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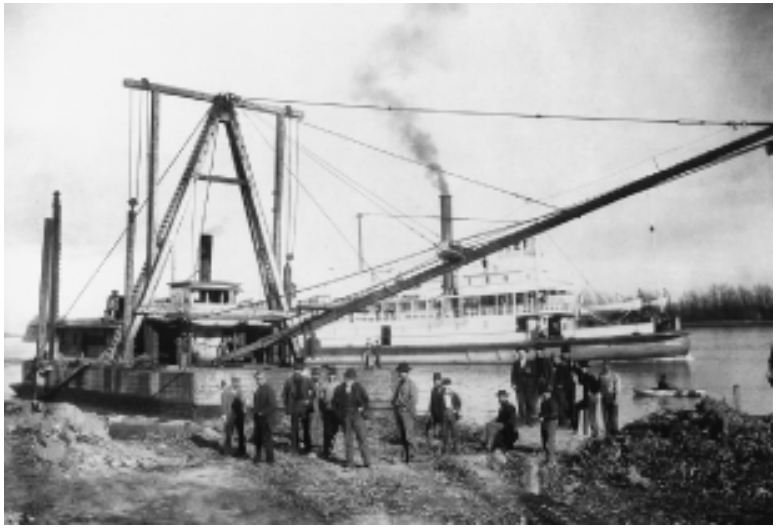
WATER FOR THE 21st CENTURY ECONOMY AND ENVIRONMENT

California Integrated Water Management Summit

April 3, 2013

Historical Context

- Swamp and Overflow Act
- Central Valley Flood System
- Water System Development



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Historical Context

Adaptability?

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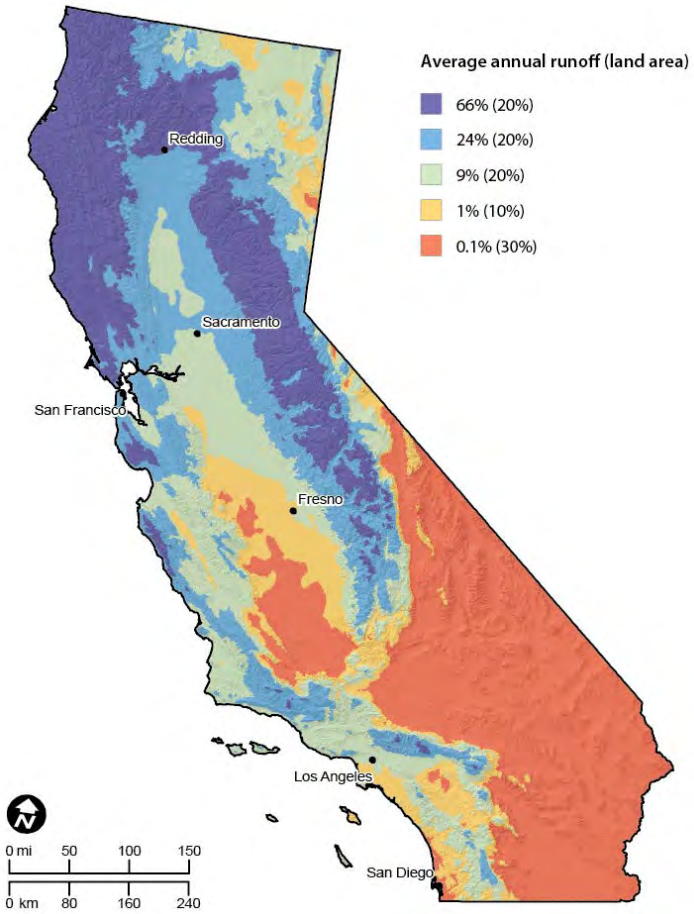
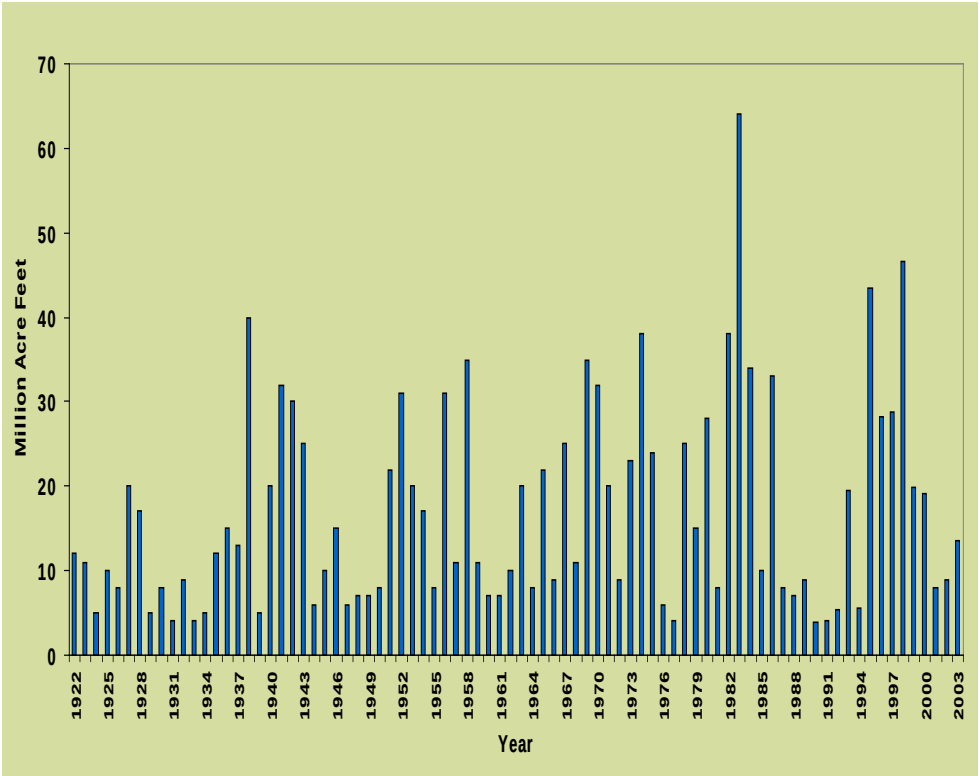
Water Variability and Use



Yearly Total Delta Outflow
(Calendar Year)



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California Water Systems

- Fueled California economy
- All had unintended consequences
- All are less reliable today

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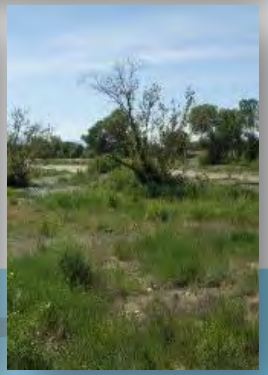
Water System in Crisis

- Increasing population
- Aging infrastructure
- Groundwater overdraft
- Degraded ecosystems
- Increasing conflict
- Uncertainty due to climate change



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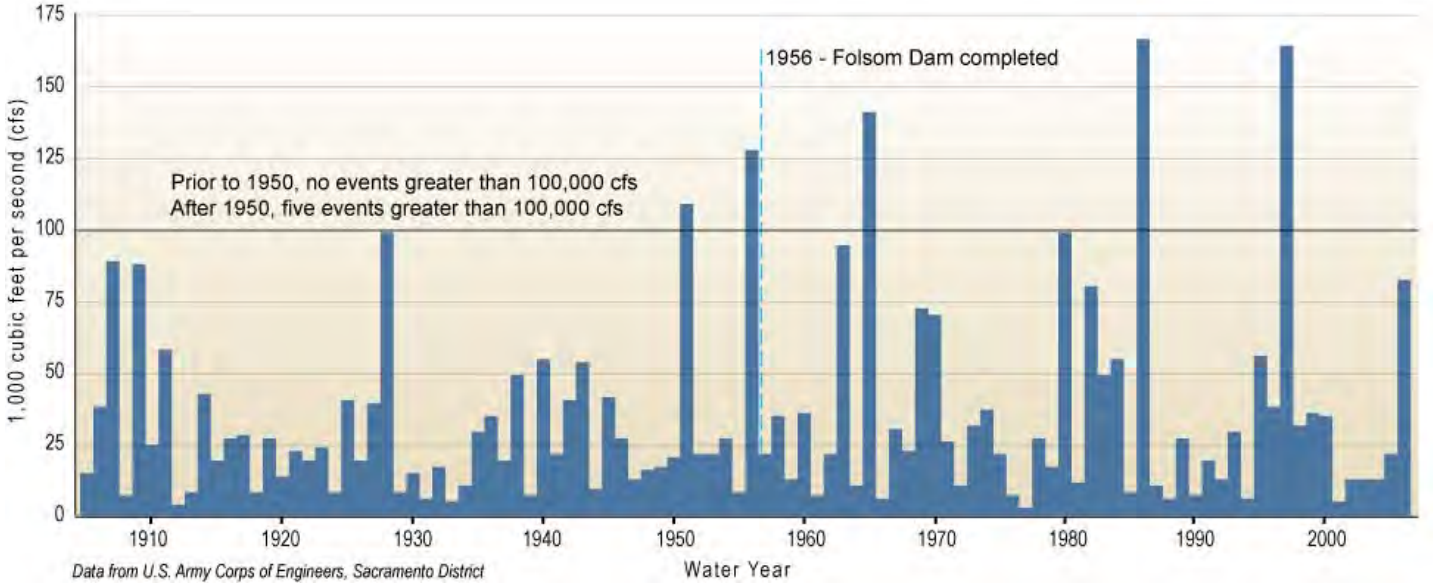
American River Runoff Annual Maximum 3-Day Flow

The five highest floods on record of the American River have occurred since 1950.



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Australian ‘Big Dry’ in CA?

$500 Billion	Total negative economic impact
1.6 Percent	Reduction in GDP growth
114,000	Jobs lost
30 Percent	Reduced agricultural output

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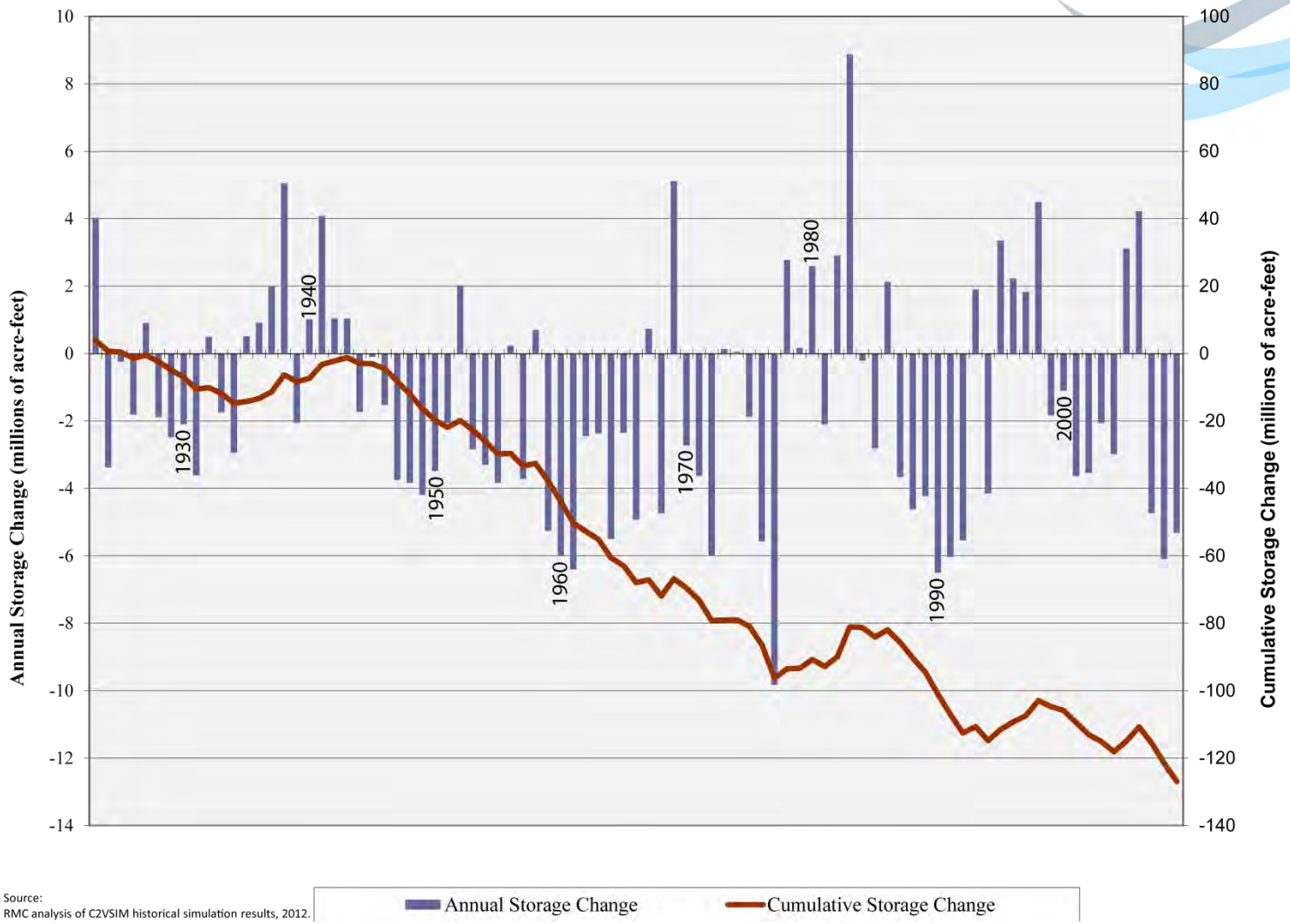
Change in Groundwater Storage for the Central Valley



Source:
RMC analysis of C2VSIM historical simulation results, 2012.

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Solving California's Water Crisis

- No single strategy can meet all needs
- Integrated, diverse strategies contribute to sustainable solutions
- Water management actions and issues are interconnected
- Manage water as a natural resource

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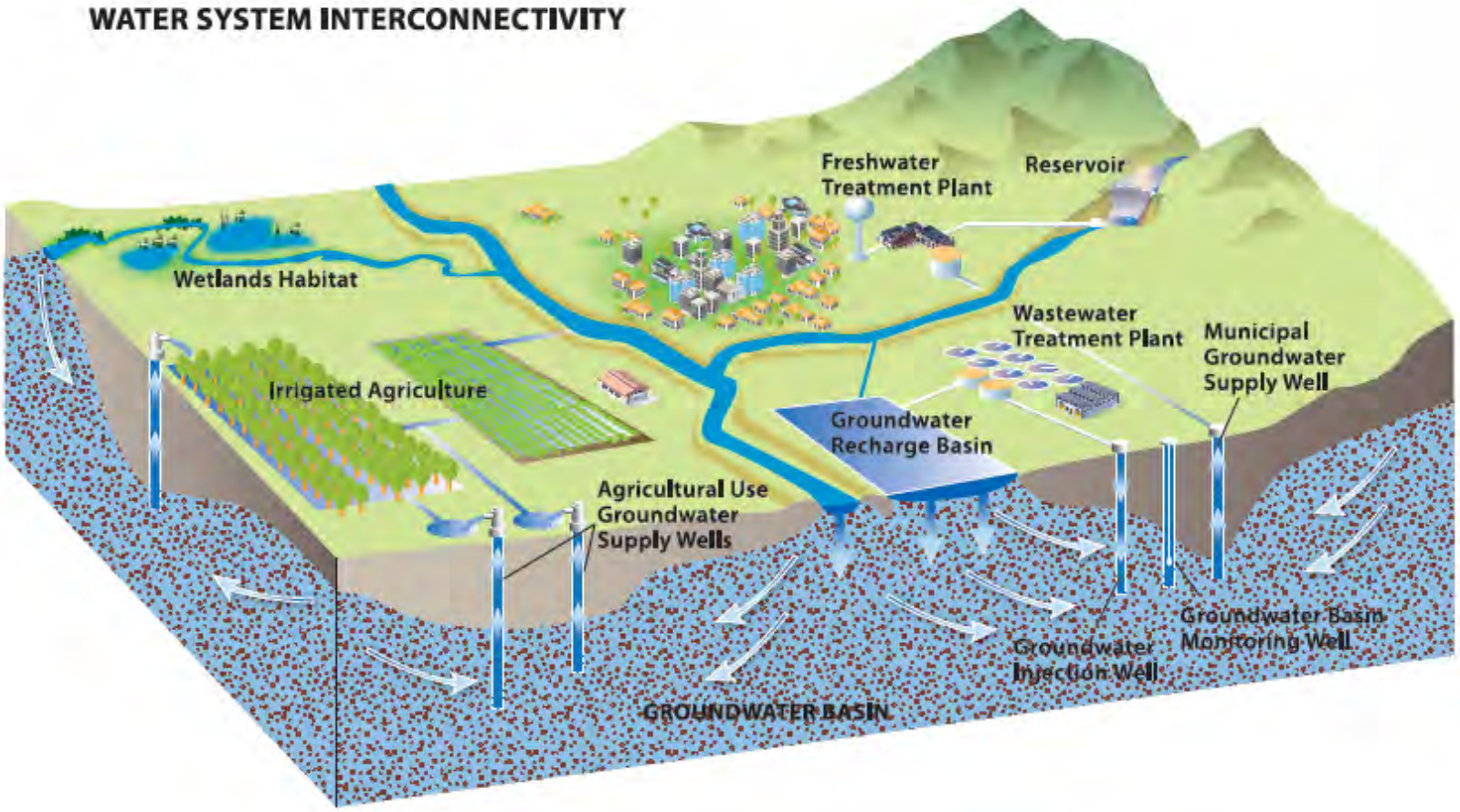
Integrated Water Management



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Achieving sustainable water management through:

1. Integrated Water Management
2. Groundwater Management
3. Urban Water Use Efficiency
4. Agricultural Water Use Efficiency
5. Stormwater Capture
6. Recycled Water
7. Reservoir Reoperation
8. Flood Management

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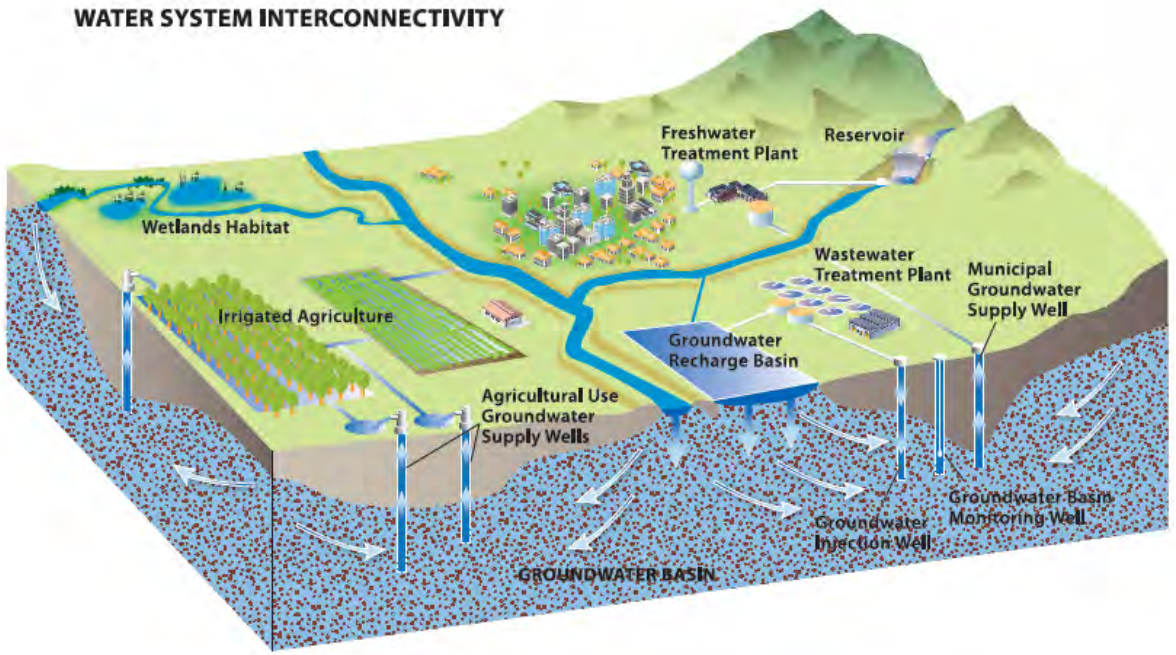
Advance Integrated Water Management

- Promote new and broad-based coalitions
- Develop long-term funding
- Support integrated resource planning
- Promote innovative technologies



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Water Management Opportunities

- **Water Use Efficiency** – 5.0 MAF
  - Urban efficiency – 2.1 MAF
  - Agricultural efficiency – 0.6 MAF
  - Reuse and recycling – 1.5 MAF
  - Stormwater capture - 0.8 MAF
- **Conjunctive management and groundwater storage** – 1.0 MAF

CWF solutions could provide California with an additional 6 MAF of water each year

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Sustainability

- Resilient ecosystems
- Diverse and adaptable water supply
- Meet current and future economic and ecosystem water needs

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