California

DRIP Collaborative

Drought Resilience Interagency & Partners (DRIP) Collaborative Meeting

Friday May 16th, 2025
California Natural Resources Agency
715 P Street, Sacramento, CA
Room 02-221 A/B/C (Second Floor)

Meeting Information

1. This meeting is being live streamed and recorded.
2. Members of the public are welcome to listen. Public comments will be taken throughout the meeting.
3. Please practice electronics courtesy and turn off or mute your cell phones.
4. All viewpoints are welcome; we look forward to engaging, innovative, thoughtful, and respectful discussions!

Secretary Wade Crowfoot, California Natural Resources Agency

WELCOMING REMARKS

Meeting Objectives

Objective #1: Promote collective learning about efforts to advance drought and water shortage resiliency.

Objective #2: Finalize the 2025 focus areas problem statements.

Objective #3: Identify recommendations ideas to address the 2025 focus areas.

Meeting Agenda

1. Welcome Remarks and Setting Intentions
2. Informational Updates
3. 2024 Recommendations – Follow Up
4. New Members Introductions
5. Cross Cutting Themes – Definition and Approach
6. Communication Program
7. Lunch (12pm – 1pm)
8. 2025 Focus Areas Problem Statements
9. 2025 Recommendations Development – Breakout Sessions
10. BREAK (3:20pm – 3:35pm)
11. Focus Areas Report Out and Follow Up
12. Public Comment
13. Closing Comment

California
DRIP Collaborative

DRIP Collaborative (Quorum is 14)

1. **Alvar Escriva-Bou**, University of California Davis
2. **Andrew Altevogt,** State Water Resources Control Board
3. **Anna Schiller,** Environmental Defense Fund
4. **Brent Hastey,** Plumas Lake Self Storage, Owner
5. **Carolina Hernandez**, Los Angeles County Public Works
6. **Catherine Freeman,** California State Association of Counties
7. **Cyril Barmore,** Rural Community Assistance Corporation
8. **Emily Rooney**, Agricultural Council of California
9. **Jason Colombini**, Jay Colombini Ranch, Inc.
10. **John Andrew**, California Department of Water Resources
11. **Katie Ruby**, California Urban Water Agencies
12. **Katy Landau**, California Environmental Protection Agency
13. **Kyle Jones**, Community Water Center
14. **Laura Ramos**, California Water Institute at Fresno State
15. **Natalie Kuffel**, Governor's Office of Land Use and Climate Innovation
16. **Redgie Collins,** California Trout, Inc.
17. **Rose Nguyen,** California Office of Emergency Services
18. **Samantha Arthur**, California Natural Resources Agency
19. **Sierra Ryan**, Santa Cruz County
20. **Suzanne Pecci**, Domestic Well Advisory Group, South American Subbasin
21. **Tami McVay**, Self Help Enterprises
22. **Tim Worley,** California Association of Mutual Water Companies
23. **Virginia Jameson,** California Department of Food and Agriculture

<u>Additional Members:</u>

24. **Emiko Burchill**, California Department of Fish and Wildlife
25. **Joshua Cahill**, Yurok Tribe
26. **Matessa Martin**, Buena Vista Rancheria of the Me-Wuk Indians

DRIP Collaborative Purpose: Facilitate proactive state planning and coordination, both for predrought planning and mitigation, emergency response, and post-drought management, and to develop strategies to enhance collaboration between various fields, for all types of water users. (Water Code §10609.80., subd. (b))

Glen Low

RECAP OF 2024

California
DRIP Collaborative

Building a foundation for impact

Year 1 – Foundation Building
Shared process, initial ideation (needs, solutions), engagement

2023

Year 2 – Building Muscle
Content work, focused on early wins and demonstrating success

2024

Year 3 & Beyond – Scaling Impacts
High impact, more difficult work.
System change (as needed)

2025+

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What we accomplished in 2024

DRIP Collaborative Second-Year Milestones: State-Led Drought Task Force Moves to Strengthen California's Drought and Water Shortage Resilience

Published: March 17, 2025

Low water conditions surrounding Granite Bay Main Beach at Folsom Lake in Placer County, California. Photo taken November 18, 2022.

California's increasingly severe droughts are not just a challenge for water managers — they fuel extreme wildfires, threaten communities, and strain ecosystems. The devastating fires experienced this year in Southern California, following months of record-dry conditions and coupled with extreme wind, underscore the urgency of preparing for drought conditions and their impacts before they become a crisis/emergency.

The Drought Resilience Interagency and Partners (DRIP) Collaborative, established to enhance California's resilience to droughts and water shortages, has released its 2024 progress report which highlights the activities, discussions, meetings, and collaborative recommendation process that was undertaken during the DRIP Collaborative's second year. DRIP is facilitating statewide planning, proactive preparation, and efficient emergency response while addressing the diverse needs of all water users. Formed in 2023, the Collaborative is comprised of a diverse array of voices, including state agencies, county and Tribal governments, community groups, and more.

The DRIP Collaborative made significant progress in 2024, developing recommendations to address drought challenges while fostering a collaborative and inclusive environment. During the October 2024 meeting, members highlighted the group's adaptability and efficiency, noting that the collaborative approach supported diverse perspectives and quickly turned ideas into actionable plans. Many members described the experience as positive and productive, with some appreciation expressed on the group's openness to feedback and its ability to achieve consensus efficiently.

DRIP Collaborative is member led.
"High Impact, Efficient Effort"

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DRIP Collaborative

2025 Proposed DRIP Collaborative Timeline

Feb 2025
Launch 2025 process. Select State and Non-State leads. Align on roles

Mar/Apr 2025
Conduct virtual discussions for focus area problem statements

May/Jun 2025
Align on recs, begin populating rec templates

Aug/Sep 2025
Complete rec templates (where possible)

Nov/Dec 2025
Write DRIP Report and plan for 2026

In-Person Meeting

Virtual Meeting

**Note: The timeline for each focus area/workgroup will vary and may extend beyond the proposed 2025 timeline.*

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Jeanine Jones, California Department of Water Resources (Recorded)

INFORMATIONAL ITEM

HYDROLOGY & CONDITIONS UPDATE

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Water Supply & Budget Conditions

Jeanine Jones, California Department of Water Resources

Precipitation Statistics (period of record: 1981-current)

Statewide as of 05/10/2025

Water Year to Date: **21.48"**

% of Average: **98%**

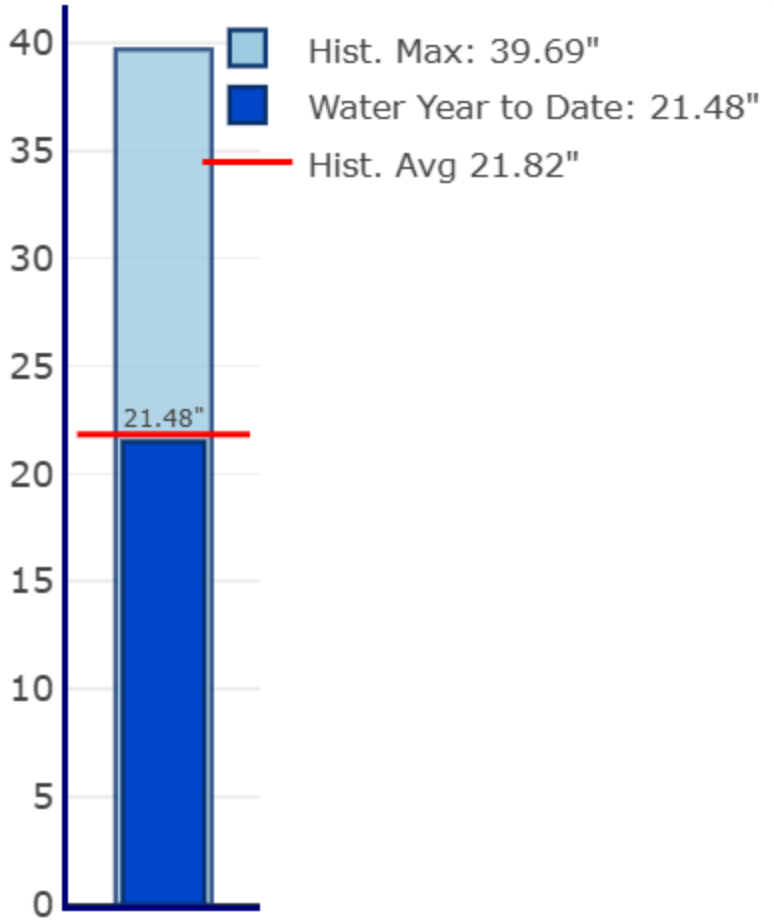
Precipitation % of average for full water year through September 30th: **91%**

Historical Record to Date:

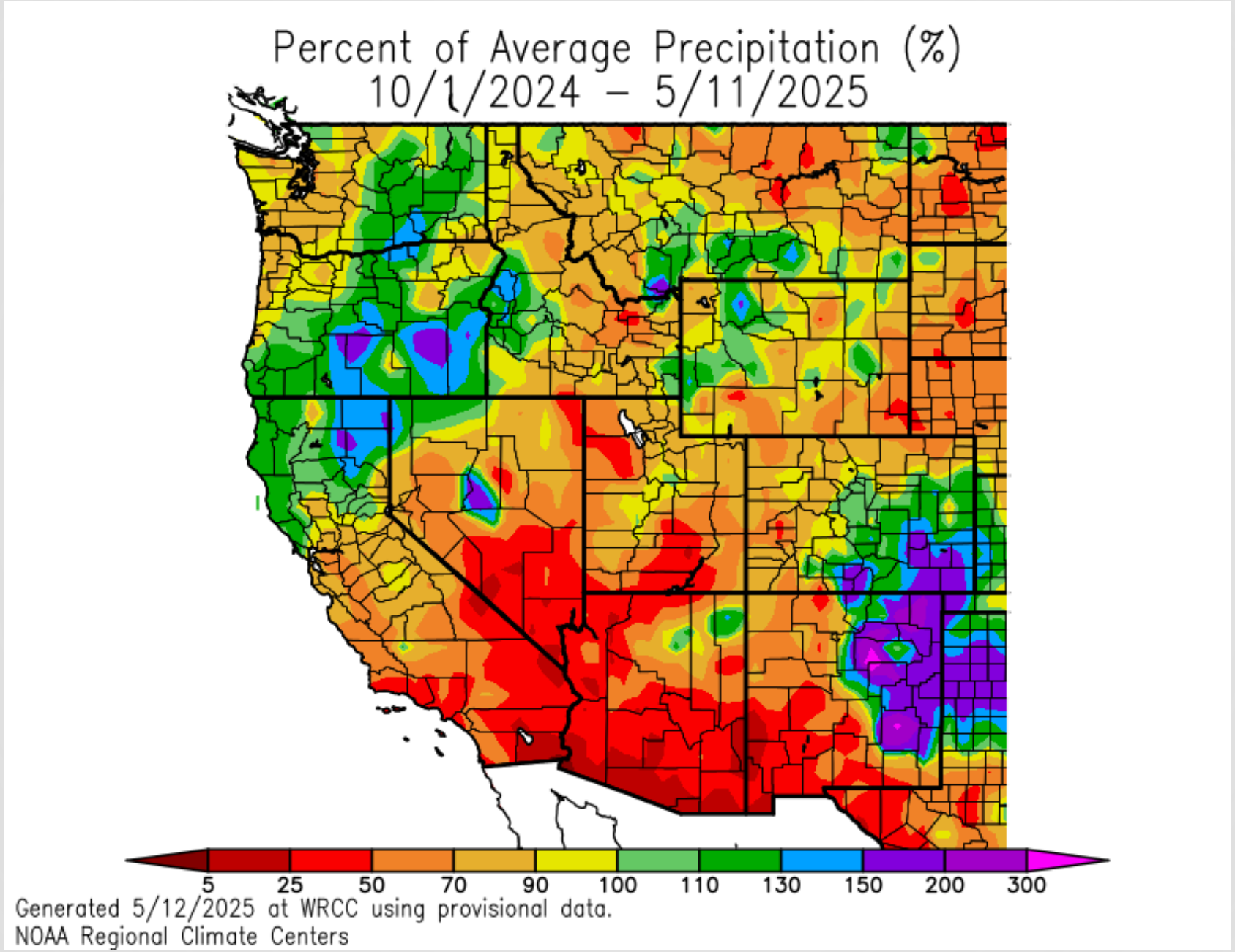
Max: **39.69"**

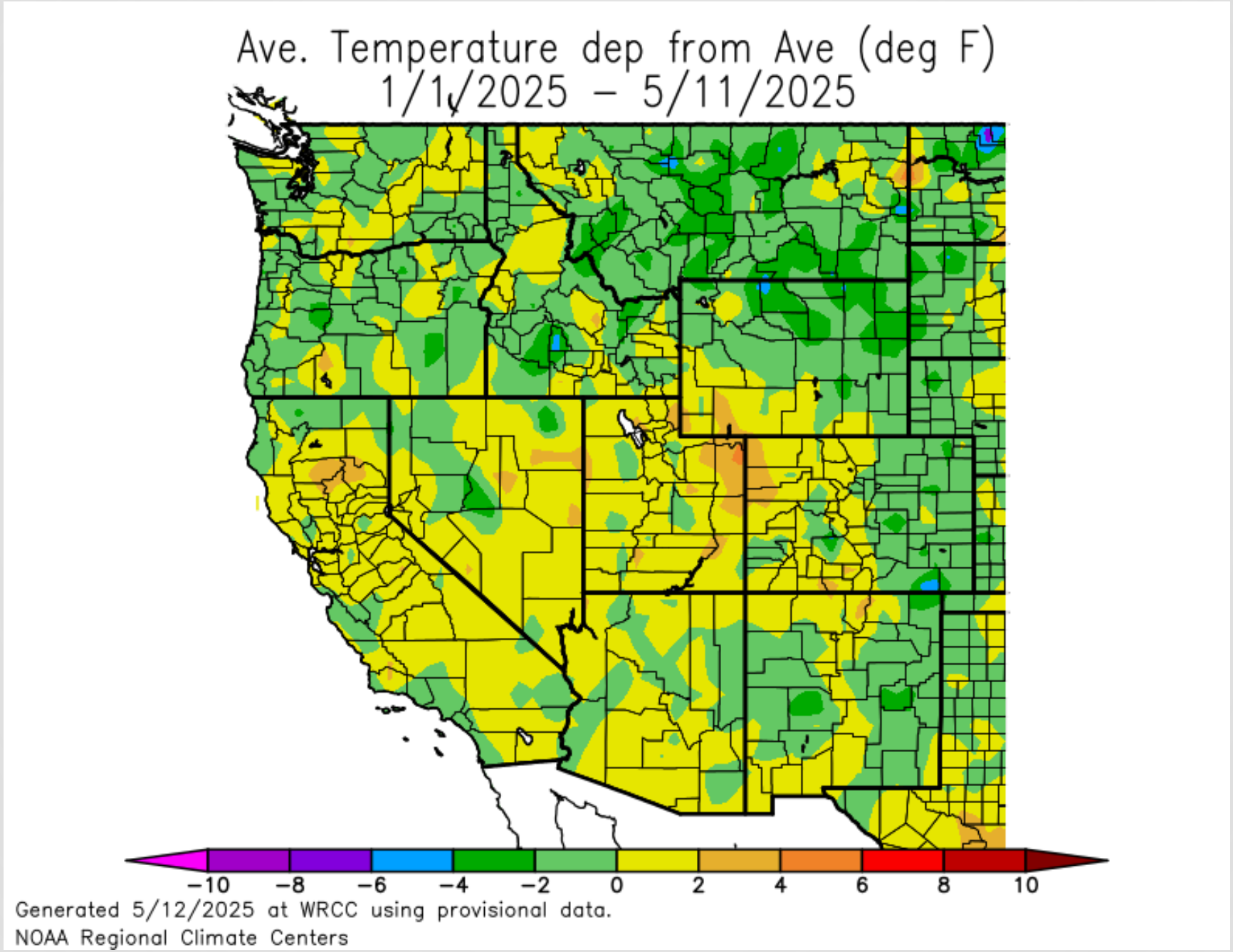
Mean: **21.82"**

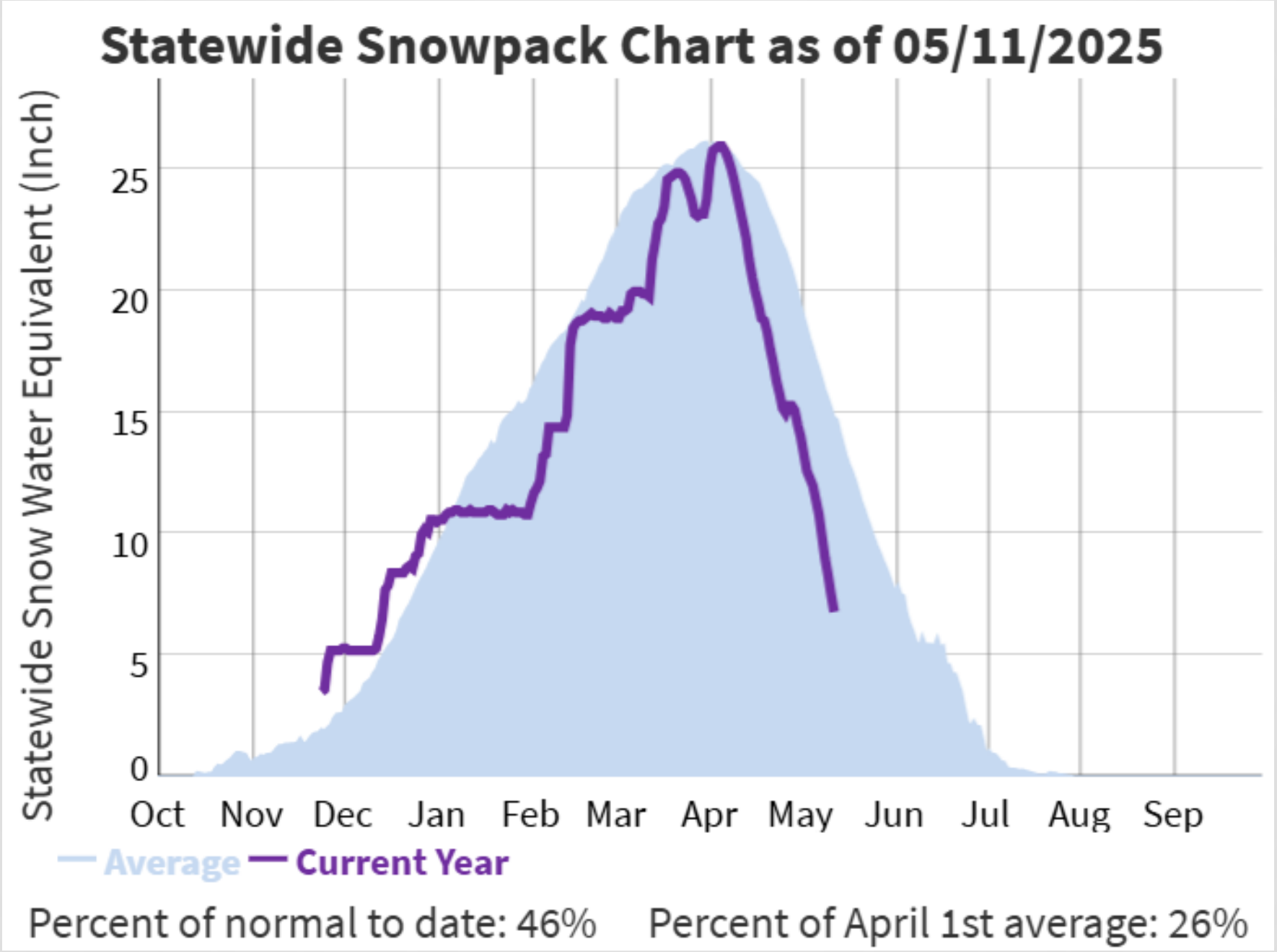
Min: **10.93"**



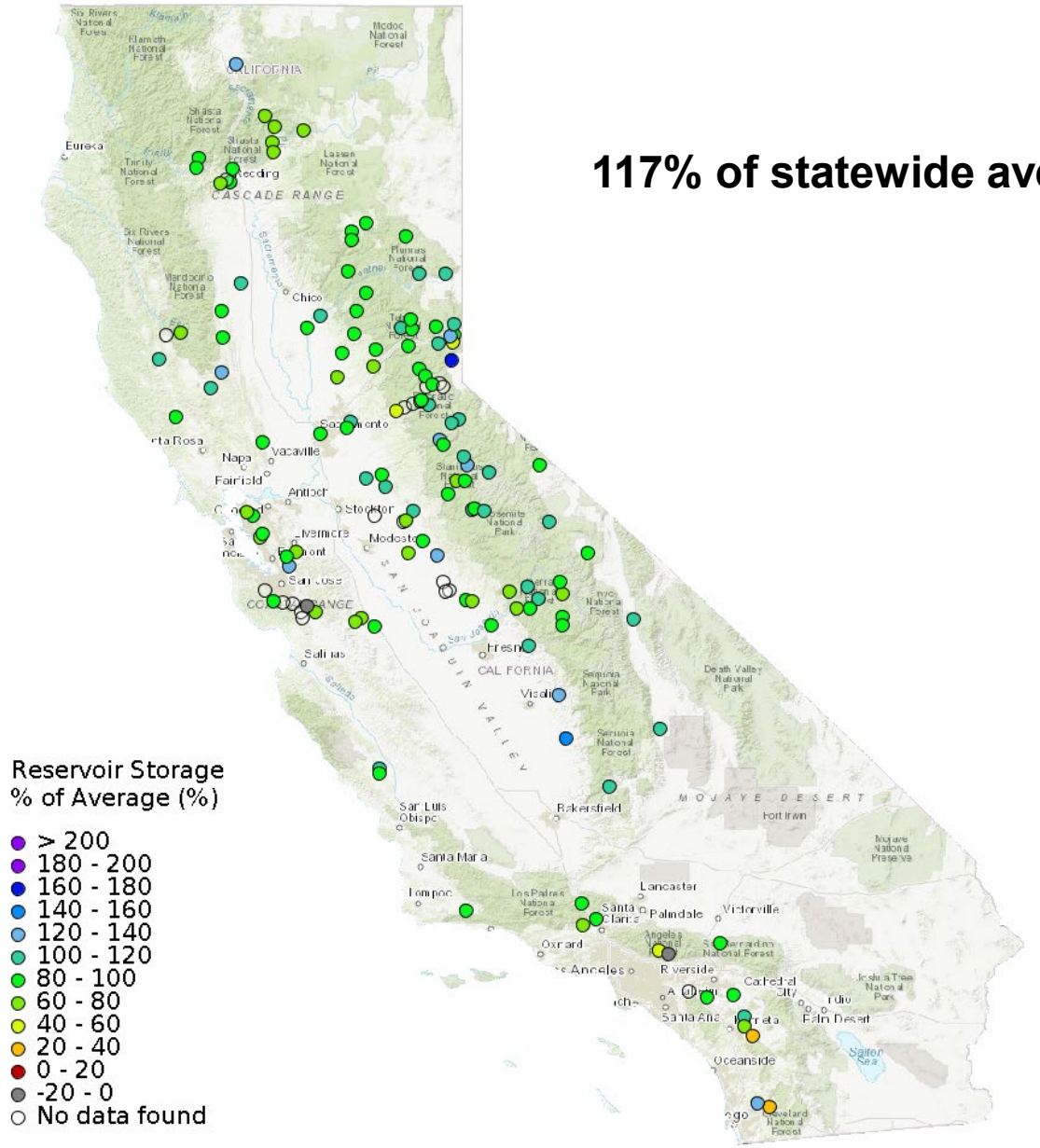
Precipitation for water year to date is 98% of historical average


Percent of Average Precipitation (%)
10/1/2024 – 5/11/2025
5
25
50
70
90
100
110
130
150
200
300
Generated 5/12/2025 at WRCC using provisional data.
NOAA Regional Climate Centers

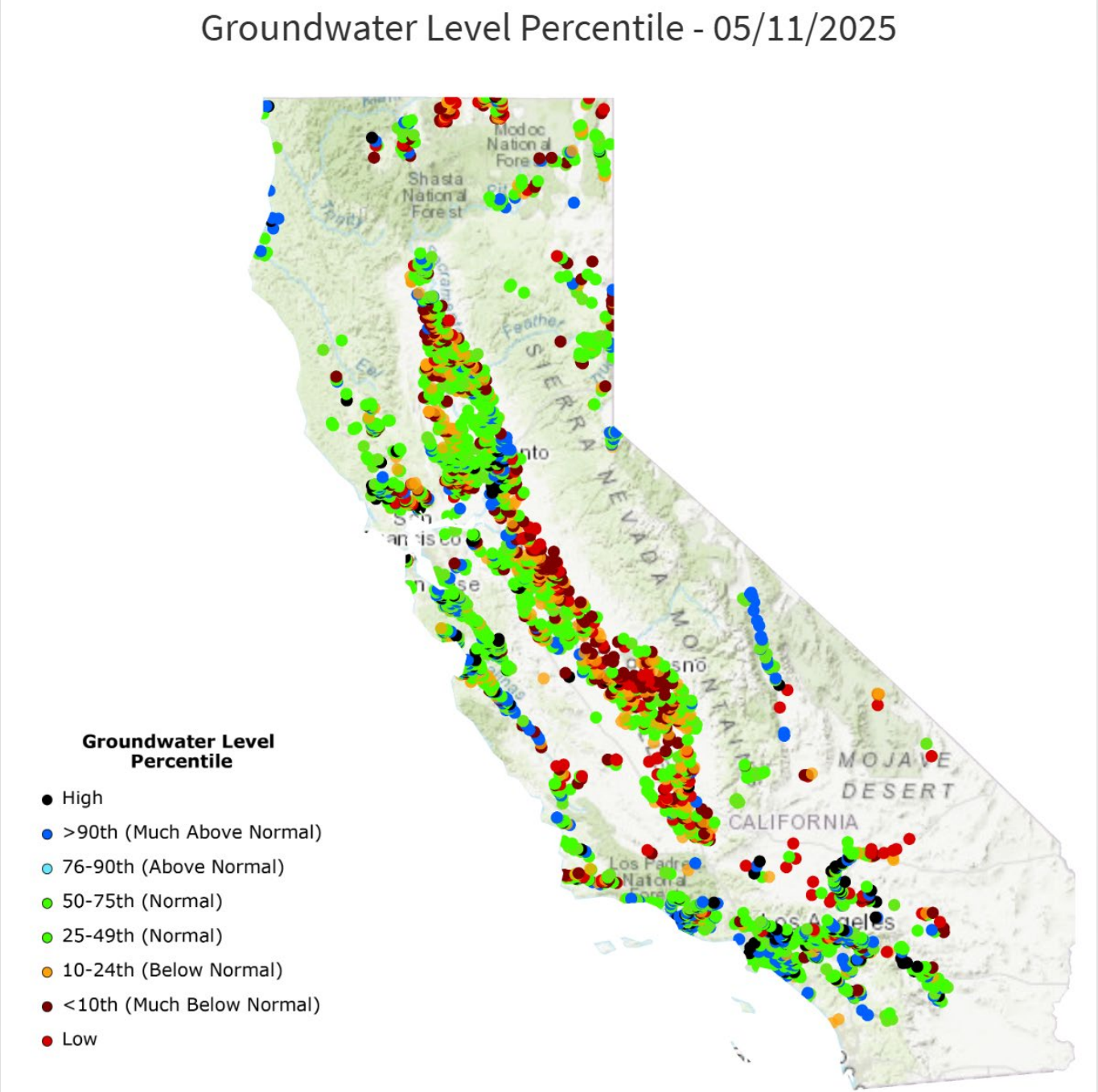

Ave. Temperature dep from Ave (deg F)
1/1/2025 – 5/11/2025
−10
−8
−6
−4
−2
0
2
4
6
8
10
Generated 5/12/2025 at WRCC using provisional data.
NOAA Regional Climate Centers


Statewide Snowpack Chart as of 05/11/2025
Statewide Snow Water Equivalent (Inch)
0
5
10
15
20
25
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Average
Current Year
Percent of normal to date: 46%
Percent of April 1st average: 26%

Reservoir Storage % of Average - 05/11/2025



117% of statewide average

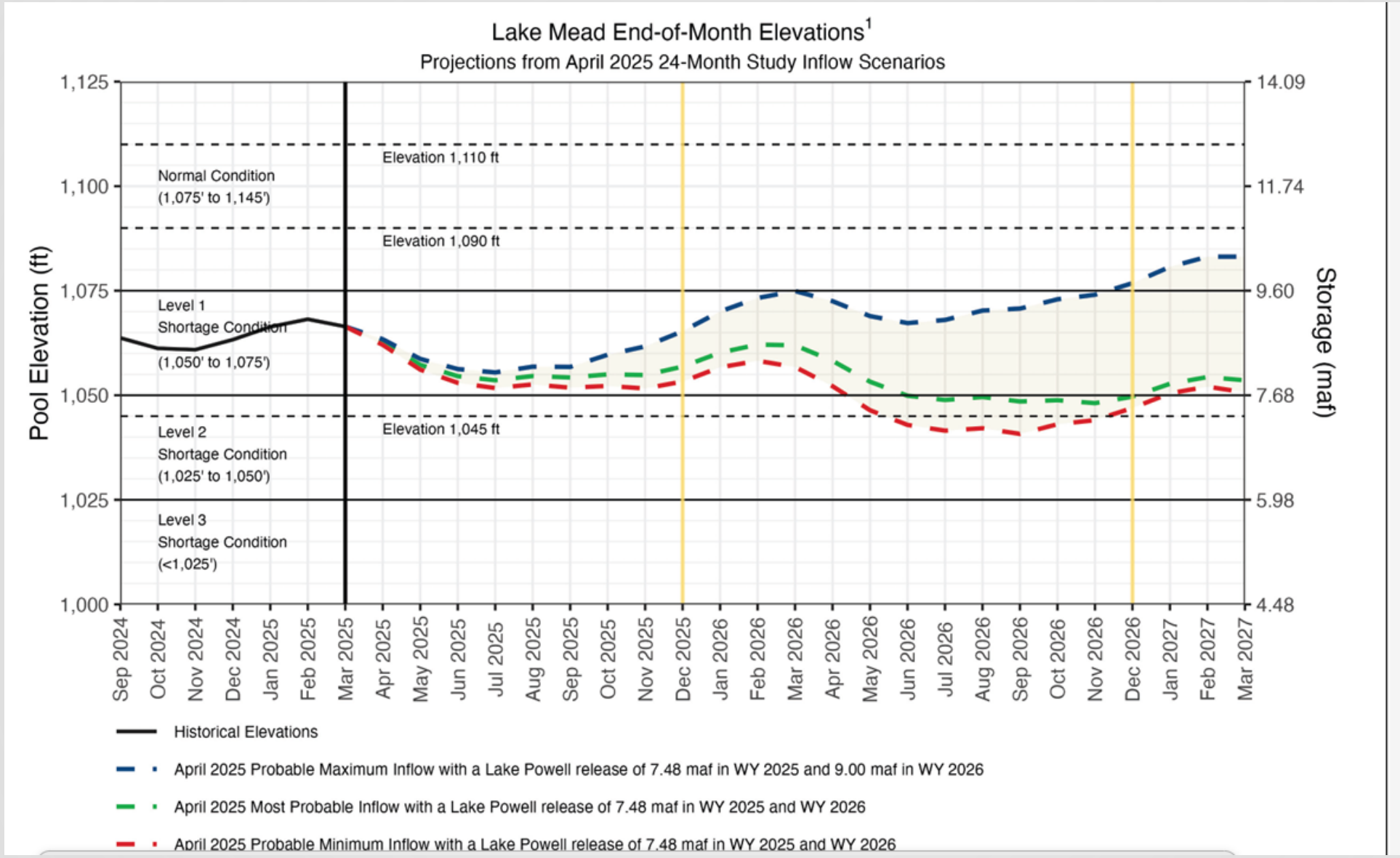


Monitoring Wells

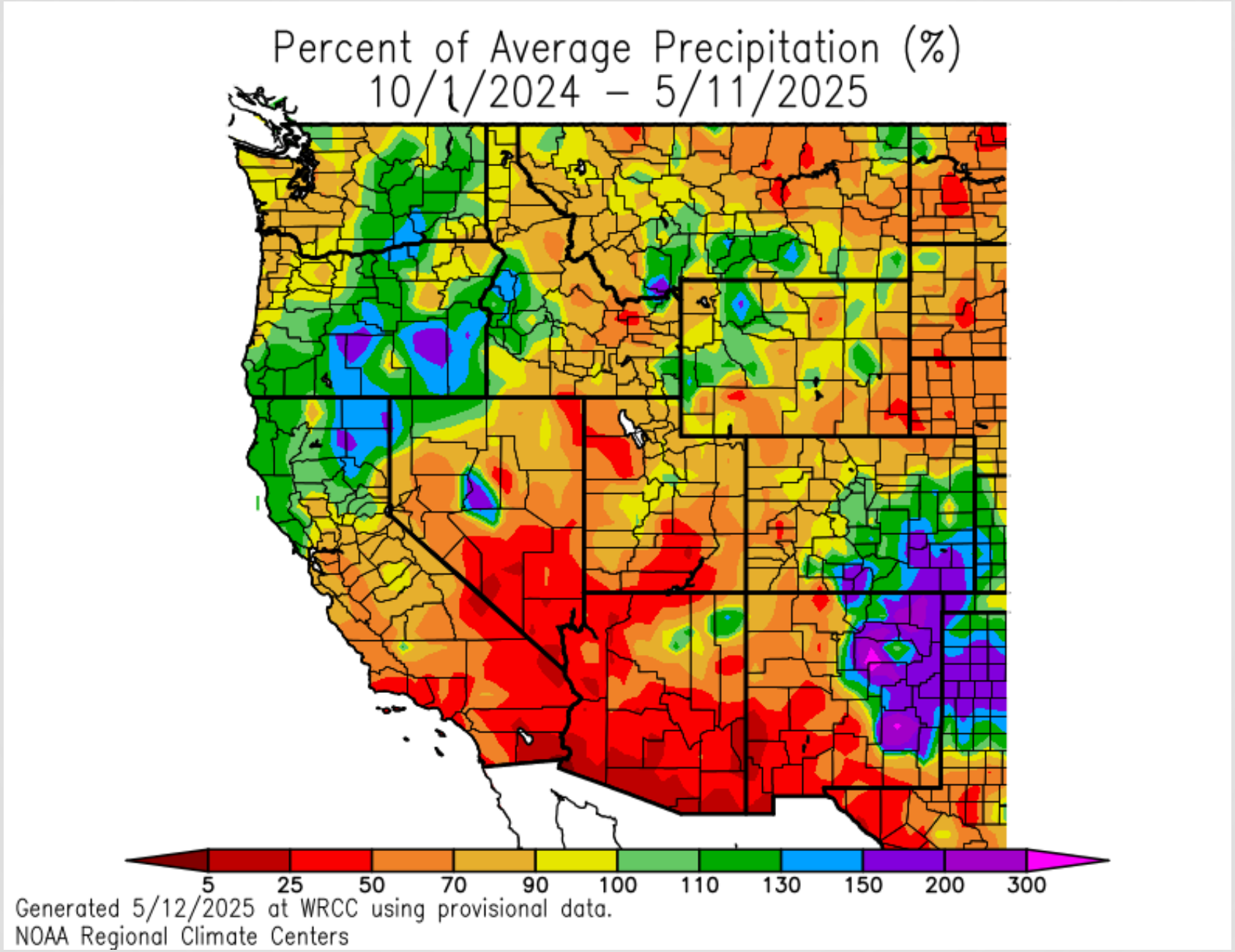
Below normal: 27%
Normal: 39%
Above normal: 35%

2025 Water Project Allocations

- SWP: 50%
- CVP:
  - NOD: 100%
  - SOD: 50% Ag & 75% M&I
    - » 100% Friant Class 1



Forecasted WY25 inflow to Lake Powell: 71% of normal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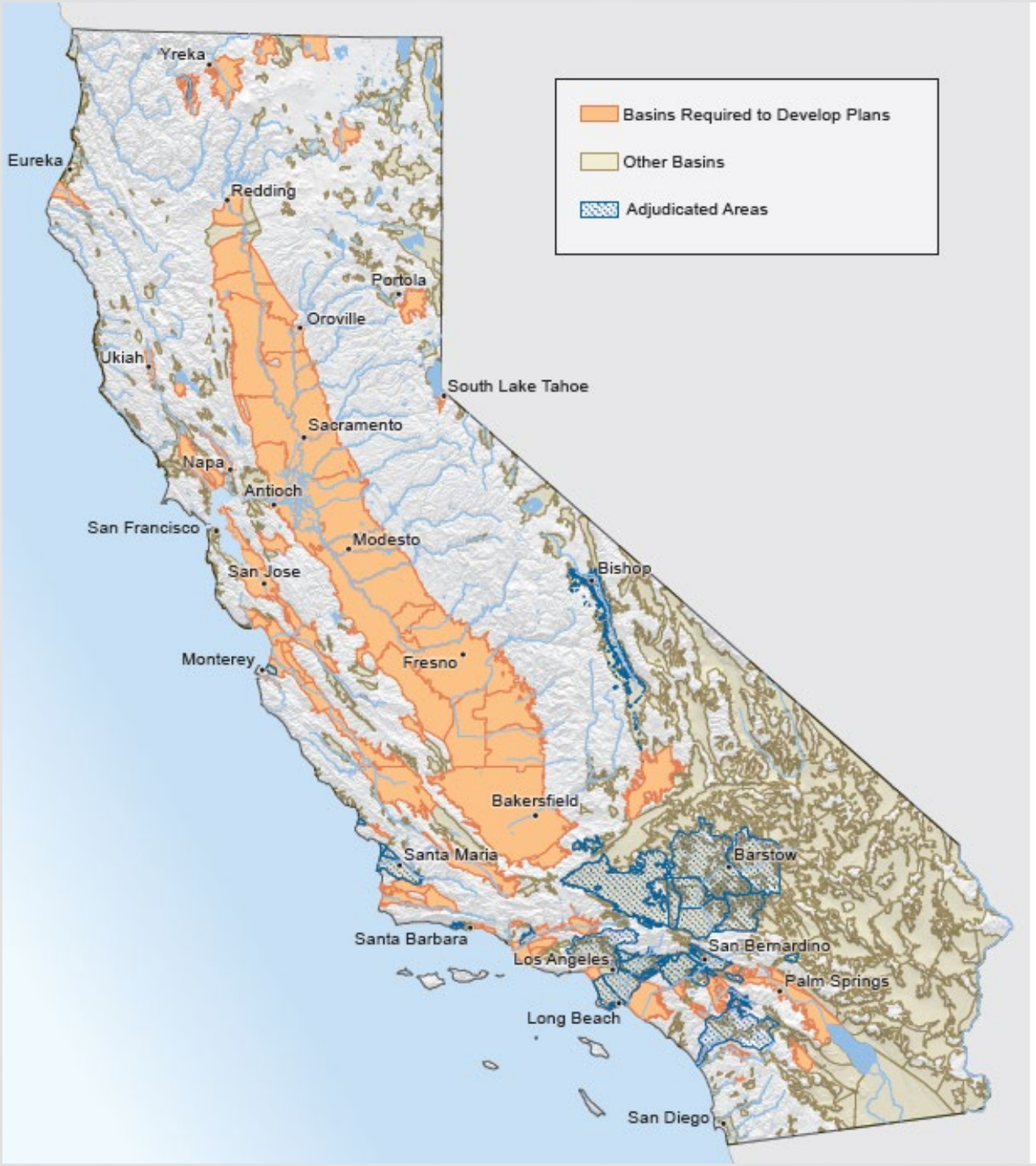
Basins Required to Develop Plans
Other Basins
Adjudicated Areas
Yreka
Eureka
Redding
Portola
Oroville
Ukiah
South Lake Tahoe
Sacramento
Napa
Antioch
San Francisco
Modesto
San Jose
Bishop
Monterey
Fresno
Bakersfield
Santa Maria
Barstow
Santa Barbara
San Bernardino
Los Angeles
Palm Springs
Long Beach
San Diego

FY26 Federal Budget

- OMB Passback & topline President's Budget Request released (line item detail not yet available)
- Congressional budget process beginning
- Will budget be signed before September?

OMB FY26 Passback

Oceanic and Atmospheric Research (OAR). Passback provides $171474 million for OAR programs, a $484.579 million reduction from 2024 enacted Passback eliminates all funding for climate, weather, and ocean Laboratories and Cooperative Institutes. It also does not fund Regional Climate Data and Information, Climate Competitive Research, Sea Grant (College and Aquaculture), or the National Oceanographic Partnership Program.
At this funding level, OAR is eliminated as a line office.

National Weather Service (NWS). Passback provides $1,247 393 million for NWS, equal to 2024 enacted.
• At this level NOAA should make efforts to streamline operations and eliminate inefficient or unnecessary functions in order to best service the American people.

The President's FY 2026 Discretionary Budget Request

National Oceanic and Atmospheric Administration (NOAA)—Operations, Research, and Grants	-1,311	The Budget terminates a variety of climate-dominated research, data, and grant programs, which are not aligned with Administration policy-ending "Green New Deal" initiatives. For example, NOAA' educational grant programs have consistently funded efforts to radicalize students against markets and spread environmental alarm. NOAA has funded such organizations as the Ocean Conservancy and One Cool Earth that have pushed agendas harmful to America's fishing industries. These NOA grants were funding things such as: George Mason University's "Policy Experience in Equity Climate and Health" fellowship, a workshop for "transgender women, and those who identify as non binary," and NOAA Climate Adaptation Partnerships, which funded webinars that promoted a children's book "designed to foster conversations about climate anxiety" as therapy.

Julie Ekstrom, California Department of Water Resources – Water Justice Office

2024 RECOMMENDATIONS TRACKING PROGRESS

California DRIP Collaborative

Tracking the 2024 DRIP Collaborative Recommendations

Focus Area	Recommendation
DROUGHT RELEVANT DATA	1. Drought Indicators and Metrics
	2. Rapid Inventory of Drought-Related Tools and Resources
DROUGHT PREPAREDNESS FOR DOMESTIC WELLS	3. Empowering County Drought Resilience Planning for DW* and SSWS**
	4. Voluntary Community-Based Well Monitoring Program
	5. Roles and Responsibilities
DEFINITION & NARRATIVE	6. Drought Definitions and Case Studies

Approach to tracking 2024 recommendations

- **Goal:** To track and communicate progress
- **Input**
  - Member sharing; Survey ahead of each DRIP Collaborative meeting (10 responses)
  - Connect to the work of the members as it relates to 2024 recommendations
- **Communicate**: Memo (future), briefing in-person meetings
- **Feedback Loop**: Identify opportunities to bring recommendations outcomes back to inform the work of the DRIP Collaborative
  - Other opportunities for engagement outside of the DRIP Collaborative work

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DW*: Domestic Wells
SSWS**: state small water system, serving 5-14 connections

Tracking the 2024 DRIP Collaborative Recommendations

Focus Area	Recommendation	Progress
DROUGHT RELEVANT DATA	1. Drought Indicators and Metrics	 Forthcoming publication on drought indicators for CA; uncertainty in next phases (challenges with federal funding)
	2. Rapid Inventory of Drought-Related Tools and Resources	 No reported progress.
DROUGHT PREPAREDNESS FOR DOMESTIC WELLS	3. Empowering County Drought Resilience Planning for DW* and SSWS**	 Continue county assistance program and CA County Café Series.
	4. Voluntary Community-Based Well Monitoring Program	 Expected progress by July or October 2025 Meeting.
	5. Roles and Responsibilities	 Internal state agency steps
DEFINITION & NARRATIVE	6. Drought Definitions and Case Studies	 Early plans to develop case studies to support LCI's Vulnerable Communities Platform

California DRIP Collaborative

DW*: Domestic Wells
SSWS**: state small water system, serving 5-14 connections

 Early progress identified

 No progress to report to date

Public Comment

Tracking the 2024 DRIP Collaborative Recommendations

1. In-person participants
2. Virtual participants:
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    c) If you are dialing in by phone, dial *9 to raise your hand and dial *6 when it you are called on to speak.

(1) What does drought resilience mean from your perspective?

(2) What initiatives are you working on to improve drought resilience?

Samantha Arthur, California Natural Resources Agency

Natalie Kuffel, Governor's Office of Land Use and Climate Innovation

Cyril Barmore, Rural Community Assistance Corporation

DRIP COLLABORATIVE MEMBERS INTRODUCTIONS

Workgroup Members

- Catherine Freeman, California State Association of Counties
- Kyle Jones, Community Water Center (Lead)
- Natalie Kuffel/Elea Becker Lowe, CA Office of Land Use & Climate Innovation
- Suzanne Pecci, Domestic Well Advisory Group - South American Sub-Basin
- Tami McVay, Self Help Enterprise
- Virginia Jameson, CA Department of Food & Agriculture

Lead: Kyle Jones, Community Water Center
Point of Contact: Zoe Kanavas, California Department of Water Resources – Water Justice Office

CROSS-CUTTING THEMES - DEFINITION AND PROCESS

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Purpose and Integration of Cross-Cutting Themes

PURPOSE OF CROSS-CUTTING THEMES

- Provide a shared lens or framing tool to guide DRIP Collaborative discussions and decision-making.
- Elevate broad priorities that are relevant across multiple focus areas.
- Reflect widely applicable considerations that may not warrant their own workgroup but are still essential to integrate across the Collaborative's work.

Cross-Cutting Themes Definition:
Cross-cutting themes serve as general themes, providing a consistent lens for the DRIP Collaborative's work to ensure that key topics are thoughtfully considered and incorporated throughout the development process.

INTEGRATION INTO THE DRIP COLLABORATIVE'S WORK

- Cross-cutting themes can be used as **prompts during problem statement scoping**, helping ensure key considerations are surfaced early.
- They may be **referenced in the recommendation template**, where applicable, through open-ended questions.
- Themes can serve as a **discussion tool**, helping facilitators prompt reflection during meetings.
- They may inform **presentations by subject matter experts**, guiding topic selection to align with shared values.
- Themes could also support **end-of-year reflection**, helping the Collaborative assess how key priorities were addressed across its recommendations.

Cross Cutting Themes for Consideration

PROPOSED THEMES TO INCLUDE NOW

- **Climate Change Adaptation**
- **Nature Based Solutions**
- **Equity** (including racial equity, climate justice, the human right to water, and Tribal engagement)

ADDING NEW THEMES MOVING FORWARD

The group agreed that future themes can be proposed without reconvening the workgroup. The full Collaborative may consider additions and **decide through group discussion** whether to include them. Additional themes mentioned in the discussion include:

- Governance
- Emergency Management
- Public Health & Mental Health
- Economic Resilience and Workforce (including economic impacts, financing mechanisms, labor, and workforce considerations)

Cross-Cutting Themes: Climate Change Adaptation

Purpose Statement:
Climate change adaptation refers to **proactive measures taken to build resilience and reduce risks and vulnerabilities** to climate change impacts by preparing systems to cope with specific threats such as extreme weather, rising sea levels, and increasing temperatures. In California, this means **adjusting water management, land use practices, and environmental policies** to withstand climate stressors like changing precipitation and hydrologic patterns, sea level rise, and more frequent flooding. Unlike resilience, which is a state of readiness, **adaptation involves the concrete steps needed** to achieve that readiness. It is also distinct from climate change mitigation, which focuses on reducing or preventing greenhouse gas emissions to limit the severity of future climate change. Examples of adaptation strategies include enhancing water use efficiency, increasing conservation efforts, expanding new water sources such as desalination and recycled water, implementing integrated water management plans, upgrading infrastructure resiliency and flexibility to withstand extreme weather, and restoring ecosystems that provide essential services such as clean water and healthy soils. Adaptation also requires **improving decision-making and planning processes**, such as developing land use policies that account for drought resilience and long-term environmental sustainability.

Discussion Questions:

- What is missing from this statement?
- Does this statement sufficiently inform related discussions in focus areas?

Cross-Cutting Themes: Nature-Based Solutions

Purpose Statement:

Nature-Based Solutions (NBS) refer to **strategies that use natural processes and ecosystems** to address societal challenges while enhancing environmental and community resilience. In the context of drought and water shortage resilience, NBS play a critical role by **supporting landscapes' ability to retain water, sustain ecosystem health, and buffer against climate impacts**. Key approaches include **wetland restoration**, which reconnects aquatic habitats and improves water storage; **Flood-MAR** (Managed Aquifer Recharge), which utilizes floodwaters for groundwater replenishment and habitat enhancement; **headwaters protection**, which restores river, meadow, and forest ecosystems to support hydrologic function and biodiversity; and **soil health practices** that increase water retention, reduce emissions, and improve agricultural and ecological resilience. These solutions offer co-benefits for water, climate, and communities and should be integrated into drought resilience strategies.

Discussion Questions:

- What is missing from this statement?
- Does this statement sufficiently inform related discussions in focus areas?

Cross-Cutting Themes: Equity

Purpose Statement:

Equity refers to **the fair and just inclusion of all people** in processes, decisions, and outcomes related to drought and water shortage resilience. In California, equity **requires acknowledging and addressing the disproportionate impacts of water scarcity, climate change, and environmental degradation on historically marginalized communities**, including low-income households, communities of color, and Tribal Nations. This includes **advancing the human right to water, integrating Tribal perspectives and leadership,** and **prioritizing community voices** in planning and implementation efforts. Equity in drought resilience planning involves evaluating systemic barriers to water access, strengthening procedural fairness in decision-making, and ensuring that investments, policies, and programs do not perpetuate or exacerbate existing inequities. Examples include supporting community-led planning, improving access to safe and affordable drinking water, incorporating culturally appropriate outreach and engagement, and directing resources to areas with the greatest need and fewest existing protections.

Discussion Questions:

- What is missing from this statement?
- Does this statement sufficiently inform related discussions in focus areas?

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Public Comment
Cross-Cutting Themes

1. In-person participants
2. Virtual participants:
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Cross-Cutting Themes
DRIP Collaborative Vote

- **Adopt the proposed process** for incorporating cross-cutting themes into DRIP Collaborative work. (Yes/No)

- **Disband the Cross-Cutting Themes Workgroup**, with future theme additions handled by the full Collaborative through group discussion. (Yes/No)

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Co-Leads: Laura Ramos, California State University, Fresno; Tim Worley, California Association of Mutual Water Companies

Point of Contact: Anthony Navasero, California Department of Water Resources – Drought Coordinator

COMMUNICATION PROGRAM – RECOMMENDATION DEVELOPMENT

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Rec #7. Communication Program - Updated

1. Communication Program Recommendation
    a) Problem Statement – *"…effective communication has been hindered by differences in appropriate messaging due to geographic and meteorological variations, or the relative diversity of a water supply portfolio or other investments in community resilience… small water providers and private well owners receive and communicate information differently."*
    b) Recommendation Idea – *"…creating an [easily] understandable, statewide, symbols-based messaging platform suitable for weather reports and social media that counties and/or water suppliers can tier off to provide appropriate water supply information to their audiences."*
2. Member Feedback (2024 October DRIP Meeting)
    a) Check in on existing communication platforms such as California Water Watch and Save Our Water Campaign
    b) How do roles and responsibilities factor into communication program?
    c) Need information from the Drought Metrics and Indicators recommendation to feed into a potential communication platform – dashboard

Rec #7. Communication Program - Updated

3. Challenged to formalize a recommendation
    a) No Communication workgroup meeting so far
    b) Co-leads discussion
        I. Informed about Save Our Water Campaign and California Water Watch
            a. No direction to a recommendation based on received information
        II. Discuss the need to talk to other entities about their communication
            a. Need more subject matter experts to inform and identify a recommendation's value add
            b. Need to identify other entities, regional and local
4. Next steps
    a) Interview local/regional subject matter experts
    b) Convene the workgroup
        I. Potentially have subject matter experts join the meeting
        II. More applicable at regional/local level, than state
    c) Potentially revise or propose a new recommendation

Public Comment
Rec #7. Communication Program

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2. Virtual participants:
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LUNCH BREAK!

PLEASE RETURN AT:
12:55pm
(so we can start promptly at 1:00pm)

DRIP Collaborative (Quorum is 14)

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FA1: Reducing Ecosystem Impacts of Drought
FA2: Land Use Planning for Drought Resilience
FA3: Water Infrastructure and Planning

2025 FOCUS AREAS PROBLEM STATEMENTS

California
DRIP Collaborative

Reducing Ecosystem Impacts of Drought

Workgroup Members:

- Redgie Collins, CalTrout (Lead)
- Alvar Escriva-Bou, University of California, Davis
- Anna Schiller, Environmental Defense Fund
- Brent Hastey, Plumas Lake Self Storage
- Laura Ramos, California Water Institute at Fresno State
- Matessa Martin, Buena Vista Rancheria of Me-Wuk Indians
- Sierra Ryan, Santa Cruz County

DWR Point of Contact: Zoe Kanavas (California Department of Water Resources)

Problem Statement Development Considerations

KEY SUGGESTED REVISIONS

- **Broaden Scope**: Expand focus beyond freshwater ecosystems.
- **Incorporate Fire-Related Impacts**: Address fire-related vulnerabilities and ecosystem role in fire resilience.
- **Clarify Human-Ecosystem Connections**: Balance references to water use, public health, and ecosystem degradation drivers.
- **Update Wetland Loss Data**: Replace outdated stats and distinguish wetland types and services.
- **Environmental Flows**: Highlight lack of protections for most CA rivers.
- **Support Monitoring & Funding**: Emphasize the need for better stream data and sustained investment in resilience infrastructure.
- **Address Regulatory Gaps**: Highlight underused legal tools and enforcement issues tied to water rights and ecosystem protections.

Proposed Problem Statement

California's ecosystems - freshwater, terrestrial, aquatic, and coastal - are increasingly degraded due to unsustainable water use, habitat fragmentation, land conversion, and climate-driven stressors. Reduced snowpack, rising temperatures, altered precipitation patterns, and more frequent and severe wildfires have amplified the strain on ecological systems, diminishing their capacity to adapt to or recover from drought. Despite these growing threats, water management and land use decisions often fail to adequately account for ecological health, particularly outside of drought emergencies.

Healthy ecosystems are essential to California's drought resilience. They buffer against extreme events, improve water quality and availability, support biodiversity, reduce wildfire severity, and safeguard public health. However, current policies and investments often overlook the long-term ecological functions that underpin resilience for both people and nature.

Discussion Question:

Does the problem statement generally reflect current challenges and potential opportunities of this focus area?

Problem Statement Subtopics

Environmental Flow Protections

Most of California's rivers lack formal environmental flow protections. Critical species - such as salmon, smelt, steelhead, and sturgeon - depend on specific flow conditions, yet enforcement of instream flow requirements is limited. Inconsistent agency mandates and a lack of clarity on legal responsibilities hinder coordinated protections.

Habitat Restoration

Wetlands, riparian corridors, and other key habitats have been dramatically reduced or degraded. Restoration can enhance drought and fire resilience but faces barriers such as complex permitting and fragmented funding. Tailored restoration strategies are needed that recognize the distinct services of different ecosystem types.

Integrated Planning

Ecosystem resilience to drought requires integrating fire management, land use, groundwater-surface water dynamics, and climate projections at the watershed scale. Nature-based solutions are underutilized, and opportunities to center Tribal knowledge and partnerships are often missed.

Existing Tools & Regulations

California's legal tools–including the public trust doctrine, water rights enforcement, and instream flow authorities–are often underused. Strengthening agency roles, enforcement, and public awareness can improve ecosystem protections without new legislation.

Discussion Question:

Do we have the right set of subtopics that can serve as a foundation for developing recommendations?

Reducing Ecosystem Impacts of Drought Discussion

1. Does the problem statement generally reflect current challenges and potential opportunities of this focus area?

2. Do we have the right set of subtopics that can serve as a foundation for developing recommendations?

Land Use Planning for Drought Resilience

DRIP Collaborative Co-Leads: Workgroup Members:

- Sierra Ryan, Santa Cruz County(Co-Lead)
- Virigina Jameson, California Department of Food and Agriculture (Co-Lead)
- Andrew Altevogt, State Water Resources Control Board
- Anna Schiller, Environmental Defense Fund
- Brent Hastey, Plumas Lake Self Storage
- Carolina Hernandez, Los Angeles County Department of Public Works
- Catherine Freeman, California State Association of Counties
- Emily Rooney, Agricultural Council of California
- Jason Colombini, Jay Colombini Ranch, Inc.
- Katie Ruby, California Urban Water Agencies
- Kyle Jones, Community Water Center
- Natalie Kuffel, Governor's Office of Land Use and Climate Innovation
- Suzanne Pecci, Domestic Well Planning Group South American Subbasin
- Tami McVay, Self Help Enterprises

DWR Point of Contact: Julie Ekstrom (California Department of Water Resources)

Problem Statement Development Considerations

- Water **infrastructure** considerations should be **tied in early** to land use planning for new developments
- Consider **LAFCO's role** and willingness to include new communities into existing sphere (or expand it)
- Consider issues related to water **affordability**
- Emphasize the need for **transparency and public participation**
- **Rural and agriculture** considerations:
  - Agriculture (ag wells, land repurposing/sustainable transitioning, resulting effects on small farmers) and domestic (further housing development, sustainable housing for people, impacts on domestic wells, small systems, need for regionalization)
  - **Financial support** for land repurposing to incentivize private landowners to implement state's vision to reduce demands on groundwater
  - Need coordination and planning at the regional scale for agricultural field retirement so it supports habitat, buffer zones, etc. with a **regional vision**, and **supports small farmers**.
  - Rural development: Where development occurs, ensure not just that there is a water supply, but that that water supply is **resilient going into the future**
  - Shifting land use and fallowing: Add SGMA as an important context for huge areas to be put out of production shifting land use. Need to manage how fallow land is managed, transition to new uses to support the environment and other beneficial uses. Recognize no action risks that exist.

Proposed Problem Statement

Land Use Planning Defined: The process of managing how land is used to balance development, infrastructure and services, environmental protection, and economic sustainability. *The extent and ways in which land use planning accounts for water has major implications on the region's water supply reliability and drought resilience.*

Broad, clear connection to water and drought resilience challenges: In California, land use planning influences water demand and supply, yet often falls short in integrating water management strategies or accounting for the availability of water resources. This disconnect leads to land use decisions that inadequately address long-term water supply challenges. As population grows, climate change intensifies drought conditions, and implementation of the Sustainable Groundwater Management Act (SGMA) shifts land use to reduce groundwater reliance, the risk and severity of drought increase. The fragmented status quo approach to planning for both land use and water resources places communities and local economies at greater risk of water scarcity and economic strain. Strengthening coordination between land use planners and water managers is essential to building a more drought -resilient future—one in which groundwater use is sustainable, agricultural economies (including small farms) remain viable, housing development meets California's growing population needs, and water considerations are fully incorporated into planning processes.

Problem Statement Subtopics

Rural Development

Increased challenges related to water insecurity and insufficient water infrastructure, especially when new housing developments outpace water system capacity.

The prevalence of small, often under-resource water systems, reliance on domestic wells, and contamination issues underscore the need for integrated planning that aligns land use decisions with infrastructure investment and long-term water reliability.

Urban Development

Urban areas struggle to meet state-mandated Regional Housing Needs Assessment (RHNA) requirements. The timelines needed for new water infrastructure cannot accommodate the housing allocations.

The RHNA does not consider water supply availability as part of its assessment.

Agriculture Economies and Land Use Transitions

High vulnerability to drought and long-term water supply reductions.

Planning processes must better support adaptive land use transitions that generate benefits for communities and ecosystems, while proactively addressing the consequences of inaction, such as habitat degradation and rural economic decline.

Groundwater Recharge and Sustainability

Integrating recharge into land use planning is crucial for sustainable water management, especially in regions facing water scarcity or relying heavily on groundwater.

Many regions continue to treat groundwater and land use as separate planning domains, missing opportunities to design land uses that enhance recharge and long-term water supply reliability, especially in overdrafted or drought-prone areas.

Land Use Planning for Drought Resilience Discussion

1. Does the problem statement generally reflect current challenges and potential opportunities of this focus area?

2. Do we have the right set of subtopics that can serve as a foundation for developing recommendations?

Water Infrastructure and Planning

Workgroup Members:

- Emily Rooney, Agricultural Council of California (Co-Lead)
- John Andrew, California Department of Water Resources (Co-Lead)
- Alvar Escriva-Bou, University of California Davis
- Carolina Hernandez, Los Angeles County Public Works
- Jason Colombini, Jay Colombini Ranch, Inc.
- Katie Ruby, California Urban Water Agencies
- Kyle Jones, Community Water Center
- Laura Ramos, California Water Institute at Fresno State
- Suzanne Pecci, Public Member
- Tim Worley, California Association of Mutual Water Companies

DWR Point of Contact: Anthony Navasero, California Department of Water Resources

Problem Statement Development Considerations

Responses to Scope Development

- A potential understanding of infrastructure would be **water storage and distribution** (e.g., conveyance)
- Infrastructure should be **"all inclusive"**, e.g., keep definition of infrastructure (and scope) broad while keeping recommendations focused
- The scope of work should go beyond water use efficiency and focus on **resilience of water supply and bolstering of existing water supply**
- Infrastructure should **include grey (engineered) and green (natural) infrastructure**
- Scope should align with SB 552 and **include small water systems and domestic wells** (including state small water systems)
- Consideration of an **analysis of water users vulnerability from droughts** should be included in the scope

Proposed Problem Statement

The Governor's 2022 Water Supply Strategy (also known as the "Hotter, Drier" strategy) outlined overarching goals and large-scale actions to address future shortages in the long-term. While the implementation of this strategy supports "backbone" infrastructure and water supply resiliency, many of these longstanding concepts and projects may not fully address future challenges, therefore, potentially falling short of meeting the comprehensive needs for our state. More recent and emerging demands include sustainable groundwater, environmental protection, a growing population, and changes in agriculture.

At the same time, multiple coordinated, smaller scale, and shorter-term (1-5 years) efforts are equally critical to prepare for the next drought. This is particularly true in how we address drought resilience at regional and local levels where there can be a lack of "baseline" water infrastructure to support community-level drought resiliency and specifically the Human Right to Water.

Both backbone and baseline water infrastructure are thus needed and should be simultaneously planned for improvement and scaled to address future drought expectations. While backbone infrastructure has the "Hotter, Drier" strategy, for baseline infrastructure, there may still be gaps in planning and strategy for future needs. Near-term, small-scale actions could be identified, for instance, by utilizing existing information at the State and federal level (e.g., applications for grant and loan programs, formal needs surveys) and especially planning developed at the local level itself (e.g., water supply master plans, capital improvement plans). A review of this available information could lead to a formal strategy, complementary to "Hotter, Drier," that prioritizes and expedites shorter-term, local projects to be better prepared for the next drought.

Specific topics for consideration:

- Think Small Scale and Protection
- Backbone of Water Supply System and More
- Improve System Flexibility

Problem Statement Subtopics

New Water Sources

As mentioned in the Governor's 2022 Water Supply Strategy, securing new water sources is one of the major actions to address future water supply needs.

Capturing stormwater, desalinating ocean and salty groundwater sources, implementing recycled water use are needed. Implementation of water infrastructure such as treatment facilities or conveyance and distribution networks are key to support these new water sources.

Identify Vulnerability of Users

Some past drought response actions, such as providing grants to support regional and local response actions, indicate that more than providing hauled and/or bottled water is needed during drought.

Communities can be vulnerable to a host of issues during droughts, such as system delivery interruption, water quality issues, or limited ability to measure and restrict water use because of infrastructure limitations.

Improve System Flexibility

Like other types of systems, water infrastructure systems can be limited or impaired to react to changing conditions or demands such as during drought or flood.

When drought and water shortages occur, water systems can lack the ability to access or deliver from alternative water sources. For example, communities that are reliant solely on groundwater may be challenged to receive and distribute other water sources such as imported water.

Identify Local Gaps

Due to the variety of water infrastructure and systems in California (e.g., small water systems, state small water system, domestic wells, etc.) in combination with different uses and application of water on a variety of landscapes, local conditions can be different.

A greater understanding of these differences, would require surveying communities around the state to identify local issues and gaps that communities face such as the need to develop a portfolio of sources.

Water Infrastructure and Planning Discussion

1. Does the problem statement generally reflect current challenges and potential opportunities of this focus area?

2. Do we have the right set of subtopics that can serve as a foundation for developing recommendations?

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Public Comment
2025 Focus Areas Problem Statements

1. In-person participants
2. Virtual participants:
    a) Raise your hand with the "Raise Hand" feature in Zoom and you will be asked to unmute and speak.
    b) Send a Zoom chat to the webinar manager if you need technical assistance.
    c) If you are dialing in by phone, dial *9 to raise your hand and dial *6 when it you are called on to speak.

FA1: Reducing Ecosystem Impacts of Drought
FA2: Land Use Planning for Drought Resilience
FA3: Water Infrastructure and Planning

Orit Kalman

2025 RECOMMENDATIONS DEVELOPMENT BREAKOUT SESSION

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Recommendation Development Process

IDENTIFICATION
Initial ideation of potential recommendation idea.

DEVELOPMENT
Build out the details of the recommendation using the updated template.

REVIEW
Facilitate member feedback and public input. Gauge the support and identify concerns.

REFINEMENT
Address concerns and refine recommendation.

DETERMINATION
Final review. Conduct a formal poll to determine collective support.

A DRIP Collaborative Recommendation:

A thoughtful, formal suggestion that addresses the issue or challenge described in a Problem Statement, providing solutions that are specific and actionable related to the preparation of, responding to, and recovering from periods of extreme water shortages and drought.

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Breakout Session Instructions

ROUND I [40 min]

GATHERING [5 min] Highlight the sub-topics from problem statement and any initial ideas already generated

IDEAS DEVELOPMENT [30 min]

- Each participant is invited to share a recommendation idea (2 min/participant)
- Other participants, can build on the suggested idea or suggest a new one
- The group host will track all ideas
- Consider how the ideas specifically address the problem statement/sub-topics – be as explicit as possible

POLLING ON PREFERRED OPTIONS [5 min]

- Identify 2- 3 ideas to share in the report out
- Consider your interest in working on the generated ideas (any Rec leads?)

Transition [5 min]
Join your second discussion

ROUND II [40 min]

GATHERING [5 min] Highlight the sub-topics from problem statement and review ideas generated in Round I

IDEAS DEVELOPMENT [30 min]

- Build on the proposed ideas or suggest new ones
- Provide feedback on Round I preferred ideas
- The group host will track all ideas
- Consider how the ideas specifically address the problem statement/sub-topics – be as explicit as possible

POLLING ON PREFERRED OPTIONS [5 min]

- Identify 2- 3 ideas to share in the report out
- Consider your interest in working on the generated ideas (any Rec leads?)

Breakout Session Assignments – Round I

FA1. Reducing Ecosystem Impacts	FA2. Land Use Planning	FA3. Water Infrastructure and Planning
Alvar Escriva-Bou	Andrew Altevogt	Carolina Hernandez
Brent Hastey	Anna Schiller	Cyril Barmore
Natalie Kuffel	Catherine Freeman	Emily Rooney
Redgie Collins	Jason Colombini	John Andrew
Samantha Arthur	Katie Ruby	Katy Landau
	Rose Nguyen	Kyle Jones
	Sierra Ryan	Laura Ramos
	Suzanne Pecci	
	Tami McVay	
	Tim Worley	
	Virginia Jameson	

Breakout Session Assignments – Round II

FA1. Reducing Ecosystem Impacts	FA2. Land Use Planning	FA3. Water Infrastructure and Planning
Anna Schiller	Brent Hastey	Alvar Escriva-Bou
Laura Ramos	Carolina Hernandez	Andrew Altevogt
Sierra Ryan	Cyril Barmore	Catherine Freeman
Virginia Jameson	Emily Rooney	Jason Colombini
	John Andrew	Katie Ruby
	Katy Landau	Rose Nguyen
	Kyle Jones	Suzanne Pecci
	Natalie Kuffel	Tami McVay
	Redgie Collins	Tim Worley
	Samantha Arthur	

BREAK!

PLEASE RETURN AT:
3:45 pm

Co-Leads

REPORT OUT AND NEXT STEPS

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Focus Areas Co-Leads Report Out

Report out on discussions (10 minutes each)

- Any changes/additions to the subtopics under the focus area.
- Recommendation ideas (1-3) that members are interested in developing further.

Next steps

- Identify leads for proposed recommendations ideas
- Participate in a June meeting to develop the recommendations using the recommendation template outline (to be scheduled asap)

FA1. Reducing Ecosystem Impacts of Drought
Focus Area Report Out

Top three recommendation ideas

Recommendation Idea	Subtopic
Prioritization of in-stream flow requirements for streams of high ecological function and pick a pilot Project	1
Incentives for setting instream flows: landowner cooperative agreements modelled off e-regs in the Shasta & Scott Regulations	1
Granting & contracting streamlining to make restoration less expensive and more accessible	2
Incorporated watershed plans in the General Plan Guidelines + incentives for implementation	3
Ease of permitting, increase pace of cutting green tape incentives	2/4

Additional ideas that were identified in discussion:

Subtopics:

1. Environmental Flow Protections
2. Habitat Restoration
3. Integrated Planning
4. Existing Tools & Regulations
5. Other?

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FA2. Land Use Planning for Drought Resilience Focus Area Report Out

Recommendation Idea	Subtopic
Extend support for Multi-Benefit Land Repurposing Program (MLRP)	Rural, Ag, Recharge
Housing-Water Nexus: Regional Housing Needs Assessment Allocation – timing coordination with water supply; being able to designate more areas where you can't add more people because there is no long term water supply; lean in on where it can be absorbed into existing capacity. How do you quantify the impacts of rural developments even when there is no water supplies?	Urban, Rural
Assess how plans interact and make recommendation for how to integrate/coordinate better; GSP, UWMPs, Drought Plans, General Plans	Rural, urban, all?
Transfer of Development Rights (TDR)	
Ag-Res: limit or create new monitoring requirements for new development in rural areas.	

Additional ideas that were identified in discussion:

- Recharge to add to infrastructure, but touches on LUP
- Watershed/bioregional planning for General Plan- particularly for water

Subtopics:

1. Rural Development
2. Urban Development
3. Agriculture Economies and Land Use Transitions
4. Groundwater Recharge and Sustainability
5. Other?

FA3. Water Infrastructure and Planning Focus Area Report Out

Top three recommendation ideas

Recommendation Idea	Subtopic
• Develop green infrastructure investment plan with the intention of growing more fish and more flows under ESA flow requirement, ultimately benefit water supply.	
• Partnerships in the SJV among parties who have access to and water rights to develop infrastructure to move water	
• **Identifying next steps, planning gaps, and solutions for vulnerable communities and explore more stable funding solutions.	
• **Improve systems and regulatory flexibility. • Identify local gaps. • **GW recharge and nature-based solutions be included as new water source.	

Subtopics:

1. New Water Sources
2. Identify Vulnerability of Users
3. Improve System Flexibility
4. Identify Local Gaps
5. Other?

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Public Comment
Recommendation Ideas Report Out

1. In-person participants:
    a) Submit a comment card before or during the break.
2. Virtual participants:
    a) Raise your hand with the “Raise Hand” feature in Zoom and you will be asked to unmute and speak.
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Selection of 2025 Recommendation Ideas
DRIP Collaborative Vote

Ecosystem

1. Prioritize in-stream flow requirements for streams of high ecological function and pick a pilot project (Redgie)
2. Incentives for setting in-stream flows; Landowner coop agreements (Kyle) - COMBINE with #1?
3. Granting and contracting streamlining (Redgie/Samantha)

Land Use

1. Extend support for Multi-Benefit Land Repurposing Program (MLRP) (Anna)
2. Housing water nexus: RHNA allocation – timing coord w/ water supply (Sierra/Natalie)
3. Assess how plans interact and offer recommendations (GSP, UWMPs, Drought Plans, General Plans) (Sierra/Natalie)

Water Infrast.

1. Identifying planning gaps and solutions for vulnerable communities and explore more funding solutions (Kyle/Carolina)
2. Improve systems and regulatory flexibility (Laura/Katie)
3. GW recharge and NBS be included as new water sources (Kyle/Emily)

Considerations for selecting recommendation ideas for development:

- ✓ **Impact:** Does the recommendation idea explicitly address the Problem Statement/sub-topics?
- ✓ **Relevance:** Does the recommendation idea align with the DRIP Collaborative purpose?
- ✓ **Capacity:** Is there sufficient interest from members to develop this recommendation idea?

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NEXT STEPS

- ✓ May 16 meeting summary will be done in next 1-2 weeks
- ✓ Schedule Focus Area meetings in June to work on the recommendations (finalize which recs to develop)
- ✓ Use the updated Recommendation Template to prepare draft recommendations to be shared at the DRIP Collaborative July meeting (while acknowledging that NOT all recs may be fully ready for July 18)

Updated Recommendation Template

1. General Description
- Recommendation title
- Description
- Focus area
- Desired outcomes

2. Alignment with Other Initiatives

3. Implementation Considerations
- Implementing parties and partners
- Time frame
- Necessary steps and measuring success
- Potential challenges
- Funding

4. Cross Cutting Themes (informed by morning discussion)
- Climate Change Adaptation
- Nature Based Solutions
- Equity and Outreach

2025 Proposed DRIP Collaborative Timeline

Feb 2025
Launch 2025 process. Select State and Non-State leads. Align on roles

Mar/Apr 2025
Conduct virtual discussions for focus area problem statements

May/Jun 2025
Align on recs, begin populating rec templates

Aug/Sep 2025
Complete rec templates (where possible)

Nov/Dec 2025
Write DRIP Report and plan for 2026

In-Person Meeting

Virtual Meeting

**Note: The timeline for each focus area/workgroup will vary and may extend beyond the proposed 2025 timeline.*

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Public Comment

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Anthony Navasero, California Department of Water Resources

CLOSING COMMENTS

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Adjourn

Thank you!