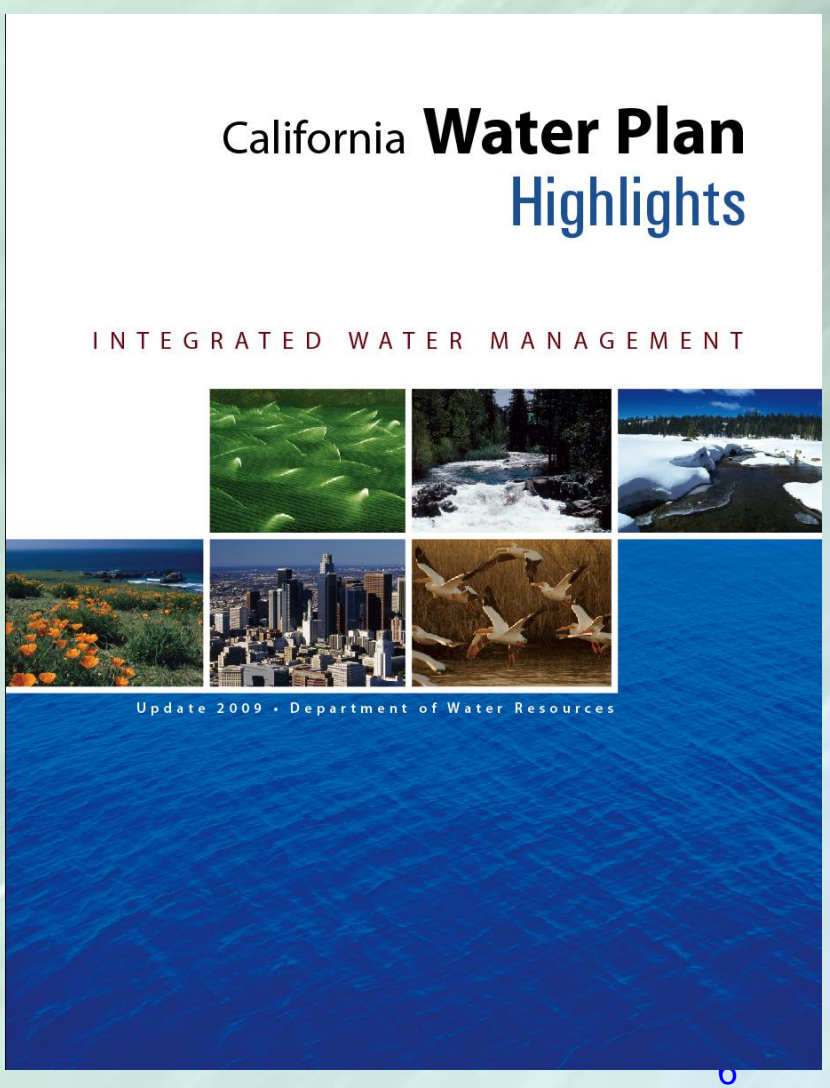
California Water



Mean annual precipitation in California, 1951 to 1990

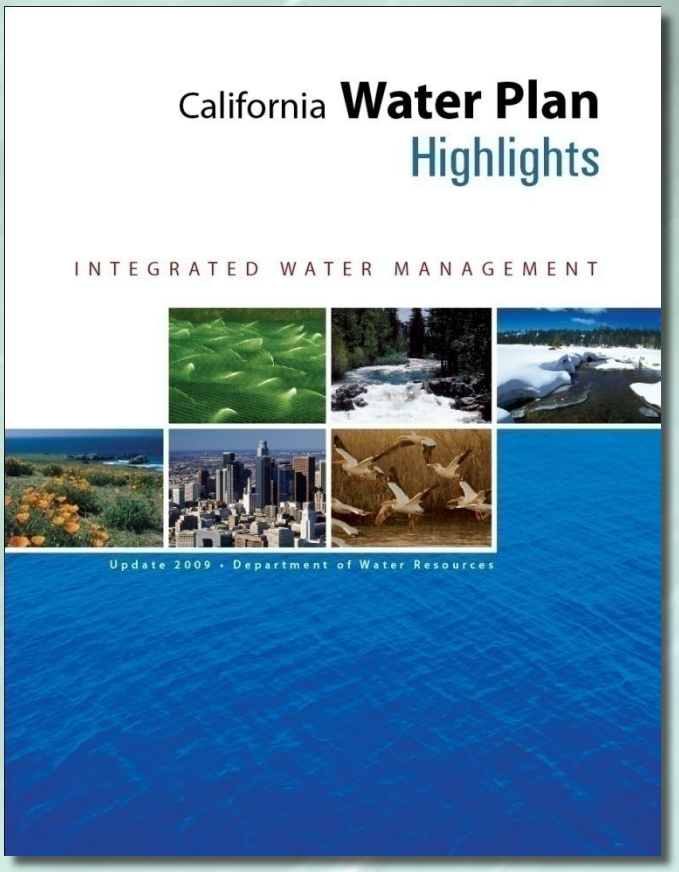
The California Water Plan

- First published in 1957
- Updated 9 times
  - Update 2009 released March 2010
- Water Code requires CADWR to update Water Plan every 5 years
  - Working on Update 2013
- Growing interest by Legislature & stakeholders



The California Water Plan DOES NOT…….

- Analyze or recommend specific projects
- Direct regional resource management activities
- Permit or authorize any actions
- Create mandates or regulations
- Appropriate money



California Water Plan Update 2009

State's Blueprint for Integrated Water Management & Sustainability

Imperative to Act and Keep Pace with Change

- Population growth & shift to permanent crops
- Increasing flood risk
- 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

Managing an Uncertain Future

Chapter 5, Volume 1

- Recognizing and Reducing Uncertainty
- Assessing Risk
- Managing for Sustainability
  - What is Sustainability?
  - Sustainability Indicators (SWRR)
  - Examples of Managing for Sustainability
    - Water Wiki (SWRR)

3 Future Scenarios: Key Factors of Uncertainty

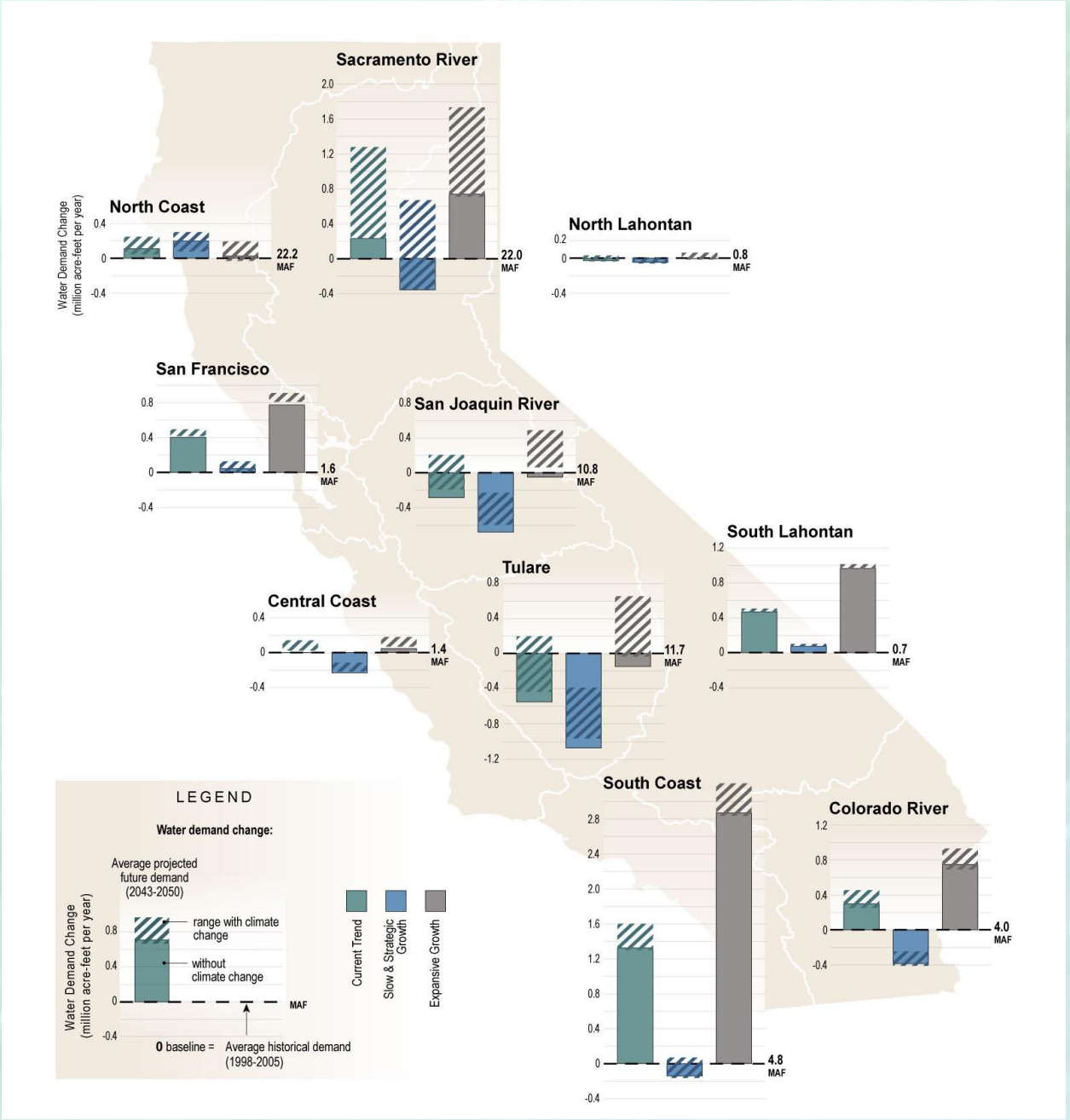
2050 Planning Horizon

	Current Trends	Slow & Strategic Growth	Expansive Growth
	Recent trends are assumed to continue into the future. Regulations are not coordinated or comprehensive, creating uncertainty for planners and managers. The state continues to face lawsuits, from flood damages to water quality and endangered species protections.	Private, public, and governmental institutions form alliances to provide for efficient planning and development that is less resources intensive than current conditions. State government implements comprehensive and coordinated regulatory programs to improve water quality, protect fish and wildlife, and protect communities from flooding.	Future conditions are more resource intensive than existing conditions. Protection of water quality and endangered species is driven mostly by lawsuits. State government has responded on a case-by-case basis, creating a patchwork of regulations and uncertainty for planners and water managers.
Factors of Uncertainty			
Population	**59.5** million* (22.8 million increase)	**44.2** million (7.5 million increase)	**69.8** million (33.1 million increase)
Land Use	Continued development	Compact development	Sprawling development
Irrigated Crop Area	**8.6** million acres (0.7 mil. acre decrease)	**9.0** million acres (0.2 mil. acre decrease)	**8.2** million acres (1.0 mil. acre decrease)
Environmental Water	**1.0** additional MAF	**1.5** additional MAF	**0.6** additional MAF
Background Water Conservation	**10%** more efficient	**15%** more efficient	**5%** more efficient

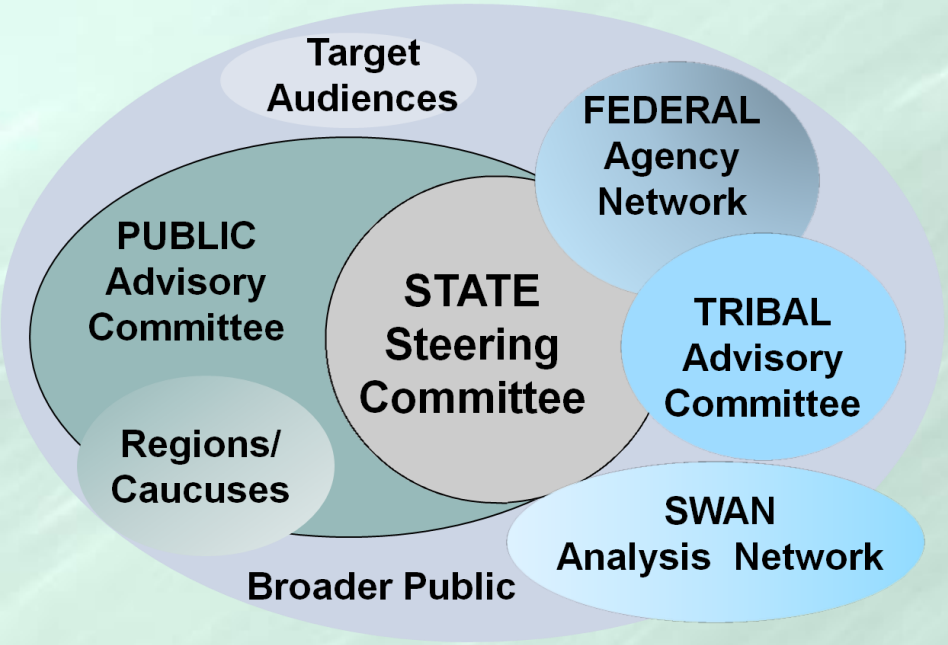
Regional Water Demand Change for 2050

3 Scenarios

Wide-ranging climate variability



Preparing for Update 2013



- 18 Content Enhancements
  - Integrated Water Management
  - Regional Planning
  - Collaboration
  - Data, Metrics & Analysis
  - Adaptive Management
- Process Improvements
  - Expand Steering Committee
  - Mod Public Advisory Committee
  - Add Tribal Advisory Committee
  - Add Federal Agency Network
  - Add Regional Forums
  - More Topic Caucuses
  - Cont SWAN Analysis Network

Sustainability Initiatives at CA DWR

Directed at internal operations

Sustainability Directive – 9/20/2010

- Sustainability targets established by Director for CADWR activities/facilities
  - Water use - reduce per employee use 20% by 2020
  - Waste water recycling at facilities
    - where cost effective and technically feasible
  - Energy use
    - Acquisition of 360 GWh of renewables by 2020
    - Reduce grid based retail energy use 20% by 2015
  - Carbon
    - 50% reduction below 1990 levels by 2020
    - 80% reduction below 1990 levels by 2050
  - Waste – Divert 50% from waste stream by 2020

Environmental Stewardship Directive 9/21/2010

- Responsibility to manage and protect natural resources and ecosystems in a sustainable manner
- Integrate into flood and water planning
- Include as criteria in project funding decisions
- Plan for conservation, restoration, and maintenance of biodiversity and natural processes
- Support projects that contribute to recovery of listed and at risk species

Contact Information

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- Water Plan Update 2009

http://www.waterplan.water.ca.gov

- SWAN

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