California's Water Supply Strategy: Adapting to a Hotter, Drier Future

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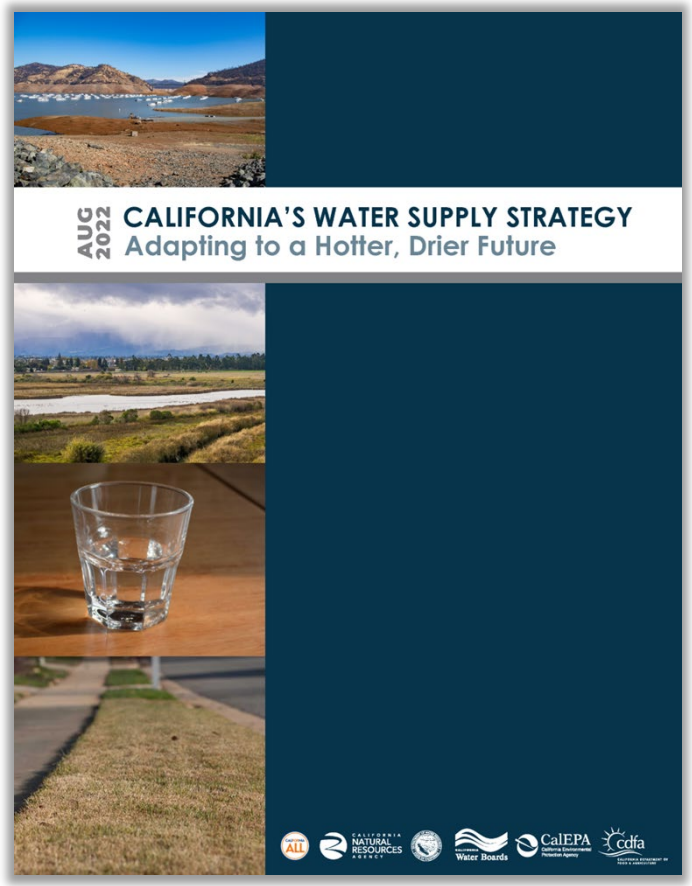
Water Supply Initiatives



Develop

Develop new water through recycling and desalination

Reduce

Reduce use of water in cities and farms

Improve

Improve all water management actions with better data, forecasting, conveyance, and administration of water rights.

Capture

Capture and save more stormwater, above ground and below ground

Water Supply Initiative, Capture – Expand Water Storage Capacity

- Expand average annual groundwater recharge by at least 500,000 acre-feet
- **Work with local proponents to complete the seven Proposition 1-supported storage projects and consider funding other viable surface storage projects.**
- Expand San Luis Reservoir by 135,000 acre-feet
- Rehabilitate dams to regain storage capacity
- Support local stormwater capture projects in cities and towns with the goal to increase annual supply capacity by at least 250,000 acre-feet by 2030 and 500,000 acre-feet by 2040

Goals to Close the Evaporative Gap

	2030		2040	
Increase Recycled Water	.8 MAF	About 5 MAF	1.8 MAF	About 7 MAF
Increases Desalination Production	28,000 AF		84,000 AF	
Increase Stormwater Capture	.25 MAF		.5 MAF	
Increase Conservation	.5 MAF		.5 MAF	
SUBTOTAL FOR RECYLED, DESAL, STORMWATER, AND CONSERVATION	1.6 MAF		2.9 MAF	
Expand storage above and below ground*	3.7 MAF		4 MAF	
Total	4.8 MAF		6.9 MAF	

* Additional storage capacity does not equate to a similar volume of new water supply MAF – million acre-feet

WATER SUPPLY STRATEGY

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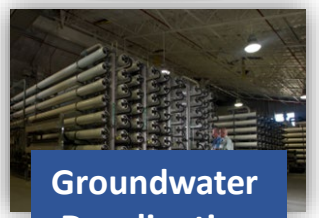
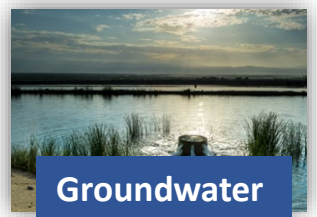
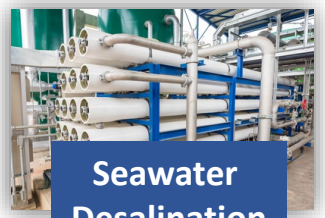
Conservation Regulations

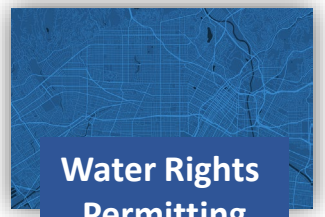

Stormwater Capture & Use


Recycled Water Projects


Groundwater Desalination


Groundwater Recharge


Seawater Desalination


Water Rights Permitting


Financial Assistance


Innovations – Investments


Data Collection & Forecasting

Milestones

2023-2024

- Develop criteria for siting of seawater desalination facilities along the coast
- Convene Strike Team for permitting and funding issues
- Identify Recycled Water Projects
- Identify water available for brackish desalination
- Adopt new long-term water use efficiency standards
- Adopt potable reuse regulations
- Investment in local water supply projects

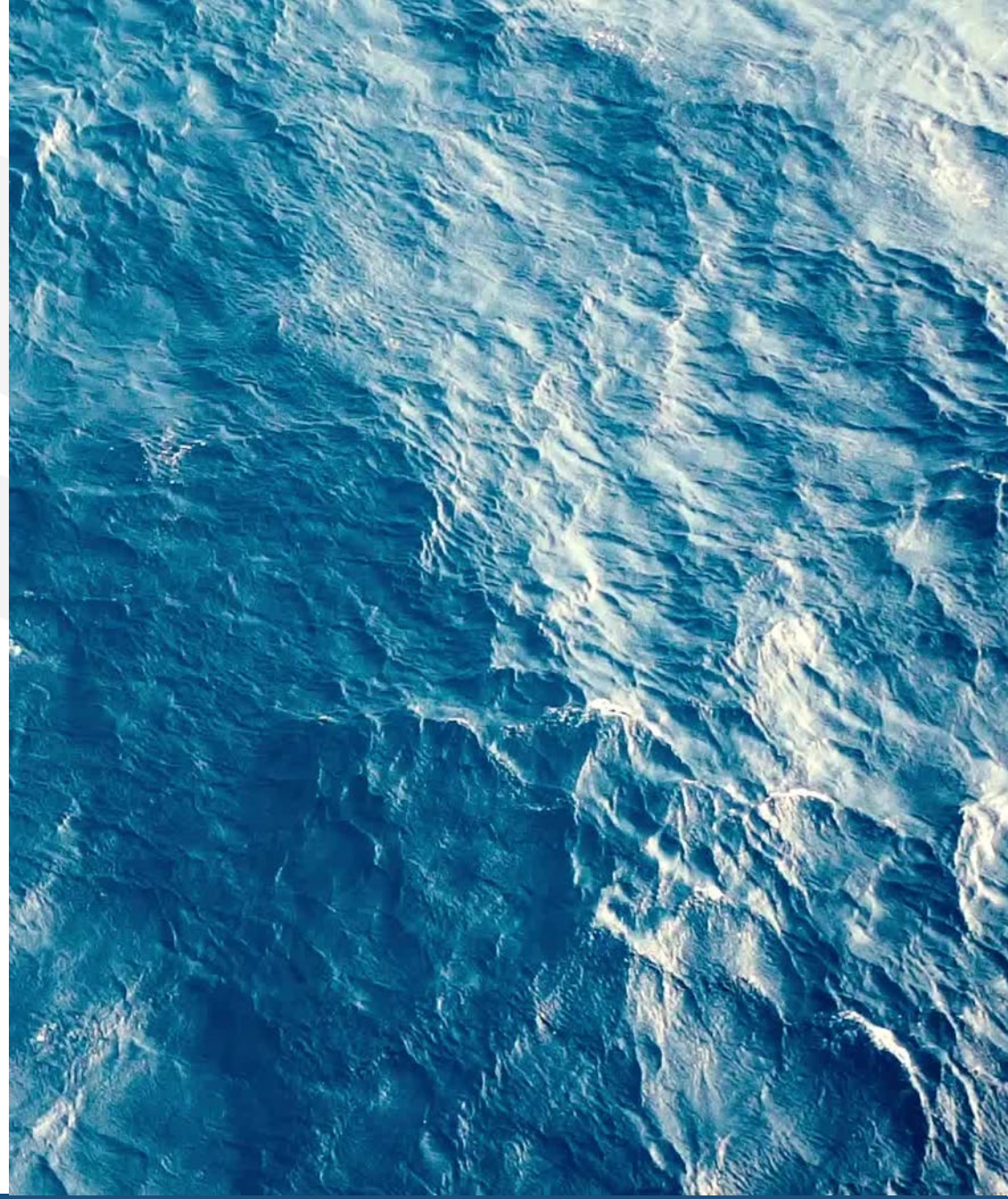
2025-2026

- Amend seawater desalination provisions in the Ocean Plan
- Statewide stormwater capture estimate and model
- Launch California Water Accounting Tracking and Reporting System (CalWATRS) for easier and more efficient reporting of water rights
- Provide grant funding for groundwater recharge projects
- Provide technical assistance for implementation of local water supply resilient projects

Increase, Rehabilitate, and Expand Water Storage. Improve Forecasting, Data, and Management.

Seawater Desalination Provisions in the Ocean Plan

- Adopted by State Water Board in May 2015.
- Contained in Chapter 3 of Ocean Plan.
- Provide a consistent framework for protecting marine life for both Water Boards and owners and operators to follow.
- Implement Water Code section 13142.5(b).



Potential Amendments to Seawater Desalination Provisions

- Recommendation from the 2019 Triennial Review of the California Ocean Plan.
- Directive in ***California's Water Supply Strategy: Adapting to a Hotter, Drier, Future (Water Supply Strategy)***, Governor's Office, 2022.

Goals for Potential Desalination Amendments

1. Apply an integrated water resource management approach to support use of desalinated ocean water;
2. Address human right to water, racial equity, and environmental justice;
3. Address pilot project technologies;
4. Provide a uniform, statewide approach for controlling potential adverse effects of seawater desalination facilities; and
5. Improve efficiency of planning and permitting.

CalWATRS

CALIFORNIA WATER ACCOUNTING, TRACKING, AND REPORTING SYSTEM

- Advisory Group Testing began in May
- Early Access Starts in July 2025
- Reporting in CalWATRS will begin in October of 2025
- Current System (eWRIMS) Closes on June 8, 2025
- No Changes to Old Reports from June 8 – September 30, 2025

Visit: waterboards.ca.gov/upward/calwatrs to sign up for our email list.

Water Rights Permitting for Recharge

- Types of permits:
  - Standard
  - 180-Day Temporary (since 2015)
  - 5-Year Temporary (since 2020)
- 2022/23: Eleven temporary permits authorized 672,853 acre-feet
- 2023/24: Eleven temporary permits authorized 92,424 acre-feet
- 2024/25: Eight temporary permits authorized 105,783 acre-feet
- Visit bit.ly/temporaryrechargepermits for details

Flood Water Recharge

- Executive Orders N-4-23 and N-4-27
  - Allows water users to divert surface water for recharge during major storms without a permit to manage flood waters
  - Does not establish a water right for the recharged water
  - Requires reporting
- Water Code 1242.1
  - Required local/regional flood control planning
- Executive Order N-16-25
  - Waived local/regional flood control planning for drought counties

Flood Recharge Reporting Requirements

- Notify the State Water Board (no more than 48 hours after diversions begin)
- File preliminary report (no later than 14 days after diversion begins)
- Submit final report (no later than 15 days after diversions end)
- Beginning in July, all of these will be done through the new CalWATRS system
- Visit waterboards.ca.gov/waterrights/water_issues/programs/groundwater-recharge/recharge-diversions.html for details and technical guidance

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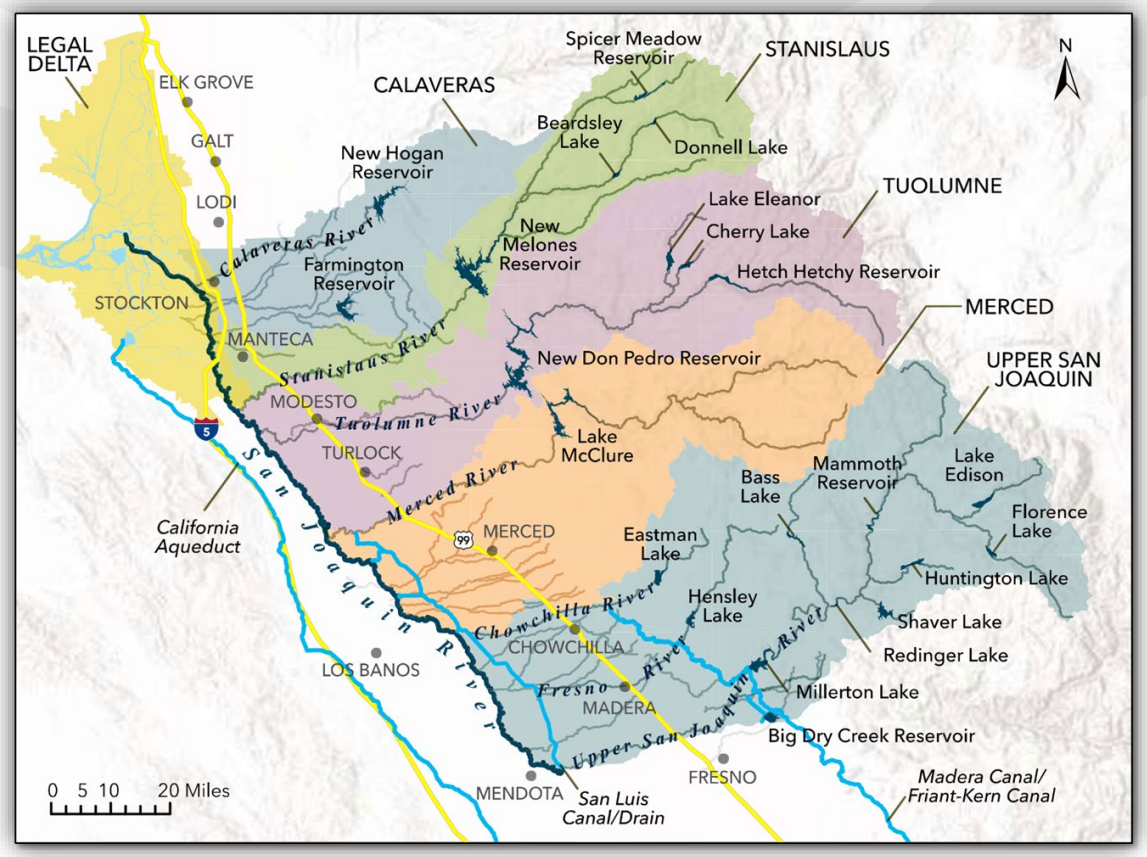
Groundwater Recharge

- San Joaquin Basin Flood-MAR Watershed Studies
  - *Watersheds in the studies:*
    - Calaveras
    - Stanislaus
    - Tuolumne
    - Merced, and
    - Upper San Joaquin
  - Water Management Sectors:
    - Flood control,
    - Water Supply (surface and groundwater), and
    - Ecosystems
  - Objective: Advancing sustainable water management through reoperation of reservoirs, flood managed aquifer recharge, and ecosystem management releases



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Groundwater Desalination

- Grant program funding for brackish desalination projects
  - *Projected Brackish Water Desalination Projects in California* (February 2024)
  - Projected 39,600 AF per year by 2030
  - Meeting and exceeding the Strategy's goal of 28,000 AF by 2030
- Awarded $123 M grant funding
  - Feasibility studies, environmental documentation, research, design pilots, and construction projects.
- Strategy 2040 goal – 84,000 AF/yr
  - Challenging and unknown

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Innovation and Investments

- **LandFlex Program** - $22M
  - Reduce agricultural water use in areas near vulnerable communities
  - Facilitate land use transitions within ongoing farming operations to promote long-term groundwater sustainability and community benefits
  - 4,474 acres of enrolled lands, protecting 16,512 domestic wells, permanently retired groundwater overdraft of 66,993 AF

- **Partnership for Desal/Treatment Innovation** – $100M
  - Secure, expand water supplies
  - Safe, affordable water for communities
  - Improve efficiency, reduce energy consumption, and improve byproduct management options
  - Some pilot projects support historically disadvantage communities

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Data Collection and Forecasting

- SB 19 Stream Gaging Improvement Program
  - Support the reactivation and deployment of stream gages
  - $20 M – general funding
  - Two major efforts
    - Internal stream gaging needs
    - Fund public agencies' external needs
- 139 new or reactivated and 198 upgraded sites – 337 total
  - 38 external partners, no additional cost
- Awarding, moving into implementation
  - Unfortunately, no O&M or management costs covered

Implementation Acknowledgments

Questions & Comments

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