



California
DRIP Collaborative

Meeting #4

Drought Resilience Interagency & Partners (DRIP) Collaborative

Friday April 26th, 2024
California Natural Resources Agency
715 P Street, Sacramento, CA
Room 221-A/B (Second Floor)

Meeting Information

1. This meeting is being live streamed and recorded.
2. Members of the public are welcome to listen. A public comment session is included later in 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!

Meeting Objectives

Objective #1: Ensure we're all clear on the recommendation process and how that structure will help inform 2024 efforts for the DRIP Collaborative.

Objective #2: Listen to DRIP member presentations on proposed recommendations within DRIP Collaborative focus areas and provide input for recommendation development.

Objective #3: Discuss process for DRIP member extension.

Meeting Agenda

1. Welcoming Remarks and Setting Intentions
2. Informational Updates
3. Overview and Discussion of California Water Commission White Paper
4. Recap Initial Focus Areas, Inaugural Report and Recommendation Process
5. Presentation and Discussion of DRIP Collaborative Recommendations
6. LUNCH
7. Presentation and Discussion of DRIP Collaborative Recommendations (Part 2)
8. BREAK
9. Expectations Moving Forward
10. Discuss DRIP Collaborative Member Extension Process
11. Public Comment
12. Action Item Review and Closing Comments

John Andrew, CA Department of Water Resources

WELCOMING REMARKS



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))

Anthony Navasero, CA Department of Water Resources

SETTING INTENTIONS

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 – Implementation

High impact, more difficult work. System change (as needed)

2025+

DRIP Collaborative: Our process so far

April 6th, 2023 DRIP Meeting #1

- Introductions
- Building relationships
- Hearing individual priorities
- Initial ideation and shared goals

July 20th, 2023 DRIP Meeting #2

- Define process
- Deepen relationships
- Explore key themes and priorities
- Achieve initial level of possible focus areas

October 25th, 2023 DRIP Meeting #3

- Identify initial 3 focus areas and their working problem statements
- Discuss approach to other focus areas
- Create list of knowledge development topics

April 26th, 2024 DRIP Meeting #4

- Ensure clarity on process for recommendations
- Discuss recs for the initial 3 focus areas
- Touch upon next focus areas for 2025

Aug/Oct 2023

Virtual Meetings (VM)

- Gather input on initial focus areas
- Prep for problem statement discussions

Jan/Feb/Mar 2024

Virtual Meetings (VM)

- Intro rec process
- Prep for April recommendations discussion

A Few Key Themes from 2023

Form real connections...

"Puzzle pieces. **DRIP Collaborative is the forum to put those puzzle pieces together.** A collaborative forum to find the connections and synergies." - Anna Naimark, Cal EPA

"We need to **define interconnections between ongoing work (such as SB 552, SGMA, new drought orders, etc.)** and how DRIP will work. **We need to find efficiencies.**" - Sierra Ryan, Santa Cruz County

"This is a little overwhelming, but I'm super appreciative. **Drought is across everything that we all work on. Having different perspectives and interests and connections is going to be super helpful.**" - Josh Grover, CDFW

...so we can work on the right proactive opportunities.

"More **proactive communication and coordination**, particularly on messaging. Identify strategies where we have common goals, despite different interests." Katie Ruby, CUWA

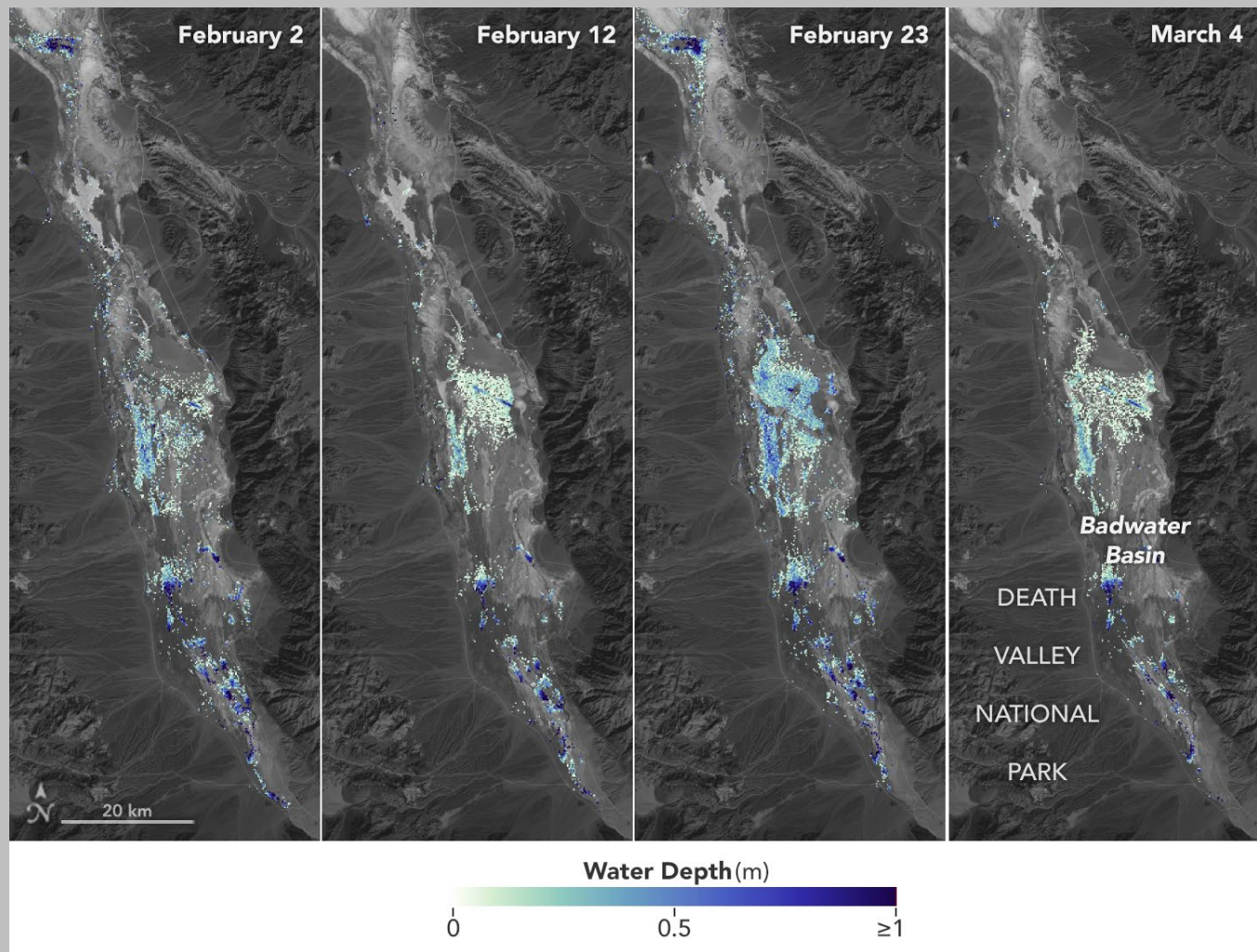
"We need to find the right pace for this work, so we're not in a panic (like in 2014) or complacent. **We need to institutionalize drought planning. Dedicated, not sporadic.**" - Nancy Vogel, CNRA

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

Jeanine Jones, CA Department of Water Resources

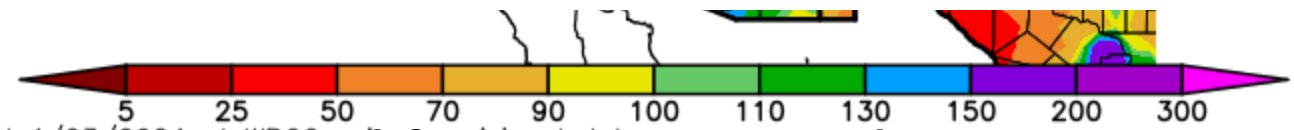
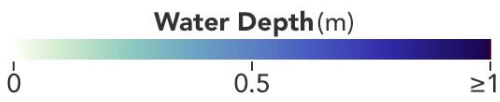
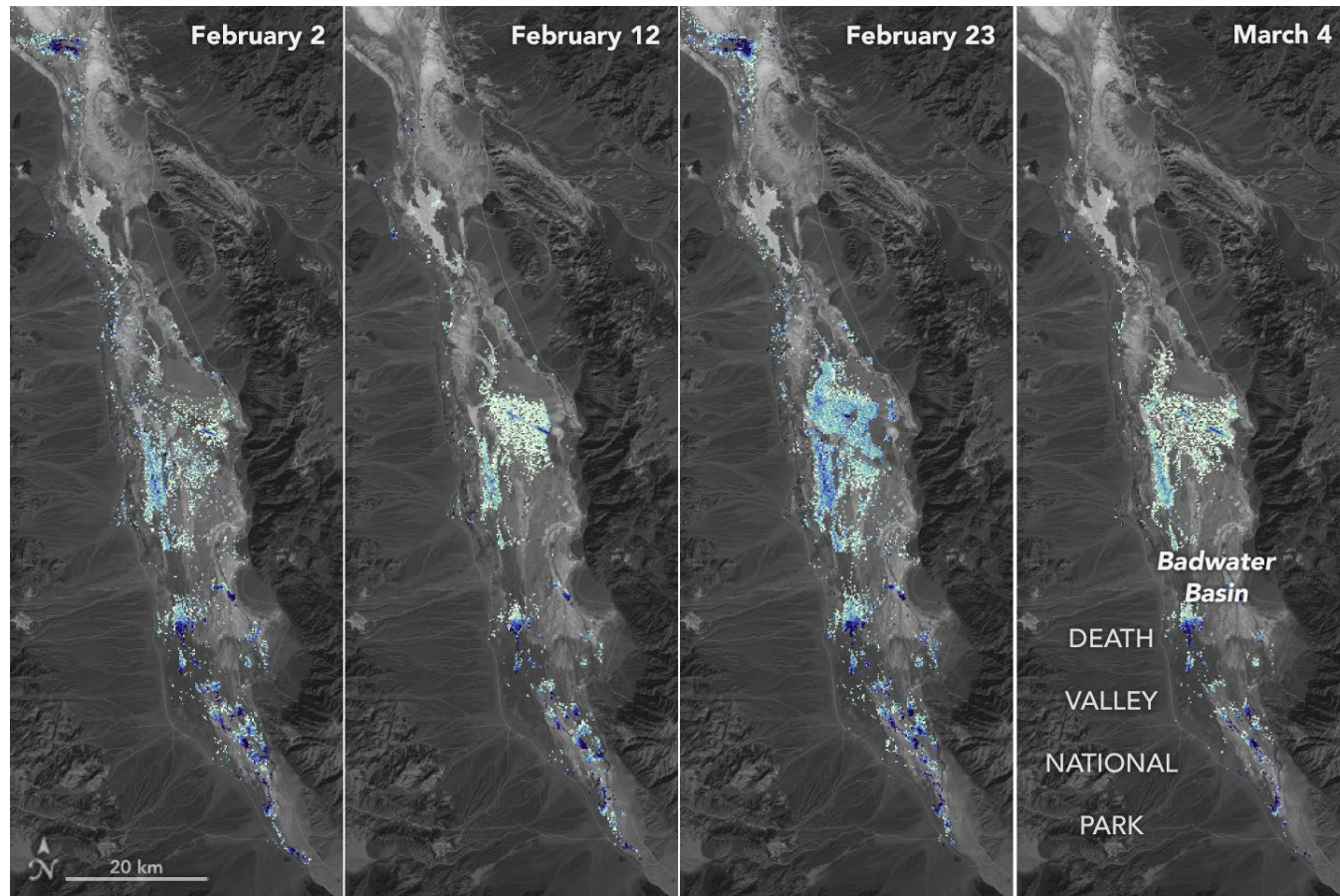
INFORMATIONAL ITEM 1

HYDROLOGY & CONDITIONS UPDATE



California Water Conditions

Jeanine Jones, California Department of Water Resources

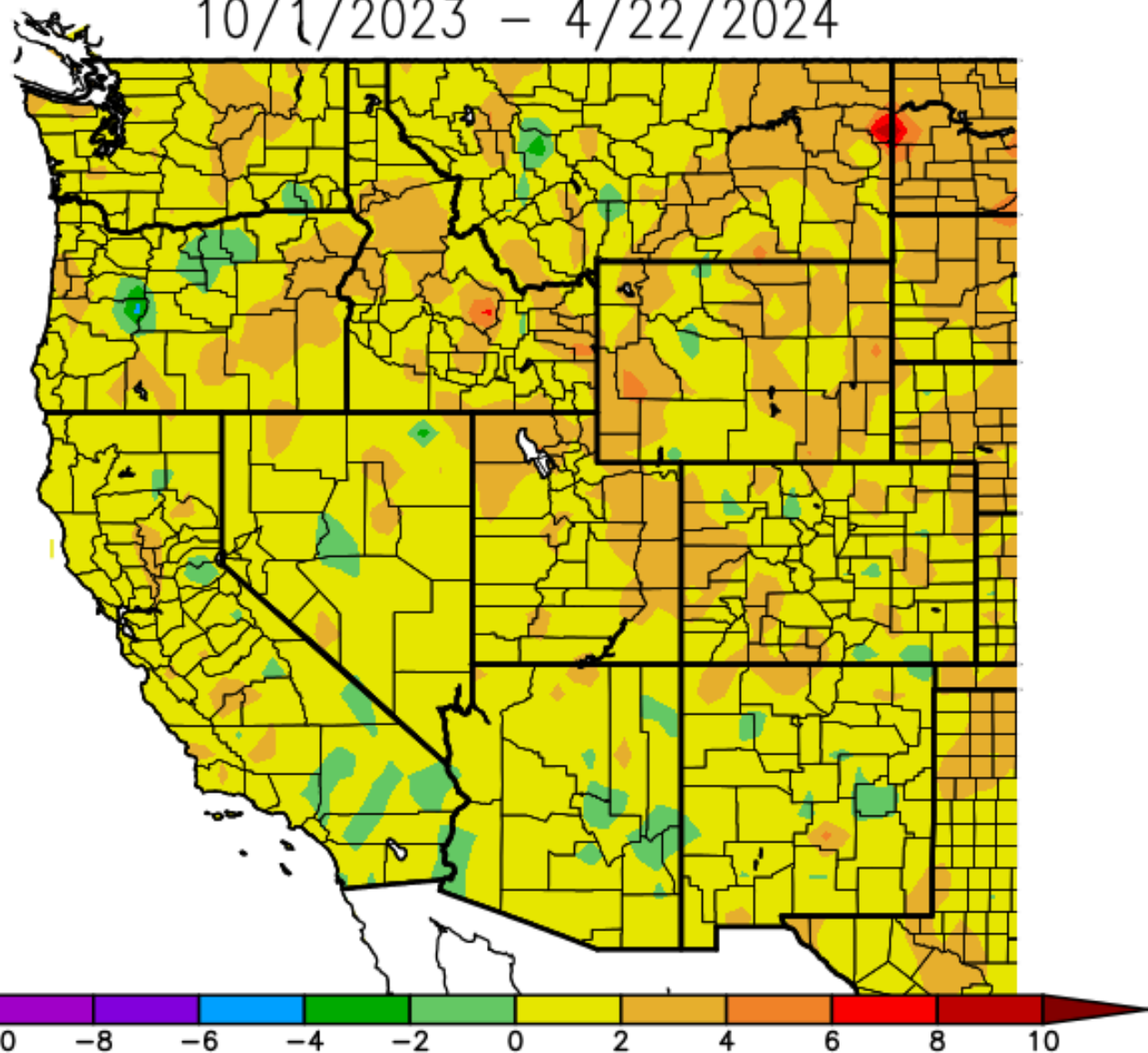


Generated 4/23/2024 at WRCC using provisional data
NOAA Regional Climate Centers

California Water Conditions

Jeanine Jones, California Department of Water Resources

Ave. Temperature dep from Ave (deg F)
10/1/2023 - 4/22/2024



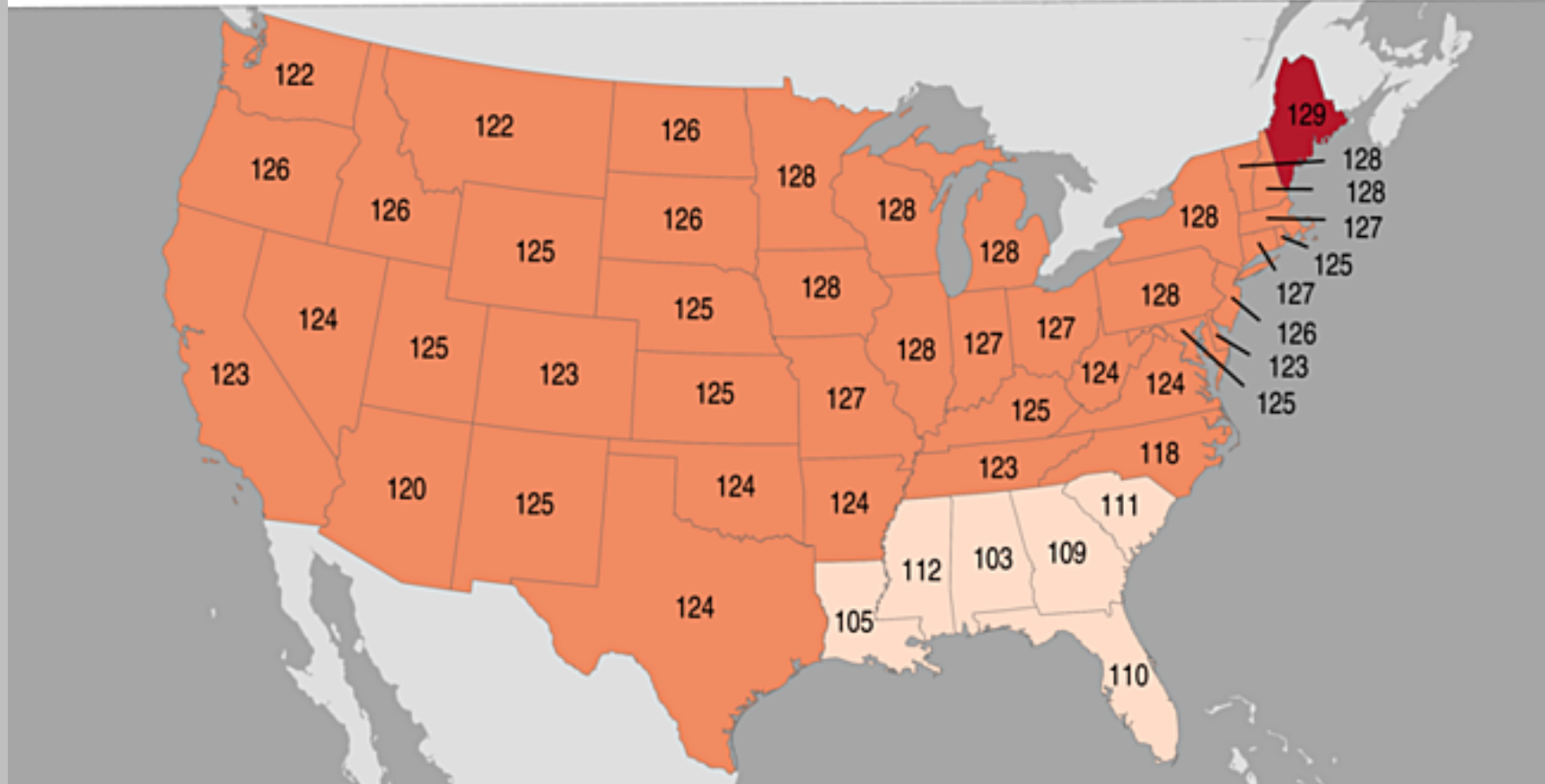
Generated 4/23/2024 at WRCC using provisional data.
NOAA Regional Climate Centers

Statewide Average Temperature Ranks

October 2023 – March 2024

Ranking Period: 1895–2024

NOAA's National Centers for Environmental Information



Created: Thu Apr 4 2024
Source: nClimGrid – Monthly



California Average Temperature January - December

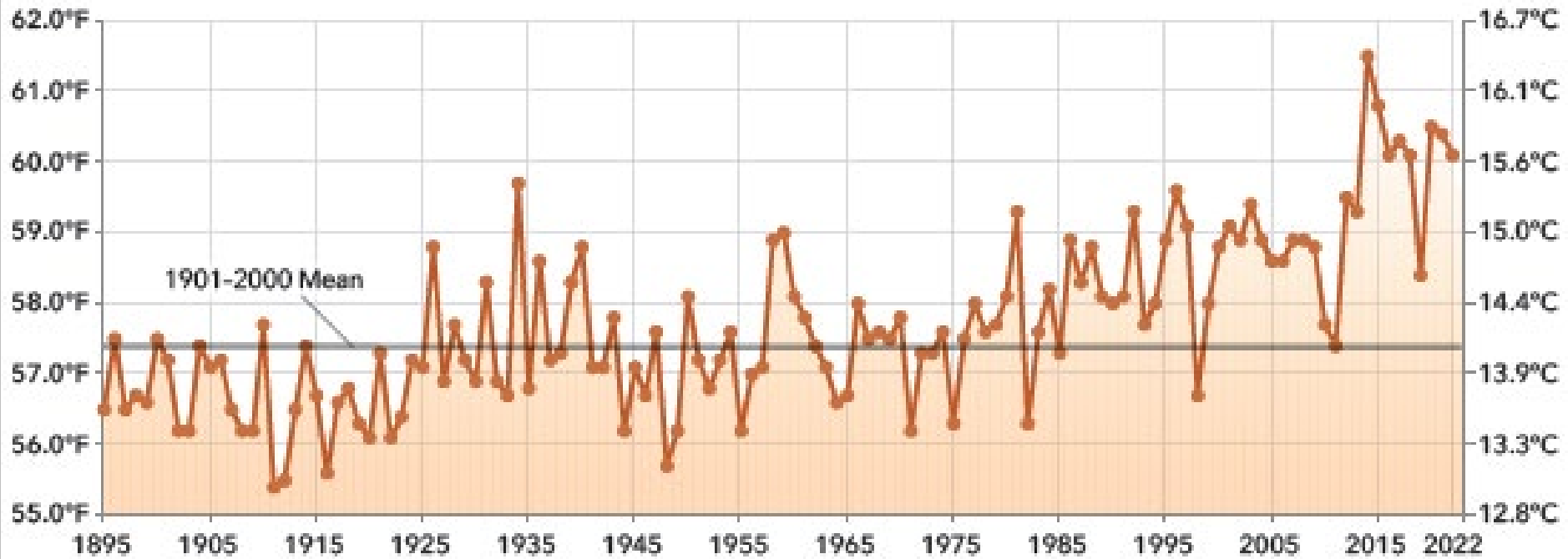
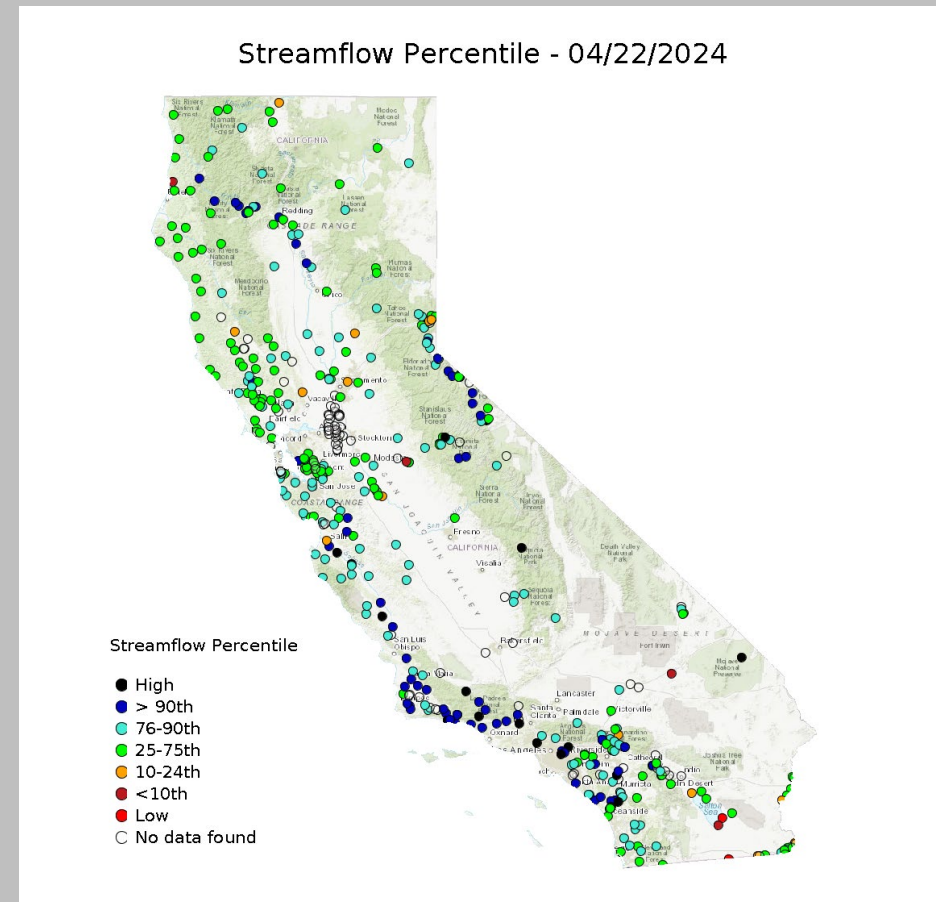


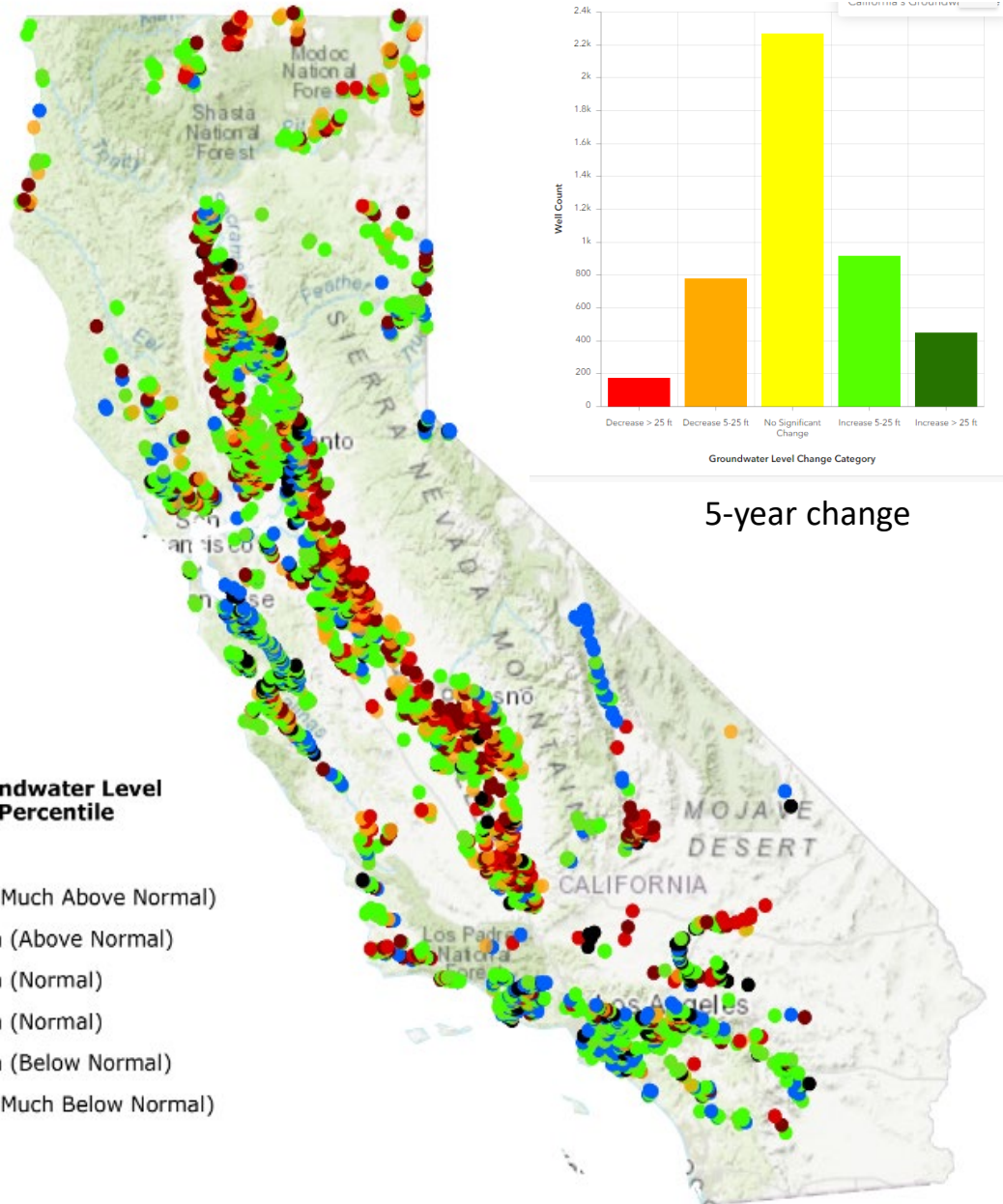
Figure credit: NOAA National Centers for Environmental Information

Current Conditions

- Statewide precipitation 106% of average for this time
- April 1st statewide snowpack was 110% of average (sensor data)
- Statewide reservoir storage 118% of average for this time



Groundwater Level Percentile - 04/21/2024



5-year change

Map shows 1-year change, bar chart 5-year change. Results on map show influence of recent wetness.

For 2023-24 data

DWR Bulletin 120 Runoff Forecasts for Sierra-Cascades Rivers (Apr – July Runoff)

- Sacramento Valley basins: 88% of average for the Sacramento River at Bend Bridge to 102% of average for the Feather River
- San Joaquin River basins: 99% of average for the Merced River to 105% of average for the Mokelumne River
- Tulare Lake basin: 101% of average for the Kaweah River to 106% of average for the Tule River

WY 2024 Key Points

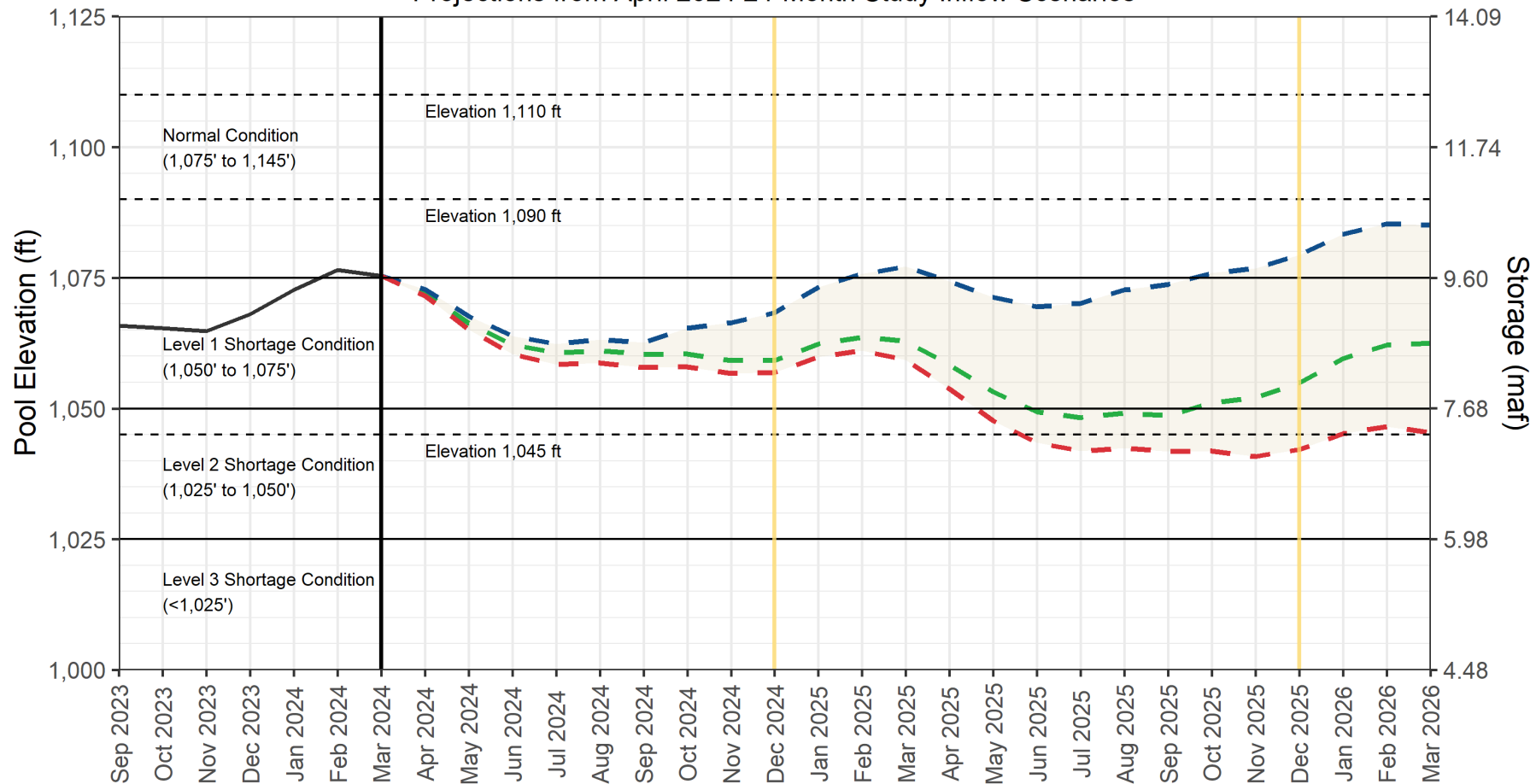
- Abnormally average at statewide level
- Very wet in coastal SoCal (extensive urban flooding) and parts of SoCal desert
- Widespread landslides in urban SoCal (more than 500 in City of LA in February)
- Who knew kayaking in Death Valley was a thing?



Water Project Allocations

- SWP: 40%
- Colorado River: 2024 AOP not yet signed
- CVP:
 - NoD, 100%
 - SoD Ag, 35%
 - SoD Urban, 75%
 - Friant, 95%
 - Eastside, 100%
- KLAMATH PROJECT DROUGHT RESPONSE AGENCY 2024 ASSISTANCE PROGRAM – NO IRRIGATION POLICY
- United States Natural Resource Conservation Service and Bureau of Reclamation’s forecasts for 2024 indicate that inflows to Upper Klamath Lake will be below normal, resulting in a water supply that will not meet irrigation demands within the Project. The purpose of this 2024 Assistance Program – No Irrigation (Program) is to help align Project water supplies and demand for irrigation water by providing financial assistance to agricultural producers for reducing the demand and use of Project water as defined in this Policy.

Lake Mead End-of-Month Elevations Projections from April 2024 24-Month Study Inflow Scenarios



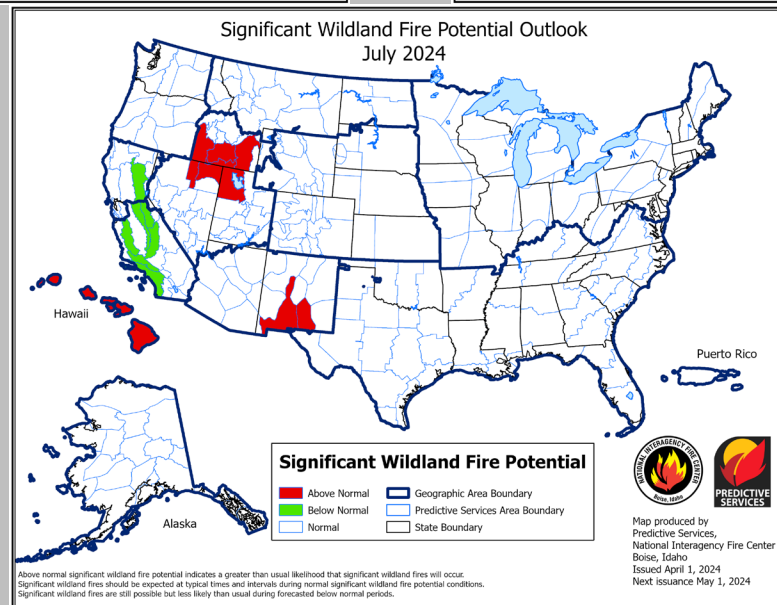
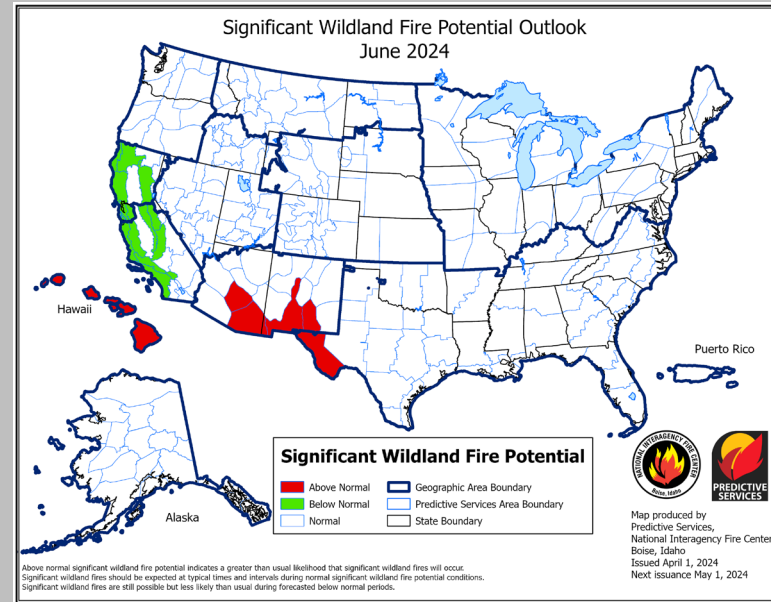
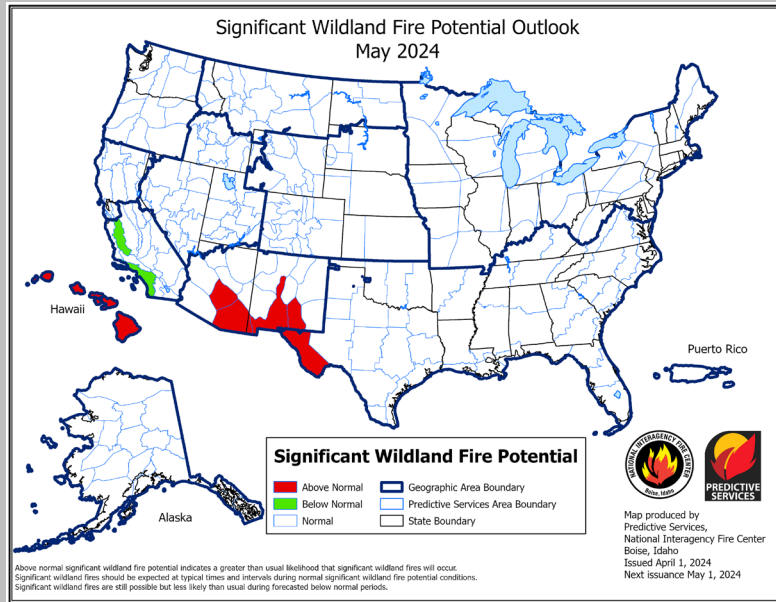
- Historical Elevations
- April 2024 Probable Maximum Inflow with a Lake Powell release of 7.48 maf in WY 2024 and 9.00 maf in WY 2025
- April 2024 Most Probable Inflow with a Lake Powell release of 7.48 maf in WY 2024 and WY 2025
- April 2024 Probable Minimum Inflow with a Lake Powell release of 7.48 maf in WY 2024 and WY 2025

The Drought Response Operations Agreement (DROA) is available online at <https://www.usbr.gov/dcp/finaldocs.html>.



BUREAU OF
RECLAMATION

National Interagency Fire Center Outlooks





No super bloom at Antelope Valley State Poppy Reserve this year

Julie Ekstrom, CA Department of Water Resources

INFORMATIONAL ITEM 2

SB 552 COUNTY TASK FORCE IMPLEMENTATION

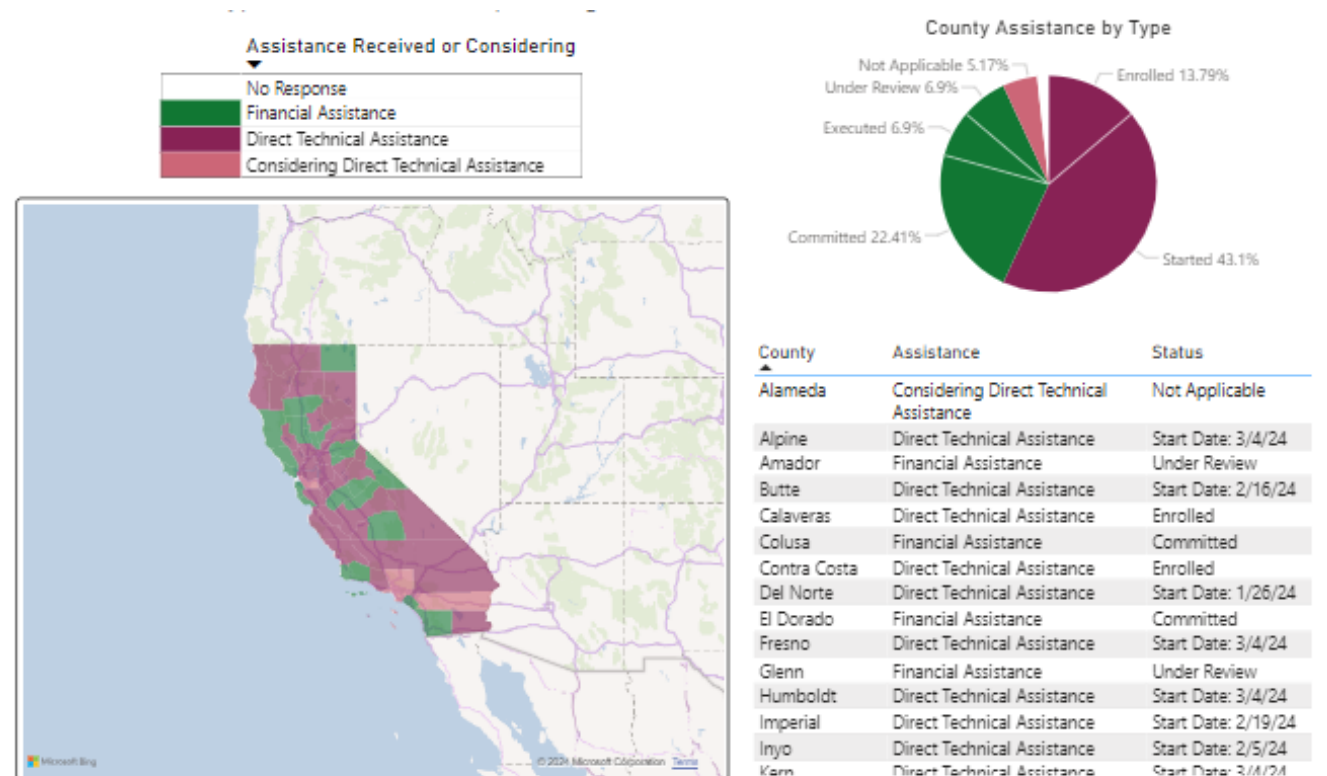
Status Report on SB 552 by Counties

Implementation Status



Assistance Program Participation (Plan & Task Force Development)

- 20 county grants (+one pending)
- 35 counties enrolled in Direct Technical Assistance
- 1 in discussion



Sandi Matsumoto, California Water Commissioner and The Nature Conservancy

CALIFORNIA WATER COMMISSION

OVERVIEW AND DISCUSSION OF DROUGHT WHITE PAPER



Potential State Strategies for Protecting Communities and Fish and Wildlife in the Event of Drought

Drought Resilience Interagency & Partners (DRIP) Collaborative Meeting
April 26, 2024

Sandi Matsumoto
California Water Commissioner

California 
WATER COMMISSION



The California Water Commission

Promoting smart water policy today for a sustainable California tomorrow

Mission: Using its public forum, the Commission explores water management issues from multiple perspectives and formulates recommendations to advise the Department of Water Resources, and as appropriate, the California Natural Resources Agency, the Governor and Legislature on ways to improve water planning and management in response to California's changing hydrology.

History: Today's Commission traces its roots back to the mid-1950s, when the California State Legislature created the Department of Water Resources. Members are appointed by the Governor and confirmed by the State Senate. Seven members are chosen for their general expertise related to the control, storage, and beneficial use of water, and two are chosen for their knowledge of the environment.

Action 26.3: Develop strategies to protect communities, fish and wildlife in the event of drought

- Commission's engagement was requested by the secretaries of CNRA, CDFA, and CalEPA.
- Commission staff presented to DRIP in July 2023.
- White Paper with potential strategies and State actions was released in January 2024.

[cwc.ca.gov/-/media/CWC-Website/Files/Documents/2024/01 January/Drought-Strategies-White-Paper Final](https://cwc.ca.gov/-/media/CWC-Website/Files/Documents/2024/01_January/Drought-Strategies-White-Paper_Final)



The Commission's work on drought ...

- Places drought in the context of climate change. Things are getting hotter and drier, and the state will continue to have periods of drought.
- Builds on existing State actions and complements the Water Supply Strategy.
- Over the course of 18 months, the Commission developed and vetted four potential drought strategies with extensive input from:
 - Tribes
 - Local and State agencies
 - Water districts
 - Communities
 - Nonprofits
 - Academia
 - Special districts
 - Agriculture
 - Environmental groups
 - Other states and countries

Four key drought strategies

1. Scale up groundwater recharge
2. Conduct watershed-level planning to reduce drought impacts to ecosystems
3. Better position communities to prepare for and respond to drought emergencies
4. Support improved coordination, information, and communication in drought and non-drought years



Commission's overlap with DRIP Collaborative priorities

Near-term DRIP priorities:

- Drought preparedness for domestic wells
- Drought-relevant data
- Drought definition and narrative



Drought preparedness for domestic wells

- Make climate disaster funding more nimble and easier to obtain for those doing emergency response on the ground.
- Ensure SB 552 drought resilience plans are being developed and used as intended.
- Identify recharge opportunities that benefit communities; provide financial incentives for these projects.

Drought-relevant data

- Data takes people-power to manage and make useful.
- Consistent information starts with having a standing interagency group that can take action to plan for and respond to drought.
- Continue to push for seasonal and sub-seasonal forecasting.

Drought definition and narrative

- Create a public information campaign related to drought in the context of increasing aridity.
 - New messaging extends beyond drought as a periodic emergency.
 - Introduce terms and concepts of “aridity” and “water scarcity.”
- Develop metrics to track impact of campaign.
- Push State leaders to talk about drought even when we are not in a drought.

Drought protections for fish and wildlife

- Ecosystem water supply needs and the California Environmental Flows Framework (CEFF).
- Regulatory and proactive approaches.
- Assess lessons learned from 2020-22 drought and develop plans for next drought emergency.
- Vocal support for key efforts that are already underway.

Other areas of DRIP interest

Land use: Make recommendations on how to build better programs for repurposing/temporarily fallowing ag land to improve drought resilience.

Drought planning: Call for an interagency group to develop a drought framework/decision-tree that spells out what happens when drought emergency is declared.

Groundwater recharge: Work closely with the flood management community.

Questions?

Commission contact: Laura Jensen
Assistant Executive Officer
(916) 820-5897
laura.jensen@water.ca.gov

DRIP Collaborative Inaugural Report

Recently Released!

Drought Resilience Interagency and Partners (DRIP)
Collaborative

Report on 2023 Activities for the DRIP Collaborative

April 2024



California Department of Water Resources
Water Use Efficiency Branch

RECAP INITIAL FOCUS AREAS AND RECOMMENDATION PROCESS

Focus Areas, Problem Statements, Recommendations

Focus Area

Focus Areas are **ideas, opportunities, and aspirations** that DRIP Members have identified as **important to improved California drought resiliency**. These were captured on the Reference List and are sequenced and prioritized based on feedback during in-person and virtual meetings (VMs).

Problem Statement

A Problem Statement is a **concise description of the issue or challenge faced by a Focus Area**. Developed by DRIP Members, Problem Statements seek to **capture the essential problems** within each Focus Area, including identification of key sub-topics within each focus area.

Recommendation

A DRIP Recommendation is 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.

2023 Focus Area Discussion



What's a Focus Area? Ideas, opportunities, and aspirations that DRIP members have identified as important to improved California drought resiliency. These were captured on the Reference List. Each focus area is intended to be specific and actionable for DRIP.

Approach: In August 2023 there was a series of three virtual meetings for DRIP members to discuss the topic of focus areas. These were refined further in our Oct 2023 group meeting

Outcomes: Three focus areas were aligned on for 2024 action. Other focus areas were also discussed.

Initial focus areas:

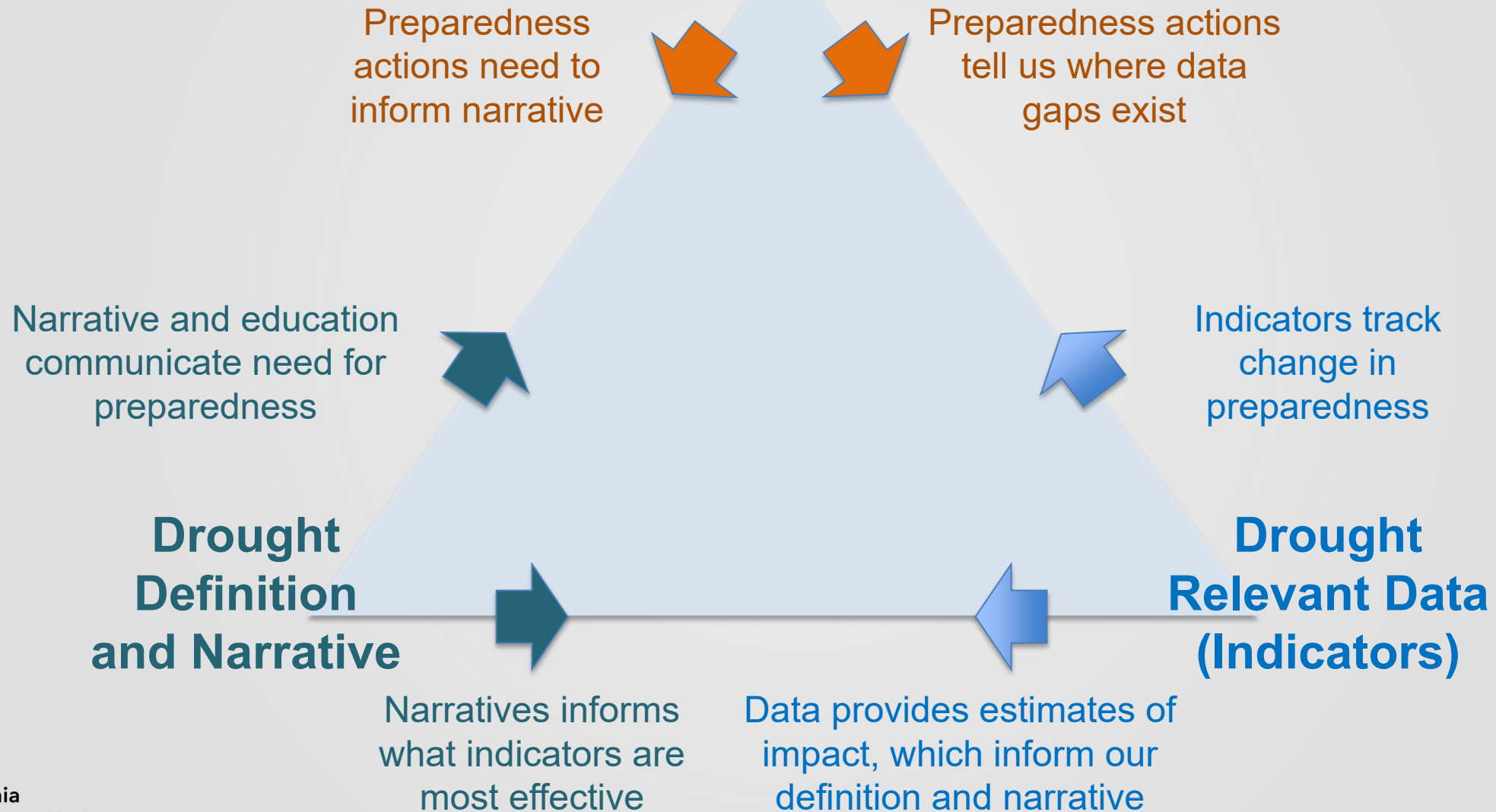
- Drought Relevant Data
- Drought Preparedness for Domestic Wells
- Drought Definition & Narrative

Other focus areas:

- Water Resources and Operations
- Land Use Planning
- Water Infrastructure and Planning
- Integrating Climate Change Adaptation
- Nature Based Solutions
- Reducing Ecosystem Impacts

Today's Focus Areas: Highly related

Drought Preparedness for Domestic Wells



Member quotes: Making recommendations

Members have consistently stressed the need for DRIP recommendations to include suggested mandates and clear policy linkages in the final problem statements/actions.

DRIP Members want to take action

- “We need to make recommendations and take action.”
- “How do we make this work impactful? Put energy into very thoughtfully defining problems, the actions, the connectivity, and who needs to be involved so agencies and stakeholders can take action.”
- “Define actions that requires agencies to work together across the state. DRIP could inform this and craft what the action looks like.”

A clear coordinated, process is needed to make those recommendations

- “This group was formed because there is a lack of efficient communication. We need a formal process to bring issues this group talks about forward.”
- “The desired outcome is to leverage our respective authorities, champion our energy and improve coordination. Make recommendations for state agencies to pursue, from federal, state to local. We convene as a hub for solutions.”
- “Clarity is needed on how we bring in broader networks. We need our unified vision and messaging.”

Recommendation Process

Principles



Process Design: Collaborative, iterative and transparent. High visibility, light touch.



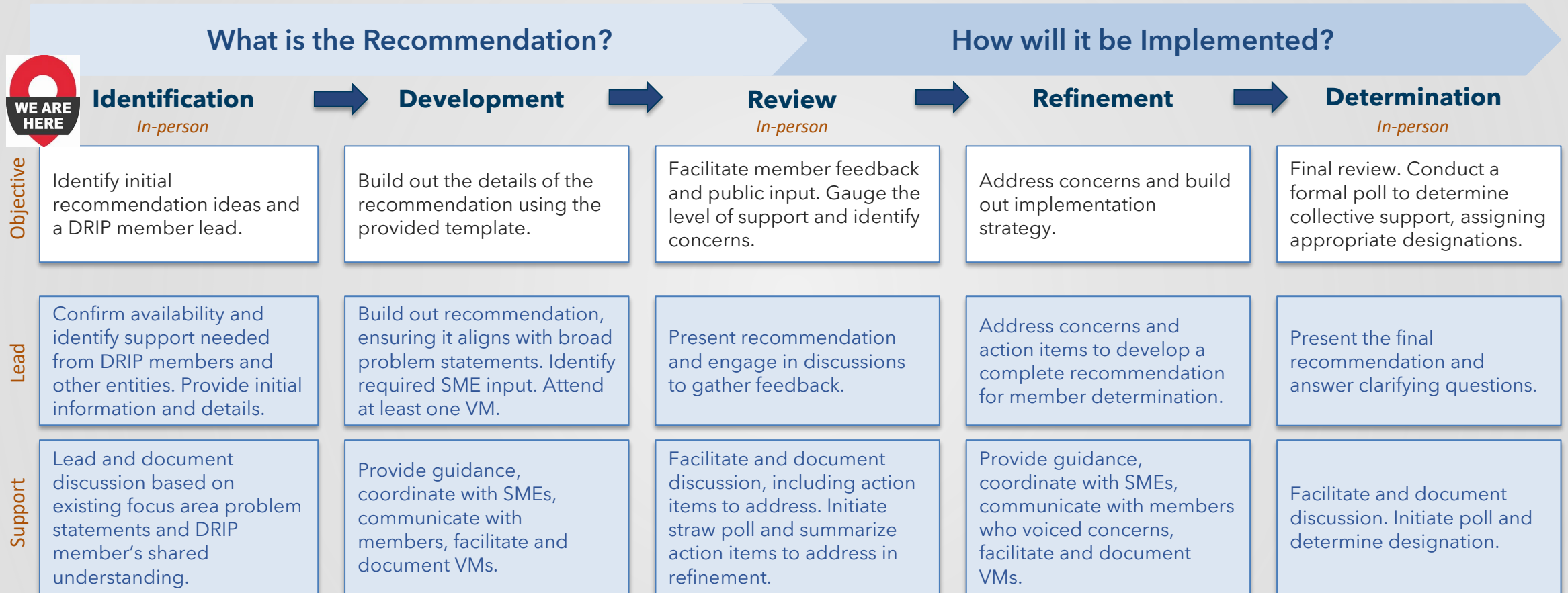
Member Driven: Recommendations are developed by DRIP Members with the goal of consensus but acknowledgement that support may vary by individual Members.



Flexible Timing: Each recommendation is unique. Some may be quick, others may take more time. The process ensures input from SMEs, public, and represented constituencies. Workgroups will be formed to aid efficient development.

Recommendation Process

Timeline

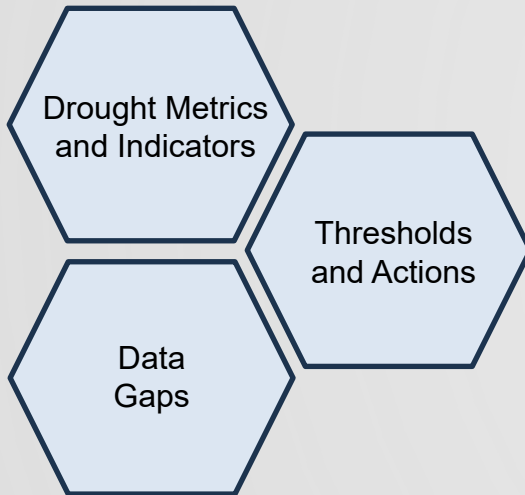


Summary - DRIP Recommendations

Recommendation Ideas mentioned in the Virtual Meetings

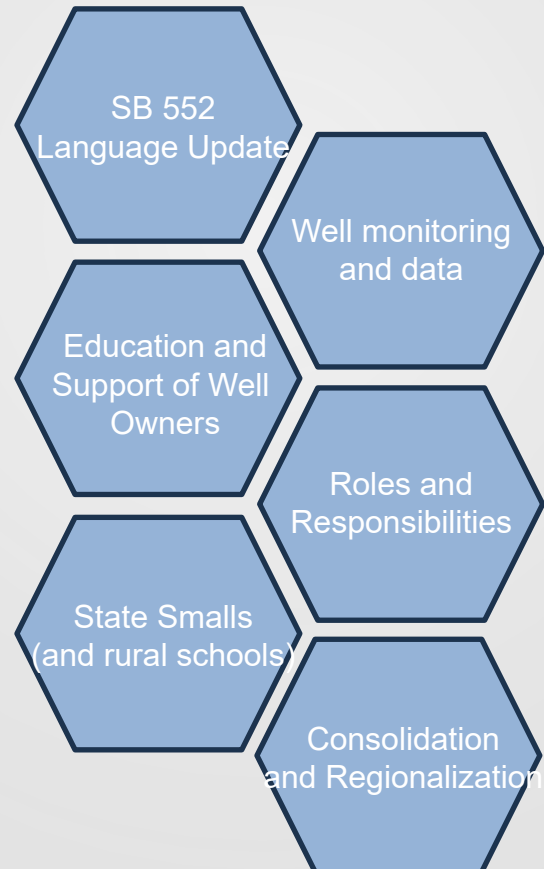
Drought Relevant Data

(February 23 Discussion)



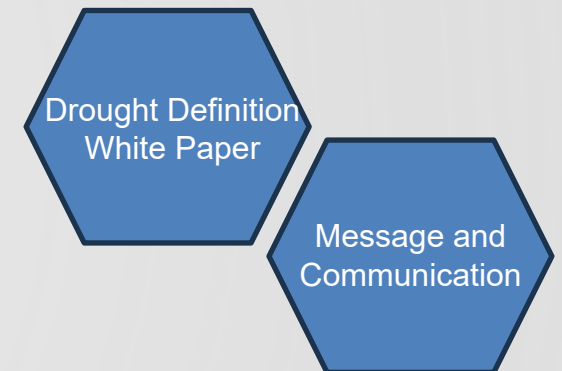
Preparedness/ Domestic Wells

(March 6 Discussion)



Drought Definition and Narrative

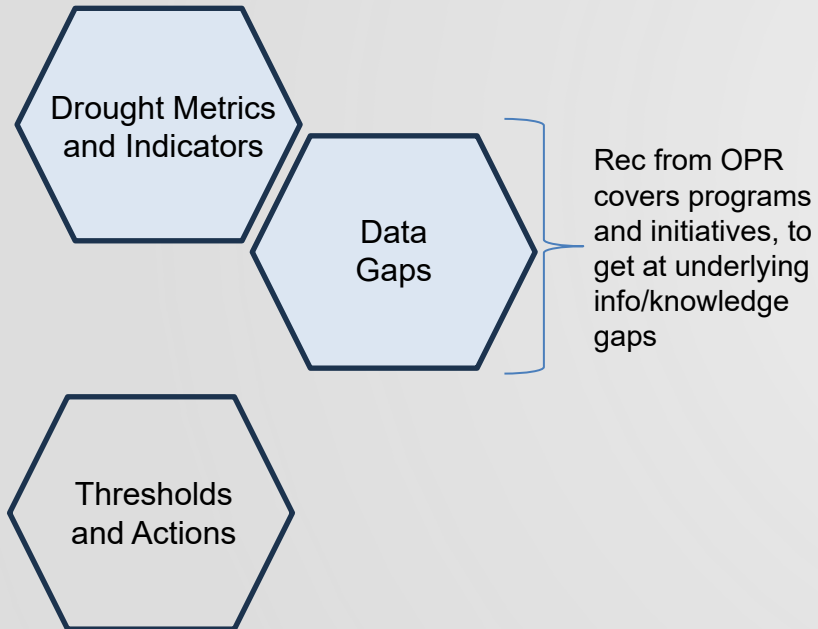
(March 7 Discussion)



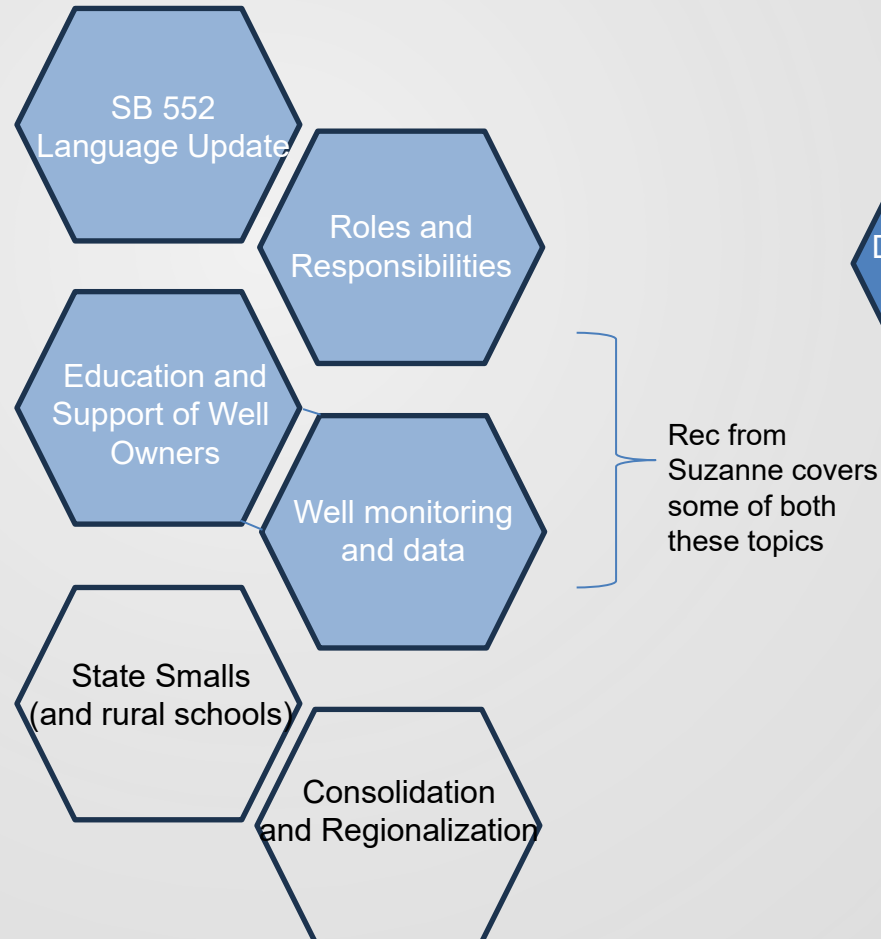
Recommendations mentioned during VMs

Compared to what was actually submitted in April 2024

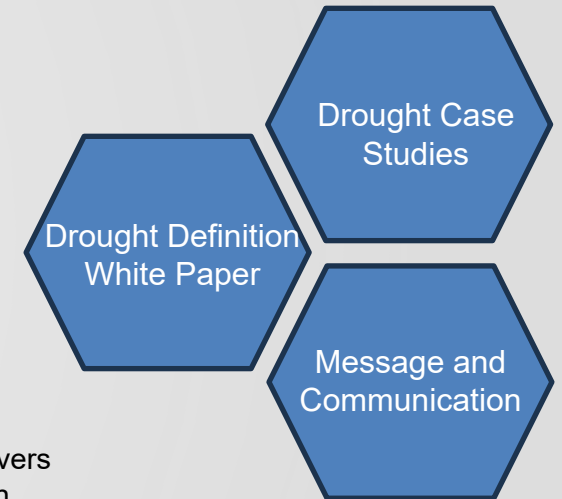
Drought Relevant Data (February 23 Discussion)




Preparedness/ Domestic Wells (March 6 Discussion)



Drought Definition and Narrative (March 7 Discussion)



 = recommendation that was NOT submitted, but was discussed in VMs



What's a recommendation? A DRIP recommendation is a **thoughtful, formal suggestion** that addresses the issue or challenge described in a Problem Statement. It provides solutions that are **specific and actionable** related to the preparation of, responding to, and recovering from periods of extreme water shortages and drought.

RECOMMENDATION DISCUSSION

PART 1

Submitted Recommendations

Drought Relevant Data

1. Drought Indicators and Metrics
(Alvar Escriva-Bou)
2. Program and Info/Tools Evaluation
(Elea Becker Lowe/ Ben McMahan,
on behalf of Saharnaz Mirzazad)

Drought Preparedness for Domestic Wells

3. SB 552 Language update
(Justine Massey)
4. Community Based Well Monitoring
Program
(Suzanne Pecci)
5. Roles and Responsibilities
(Justine Massey, Sierra Ryan, Tami
McVay, Andrew Altevogt)

Drought Definition and Narrative

6. Drought Definition White Paper
(Katie Ruby)
7. Communication Program
(Tim Worley)
8. Drought Case Studies
(Elea Becker Lowe/ Ben McMahan,
on behalf of Saharnaz Mirzazad)

Submitted Recommendations

One sentence summaries

Drought Relevant Data

1. Drought Indicators and Metrics

Identify indicators and metrics to improve drought decisions, actions and resilience (potential “early warning system”).

2. Program and Info/Tools Evaluation

Evaluate drought related programs, initiatives (and related info/tools) to identify knowledge gaps and uplift existing efforts.

Drought Preparedness for Domestic Wells

3. SB 552 Language Update

Make minor amendments to SB 552 to enhance the law’s feasibility and implementation.

4. Community-Based Well Monitoring Program

Create local community-based well monitoring programs, by providing technical assistance and a funding mechanism, with the goal of fostering education, awareness and developing individual responsibility.

5. Roles and Responsibilities

Outline roles and responsibilities of various authorities to provide short-term and long-term drinking water solutions for existing domestic wells, and comprehensive planning to limit new development in areas with failing domestic wells until solutions are reached.

Drought Definition and Narrative

6. Drought Definition White Paper

Prepare a white paper that documents and describes various definitions of drought, including the resulting impacts.

7. Communication Program

Create a statewide, symbols-based messaging platform that can be flexibly used by water suppliers to do local adaptation and thus communicate their specific drought and water supply information.

8. Drought Case Studies

Create a suite of drought related case studies across sectors and geographies of California to highlight the complicated drought realities that diverse communities across the state are facing.

April 26th: Recommendation discussion

Standardized format for each of the 8 recommendations (20 minutes each)

Introduce each Recommendation (8 minutes)

1. Intro the idea (4 minutes). Introduce the recommendation idea. Single slide using the submitted Part 0 text
2. Recap previous comments (1 minute). Show 1 slide with past DRIP member comments that are relevant/related
3. Ask clarifications (3 minutes). Ask if there are any basic clarifying questions

Get input from DRIP Collaborative (12 minutes)

4. Open discussion, aligned to Part 1 of Template
 - Scope: How might you refine the overall idea and scope of the recommendation?
 - Impacts: Is there a way to refine this idea so that it increases the positive impact?
 - Parties: Who needs to be involved to execute on this idea?
 - Other initiatives: What are related, ongoing efforts that need to be considered?

Use your worksheet handouts to provide other written feedback (that we don't have time to discuss live)

Drought Relevant Data: Problem Statement



These challenges are interconnected and comprise four key subtopics, each building upon the other:

- Drought indicators and metrics: There is a need to define indicators for risk and outcome metrics to prioritize drought management actions and to identify which actions are most critical, assess their effectiveness, and understand impacts at a regional and sector-specific level
- Coordination and data sharing: It is essential to improve coordination and data sharing and provide the opportunity to align with existing metrics tracked by various agencies and organizations (local, state, tribal and federal) and address disjointed efforts and data silos
- Data gaps and data quality: Prioritizing specific data gaps and quality issues will allow us to efficiently enhance the reliability and completeness of data for informed decision-making at an integrated watershed level
- Incorporating data analytics and forecasting techniques: Adding predictive elements to drought indicators is required to enable a shift from reactive to proactive drought management, allowing more pre-emptive actions to mitigate the impacts of drought in a changing climate

1. Drought Indicators and Metrics

DRIP Lead: Alvar Escriva-Bou (UCLA)

Recommendation Idea

There is a need to develop a practical drought early warning system to inform drought management actions—both proactive mitigation measures and effective emergency responses—to minimize drought impacts.

Our ability to link drought conditions and expected impacts is not sufficiently specific and actionable. Given the complexity of California's water system, it is not straightforward to understand different sectors' potential impacts, and develop drought responses. We also lack useful summary statistics to characterize drought resilience at the highest level (the type of drought metrics that might appear in every DRIP report to show our collective effort in improving our resilience). To do this, we need an improved ability to monitor and integrate that data, working across all levels including local, state, federal and tribal.

This drought early warning system should be adopted as part of a larger narrative and communication plan. How these metrics should be visualized and communicated must be considered, likely as part of a potentially updated online dashboard.

Previously discussed by DRIP: Yes, during Feb 23rd 2024 virtual meeting. Was originally discussed during 2023 DRIP meetings

Related recommendations: Program and Info/Tools Evaluation, Community Well Monitoring Program, Communication Program

What clarification questions do people have on this recommendation idea?

1. Drought Indicators and Metrics

DRIP Lead: Alvar Escriva-Bou (UCLA)

Past DRIP Member comments on Drought Metrics and Indicators

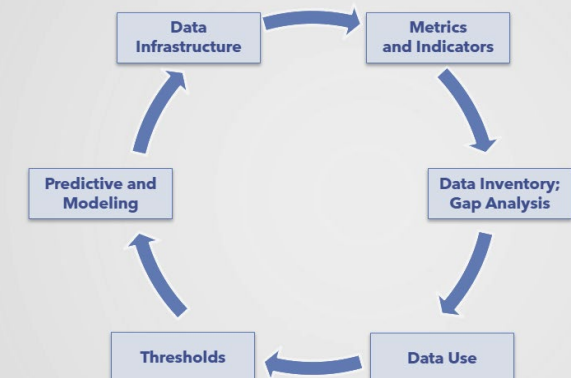
The development and refinement of drought metrics and indicators requires a holistic approach, spanning both risks and impacts. A key goal would be to update risk vulnerability indicators (as required by SB 552) and would target better representation of both rural and urban. This is part of a broader effort to make these indicators more locally actionable. It was also mentioned that impacts (not just risks) must be a key part of the indicators and that it needs to link to specific decisions. The conversation underscored the importance of having any new indicators complement existing frameworks.

Other key points included:

- An early warning system would need to integrate various data sources to inform actions, including the recent advances in monitoring networks (stream, groundwater)
- The need to integrate new metrics with ongoing state and federal efforts. For example, how does this inform or relate to water shortage contingency plans or SGMA?
- A strong emphasis on not reinventing the wheel; Use past efforts to inform indicators
- Possible inclusion of climate change impacts into scenario modeling
- The resource-intensive nature of data gathering and clarity on how the data will be used
- The importance of community involvement in data collection, to build engagement
- Concerns about data gaps and utility, with a focus on data accessibility

Potential DRIP Actions

Each of these actions are part of a positive flywheel (virtuous circle?)



1. Drought Indicators and Metrics

DRIP Lead: Alvar Escriva-Bou (UCLA)

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Open discussion, aligned to Part 1 of Template

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Collect written handouts for other feedback (that we don't have time to discuss live)

2. Program and Info/Tools Evaluation

DRIP Lead: Saharnaz Mirazad, Elea Becker Lowe, and Ben McMahan (OPR)

Recommendation Idea

Conduct an evaluation of programs and initiatives relevant to California drought issues, to ensure strategic alignment with existing federal, state or regional efforts, and rapid action to address outstanding questions.

This should include an evaluation of information gaps in drought related tools (e.g., [National Integrated Drought Information System](#)), and may include a summary of relevant monitoring or research already underway to address drought related research questions (e.g., California's Fifth Climate Change Assessment research and data products). Filling these knowledge gaps should be done strategically to uplift and complement existing efforts while leveraging federal efforts such as the NIDIS CA-NV Drought Early Warning System or other experimental drought monitoring tools (e.g. [EDDI](#)) and exploring partnerships with drought technical experts already grappling with drought challenges (State/non-State).

Previously discussed by DRIP: Data gaps discussed during Feb 23rd 2024 VM and during many of the 2023 DRIP meetings

Related recommendations: Drought Indicators and Metrics, Communication Program

What clarification questions do people have on this recommendation idea?

2. Program and Info/Tools Evaluation

DRIP Lead: Saharnaz Mirazad, Elea Becker Lowe, and Ben McMahan (OPR)

Past DRIP Member comments on Program and Info/Tools Evaluation

This specific recommendation concept has not been previously discussed in DRIP group meetings.

However, there are several possible linkages to previous DRIP discussions:

- Program and data gaps
 - This has been mentioned many times, including in the diagnosis of current data gaps (quantity, quality, accessibility of data)
 - Our prior framework of "inform, complement, lead" was used to discuss possible DRIP level of effort where gaps may exist
- State Agency actions
 - The July 2023 DRIP Group meeting included presentations by all eight State Agencies summarizing their current efforts
 - Individual presentations from each State Agency are included here: [DRIP Meeting #2 slides \(July 2023\)](#)
 - The presentations were made using a drought lifecycle framework (forecasting & monitoring, response, recovery, and mitigation, preparation & capacity)
 - However, the federal aspect of this recommendation has not been covered in significant detail

"An incredible amount of work is already underway, formalizing a lot of partnerships at the intersection of many water issues; lots of opportunities."

- Joaquin Esquivel, SWRCB

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Open discussion, aligned to Part 1 of Template

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Domestic Well Preparedness: Problem Statement

As California faces a hotter, drier future marked by intensified water shortages, the resilience of domestic wells and state small water systems is of paramount importance. These systems, heavily reliant on groundwater, face declines in water levels due to both human activity and climate trends, leading to significant reductions in water quality and availability. The SB 552 framework mandates proactive planning and specific actions to safeguard these critical water sources throughout the state. Fragile water supply systems can lead to a cascade of public health crises and economic instability, exacerbating inequities.

Three critical subtopics capture the challenges faced in enhancing drought preparedness for domestic wells and state smalls:

- **Responsibility and Accountability:** The preparedness and resilience of domestic wells and small systems depend on clearly defined responsibilities and authority across jurisdictions that includes local groundwater sustainability agencies, private property owners, county governments, and the State.
- **Funding and Financing:** The current mechanisms for funding and technical assistance are insufficient, with long lead times for emergency funding and disparities in the capacity of counties to address the needs of domestic wells. Equity issues infuse drought vulnerability, with differences between high-income and low-income residents and between tenants and landowners.
- **Coordination and Information Flow:** There is an urgent need for enhanced coordination and information sharing among federal, state, local, Tribal, non-state, and community organization players. This coordination and flow are crucial for enhancing education around resilience of existing wells and for preventing the drilling of new, unsustainable wells.

3. SB 552 Language Update

DRIP Lead: Justine Massey (CWC)

Recommendation Idea

The passage and enactment of SB 552 in 2021 represented a pivotal advancement in CA drought resilience efforts. We're proposing minor adjustments to enhance the law's feasibility and implementation. The recommended amendments aim to streamline SB 552, promoting effective execution by state and local governments in line with the law's original purpose.

Key revisions encompass:

1. Mandating each county to adopt an individual plan.
2. Establishing a five-year plan update deadline, synchronized with relevant updates in the General Plan Safety Element or Local Hazard Mitigation Plan.
3. Requiring counties to report task force status and submit plans to the State by specified deadlines.
4. Enforcing State review of plans, following a review approach akin to DWR's for Urban Water Management Plans.
5. Mandating the State to submit a comprehensive implementation report to the legislature every five years, mirroring the approach for UWMPs and AWMPs.
6. Including a directive for the State to appoint a staff as point of contact for county task forces, ensuring active state agency involvement.
7. Commissioning a legislative study, involving counties and representative organizations, to assess existing plans and task forces and understand evolving county needs.

Previously discussed by DRIP: SB 552 discussed during March 6th 2024 virtual meeting and during Oct 2023 DRIP meeting

Related recommendations: Community-Based Well Monitoring Program, Roles and Responsibilities

What clarification questions do people have on this recommendation idea?

3. SB 552 Language Update

DRIP Lead: Justine Massey (CWC)

Past DRIP Member comments on SB 552 Language Update

This is a recommendation concept that was first mentioned in the Oct 2023 meeting, and was discussed in depth in a Virtual Meeting

Specifically, during the October 2023 DRIP group meeting:

- Julie Ekstrom presented a SB 552 status update during the informational item portion of the meeting
- This update can be found here: [DRIP Meeting #3 slides \(Oct 2023\)](#)
- As noted in the meeting summary, DRIP Members discussed the possibility of a DRIP recommendation to create the authority to enforce SB 552 compliance. One suggestion included making grant or technical assistance funding contingent on completing a drought resilience plan; others discussed the potential for making recommended legislative language revisions to add requirements for State review of the plans and verifying standing task forces.

Status Report on SB 552 County Task Forces

Known to date

County Drought Task Forces

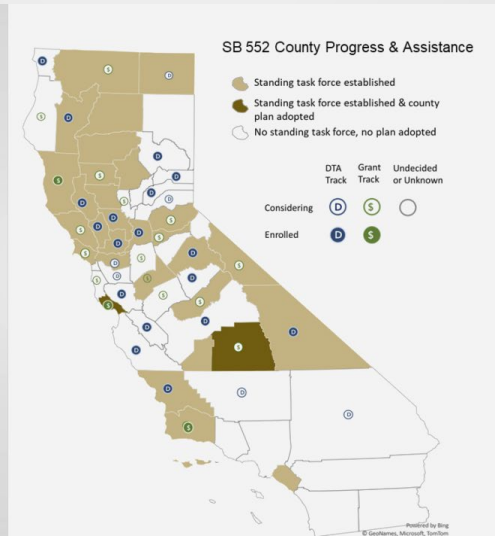
- 27 out of 58 counties (47%)

County Drought Resilience Plans

- 2 adopted out of 58 counties

State Planning and Task Force Assistance:

- 19 applied in Direct Technical Assistance
- 3 applied for grants



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LUNCH BREAK!

PLEASE RETURN AT:

1:25pm

(so we can start promptly at 1:30pm)

RECOMMENDATION DISCUSSION

PART 2

4. Community Well Monitoring Program

DRIP Lead: Suzanne Pecci (Public)

Recommendation Idea

This recommendation is to foster the organization of local community-based well monitoring programs with the objective of monitoring domestic wells and gathering well data for inclusion in regional and statewide databases. This would be accomplished by providing technical assistance and a funding mechanism. A key element of this program would be to support domestic well community engagement by fostering education, awareness, and developing responsibility for wise water use at the individual level. Regarding education, it would aim to establish community wide understanding of the following: significance of groundwater levels, water quality, value of well maintenance and repairs, and development of funding sources.

This local effort would be a partnering opportunity between domestic well communities, GSAs, NGOs, other beneficial users, land use agencies and the private development sector. The program may also help develop and implement water policies and actions protective of local domestic well communities water levels and water quality, so that it provides proactive, funded support to domestic well communities throughout the drought lifecycle.

Previously discussed by DRIP: Related efforts were previously mentioned during Oct 2023 DRIP meeting, but no DRIP discussion to date

Related recommendations: Drought Indicator and Metrics, Roles and Responsibilities

What clarification questions do people have on this recommendation idea?

4. Community Well Monitoring Program

DRIP Lead: Suzanne Pecci (Public)

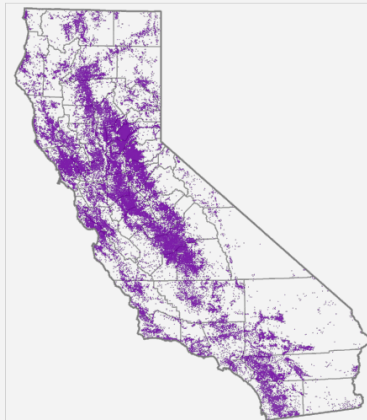
Past DRIP Member comments on Community Well Monitoring Program

Domestic well data has been prominently mentioned in the July 2023 and Oct 2023 DRIP group meetings. However, the specific angle on community well monitoring programs has not been a past focus.

Specifically, during the October 2023 DRIP group meeting:

- Ben Brezing, DWR, presented an update on domestic well data during the informational item portion of the meeting
- This update can be found here: [Meeting Minutes DRIP Meeting#3](#)
- As noted in the meeting summary, Ben highlighted the difficulty of monitoring domestic well conditions as no legislative directive or funding currently exists to maintain a statewide well inventory. A “patchwork” system of monitoring systems and inventories is maintained at various levels (county, DWR, State Water Resources Control Board (SWRCB), California Water Commission, etc.) but provides an incomplete account of where wells are used and what the condition of water supplies is in many areas

Well Inventories and Data Reporting



Existing efforts related to well inventories (incomplete list)

Program	Host
Well permitting	Counties, Cities, Water Districts
Online System for Well Completion Reports (OSWCR)	DWR
Local Well Inventories	Counties/GSAs
Dry well reporting system	DWR
Groundwater Ambient Monitoring and Assessment - Groundwater Information System (GAMA GIS)	SWB (USGS, CDPR...)
California Statewide Groundwater Elevation Monitoring (CASGEM)	DWR
Safe and Affordable Funding for Equity and Resilience (SAFER)	SWB
Drinking Water Tool	CWC

4. Community Well Monitoring Program

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5. Roles and Responsibilities

DRIP Lead: Justine Massey, Sierra Ryan, Tami McVay, and Andrew Altevogt

Recommendation Idea

Domestic wells are considered failing when they lack the supply and/or quality to serve their intended uses. California currently lacks a comprehensive approach to address the urgent drinking water needs of households served by failing domestic wells.

We recommend outlining roles and responsibilities of various authorities to provide short-term and long-term drinking water solutions for existing domestic wells, and comprehensive planning to limit new development in areas with failing domestic wells until solutions are reached. As part of this framework, Groundwater Sustainability Agencies (GSAs) and Nitrate Management Zones should fund interim and long-term solutions for domestic wells that have gone dry or are contaminated, or are at risk of going dry due to over extraction. Overall coordination of implementation of long-term solutions should be coordinated by the State Board through the SAFER Program.

Previously discussed by DRIP: Roles and Responsibilities discussed during March 6th 2024 VM and during Oct 2023 DRIP meeting

Related recommendations: SB 552 Language Update, Community Based Well Monitoring Program

What clarification questions do people have on this recommendation idea?

5. Roles and Responsibilities

DRIP Lead: Justine Massey, Sierra Ryan, Tami McVay, and Andrew Altevogt

Past DRIP Member comments on Roles and Responsibilities

Domestic well responsibility has been prominently mentioned in the July 2023 and Oct 2023 DRIP group meetings.

Specifically, during the October 2023 DRIP group meeting members stated:

- It is important to categorize activities to address domestic well shortages. We need to think about emergency response and preparedness, long-term planning, jurisdictional issues, and funding. We need to have a clear understanding of each one of these issues, who is currently working on them, and how they overlap or connect.
- There is a lot of variability regarding domestic well issues. Some organizations represent well users and small water systems from 8,000 feet in elevation to less than sea level.
- Communication between state and non-state agencies is important to address jurisdictional issues and provide a backup to outreach efforts at the local level.

DRIP Actions

Drought Preparedness for Domestic Wells

Map responsibilities and accountability across key players.

Important considerations include:

- Connect to municipal code.
- Identify role of housing professionals and impact of growth.
- Provide guidance on general plan development.
- Connect GSA responsibility and SGMO.
- Provide guidance on Bulletin 74 updates.
- Identify consolidation challenges/ opportunities and authority.
- Clarify state agency roles (OPR weigh in).
- Consider ag well moratorium.

Map funding & technical assistance for key players.

Important considerations include:

- Identify pathway for pre-approving emergency contracts for water hauling.
- Secure upfront funding for technical assistance providers.
- Identify funding administration opportunities beyond state agencies.
- Identify resiliency grant opportunities to prevent future dry wells.

5. Roles and Responsibilities

DRIP Lead: Justine Massey, Sierra Ryan, Tami McVay, and Andrew Altevogt

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Drought Definition and Narrative: Problem Statement

Drought has many different definitions. The lack of a unified understanding of drought and water shortage impacts across sectors hinders the State's ability to respond to and prepare for drought effectively. A multitude of drought definitions and the way drought impacts vary by sector and geography leads to fragmented responses and impedes the development of true drought resilience. A comprehensive, shared understanding of drought and water shortage conditions—including physical indicators and environmental, economic, and social impacts at the regional and local level—is essential for enabling cohesive, strategic management of water shortages.

Additional context

This shared understanding relies on a clear definition of the legal and institutional aspects and knowledge of the narratives and interpretations of these definitions across sectors. The DRIP Collaborative's goal is not to redefine drought but to articulate the State's vulnerabilities and opportunities for resilience in the face of water shortages, thereby clarifying the rationale for specific state responses and fostering a common purpose among various sectors.

Reframing drought as a water shortage issue based on conditions can shift the narrative to prompt the most effective action, focusing on strategic needs for drought resilience. This collective understanding is crucial in improving coordination and decision-making, leading to effective actions that bolster drought resilience. With aligned perspectives, California can adopt a more unified and informed approach to managing its water resources during prolonged dry periods.

6. Drought Definition White Paper

DRIP Lead: Katie Ruby (CUWA)

Recommendation Idea

Drought can be defined multiple ways, leading to confusion among different stakeholders and the public. Furthermore, the term “drought” can elicit certain reactions that may not be aligned with actual water shortage conditions in a given region or community. This recommendation is for the State to prepare a white paper that documents and describes various definitions of drought in California. The purpose of the white paper is to clarify terminology, including the resulting impacts and response actions associated with different definitions. Recommended content includes:

1. Literature review of existing definitions and their associated use cases.
2. Discussion of impacts that various drought definitions may have on key groups, such as disadvantaged communities, ecological areas, and urban and agricultural sectors.
3. Identification of gaps. Consider whether there is a need to broaden existing definitions to provide a more holistic, integrated view of water availability (e.g., including groundwater and surface water), reflect California’s anticipated hotter/drier future, and improve drought response.

Previously discussed by DRIP: White Paper discussed during March 7th 2024 virtual meeting and during Oct 2023 DRIP meeting

Related recommendations: Drought Indicators and Metrics, Communication Program, Drought Case Studies

What clarification questions do people have on this recommendation idea?

6. Drought Definition White Paper

DRIP Lead: Katie Ruby (CUWA)

Past DRIP Member comments on Drought Definition White Paper

The idea of a definition white paper first came up during DRIP member discussions in VM2 (Oct 2023) led by Jeanine Jones

Specifically, during the October 2023 DRIP group meeting:

- DRIP members provided varying input on the need for a single drought definition. Others felt finding a “perfect” definition could be time consuming, and just to use the existing definitions summarized by Jeanine Jones during VM2.
- Defining drought should include a clear linkage to policy. The narrative DRIP develops could trigger policy actions/reactions.
- We have to link data to whatever definition is developed to justify policy decisions.
- Any definition should be linked to both historical practices and current/future conditions.
- State definitions should be tied to local policies.
- A change in thinking is needed. The narrative and education can help drive a shift in behavior.



Defining Drought

Jeanine Jones, California Department of Water Resources

Recommendations

- Focus on concept of shortage of water to meet a particular purpose
- Avoid “one size fits all” definitions
- Develop a tolerance for ambiguity. Different programs/agencies/sectors will always have different or unique definitions or circumstances.
- Move away from the short-term emergency focus. Drought & aridification don’t happen overnight.

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7. Communication Program

DRIP Lead: Tim Worley (CalMutuals)

Recommendation Idea

Drought or other water supply conditions frequently necessitate a public response, but 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. Urban retail water suppliers may also specify differing communication protocols in their water shortage contingency plans, while small water providers or private well owners may receive or communicate information very differently.

To address this complexity and provide accurate information with enough flexibility to allow local adaptation is a challenge that should be tackled by the DRIP Collaborative, in coordination with the Water Commission and using existing communication resources as possible. This proposal recommends creating an 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.

Previously discussed by DRIP: Communication discussed during March 7th 2024 VM and nearly all of the 2023 DRIP meetings

Related recommendations: Drought Indicators and Metrics, Drought Case Studies

What clarification questions do people have on this recommendation idea?

7. Communication Program

DRIP Lead: Tim Worley (CalMutuals)

Past DRIP Member comments on Communication Program

The ideas behind improved education, communication, and messaging have been mentioned since the beginning of DRIP.

Past comments in the April and July 2023 DRIP group meeting were:

- Hotter, drier future will mean a new reality for California
- Need to be clear on who we are trying to communicate to (intended audience)
- Mix of public awareness, proactive messaging
- Plan for emergency, not be in emergency
- Public is "worn out" on drought
- Many existing resources already available: [Drought Communications_2022.pdf \(awwa.org\)](#)

Most recently, during the October 2023 DRIP group meeting the following comments were made:

- Californians need to understand that drought is a long-term condition (as opposed to an acute threat).
- We need to educate both the public and decision makers that the state can't "build its way out" of drought.
- A significant shift is needed from prior practices

Drought Communication

Tim Worley

tim@ostrategiesgroup.com

(909) 762-7401



BY LOCATION | COUNTY

Drought Conditions for Los Angeles County

[GO TO CALIFORNIA STATE PAGE](#)

Get notified when conditions change

[SIGN UP FOR ALERTS](#)

0

people in Los Angeles County are affected by drought

- No change since last week
- No change since last month

0%

of people in Los Angeles County are affected by drought

- No change since last week
- No change since last month

24th

wettest March on record, over the past 130 years

↑ 1.68 inches from normal

17th

wettest year to date over the past 130 years (January-March 2024)

↑ 7.32 inches from normal

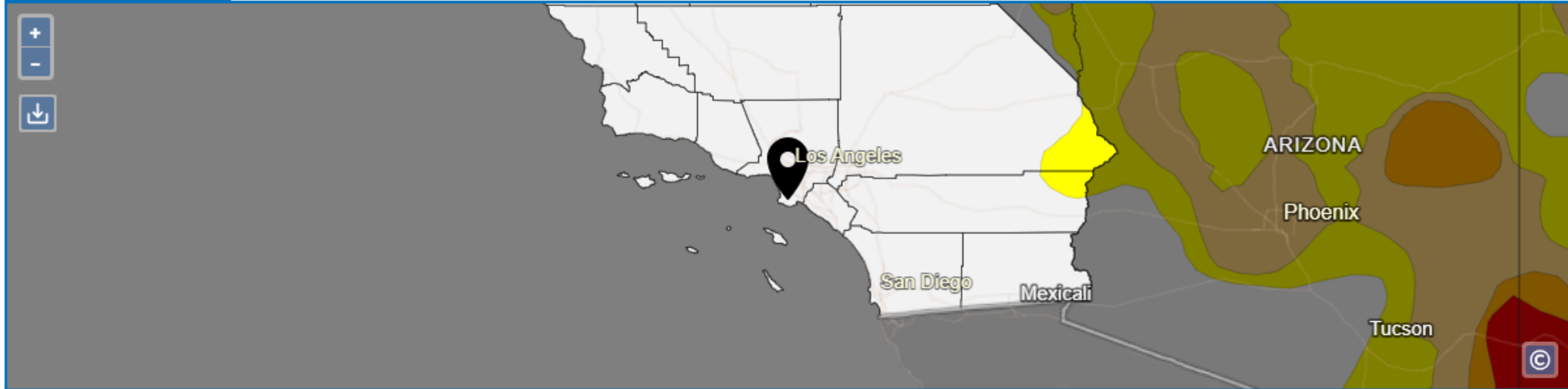
[Learn more about these stats](#)

Current Conditions for Los Angeles County

U.S. Drought Monitor

30-Day Precipitation

30-Day Temperature



The U.S. Drought Monitor depicts the location and intensity of drought across the country using 5 classifications: Abnormally Dry (D0), showing areas that may be going into or are coming out of drought, and four levels of drought (D1–D4).

The U.S. Drought Monitor is a joint effort of the National Drought Mitigation Center, U.S. Department of Agriculture, and National Oceanic and Atmospheric Administration.







Source(s): [NDMC](#), [NOAA](#), [USDA](#)

Color Coding

Legend

Drought & Dryness Categories

% of Los Angeles County

	D0 - Abnormally Dry	0%
	D1 - Moderate Drought	0%
	D2 - Severe Drought	0%
	D3 - Extreme Drought	0%
	D4 - Exceptional Drought	0%
	Total Area in Drought (D1–D4)	0%

Drought Index

Water Supply

Agriculture

Updates



[VIEW MORE NATIONAL DROUGHT MAPS](#)

[LEARN MORE](#)

Current Air Quality

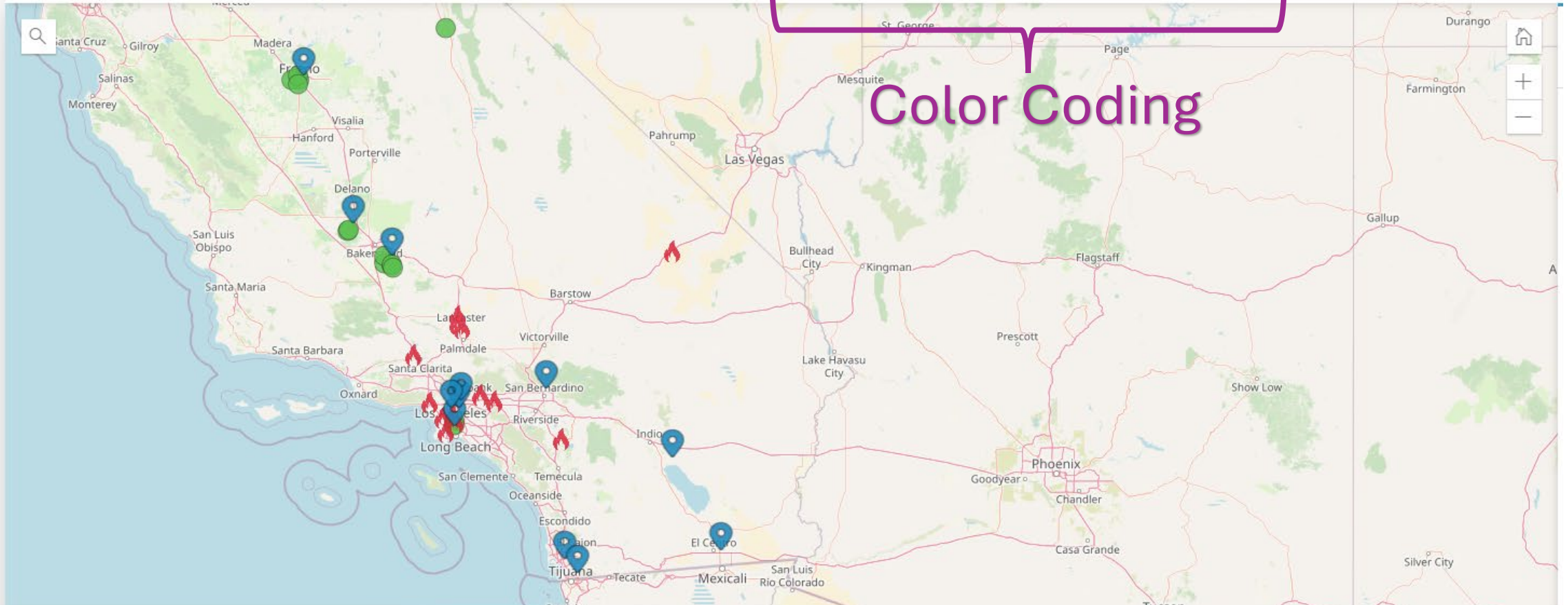
Pollutant ?

Fine Particles (PM2.5)

Air Quality Index ?



ON Active Fires ?



Water Supply Communication (State-Level)

Annual Water Supply &
Demand Assessment

Urban Water Management Plans

Water Shortage Contingency Plans

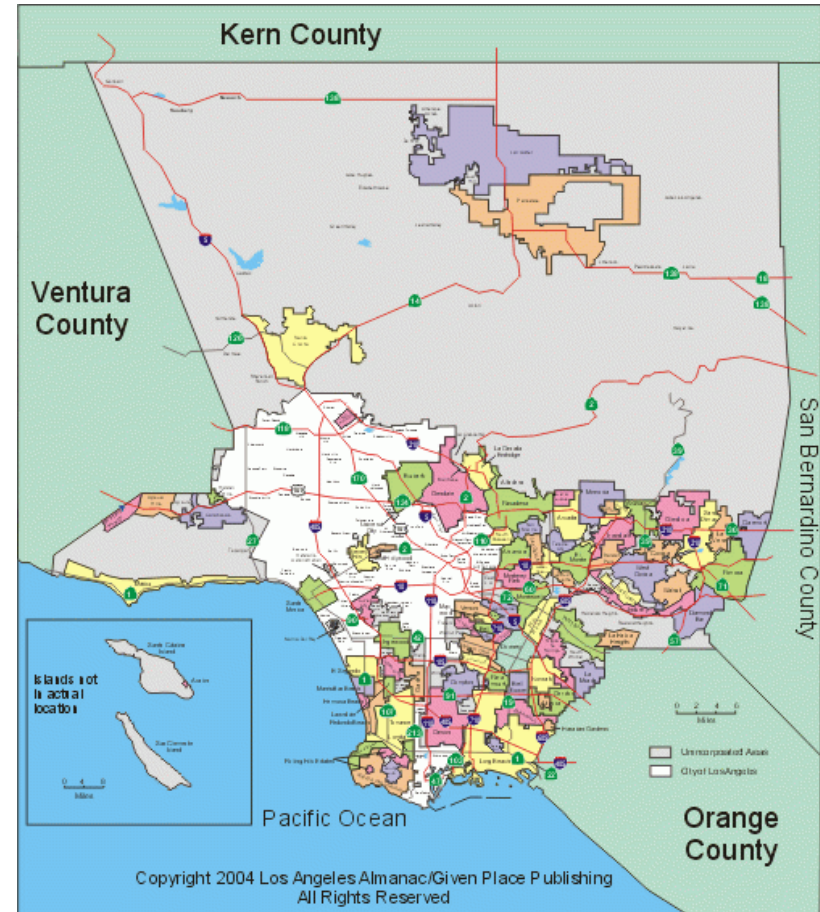
Drought Risk Assessment

Annual Shortage Report

**Public
Understanding**



Interpretation Must Be Localized

- 88 cities in Los Angeles County
- Each with a different portfolio
 - Groundwater – how good?
 - Imported supply
 - Recycled water
 - Other
- “State says drought ... What does it mean for me?”
- Local agencies need help
- Simple, symbolic tool, used consistently statewide








Example – Color Coding

Statewide Drought Level

	“Fat and happy”
	“All cool!”
	Normal, everyday efficiency
	Caution: Dry Conditions
	Drought I: Voluntary saving
	Drought II: Restrictions
	Drought III: Extreme Restrictions

Local Water District








	“Fat and happy”
	“All cool!”
	Normal, everyday efficiency
	Caution: Dry Conditions
	Drought I: Voluntary saving
	Drought II: Restrictions
	Drought III: Extreme Restrictions

Example – Color Coding

Local Water District “A”

	“Fat and happy”
	“All cool!”
	Normal, everyday efficiency
	Caution: Dry Conditions
	Drought I: Voluntary saving
	Drought II: Restrictions
	Drought III: Extreme Restrictions

Local Water District “B”

	“Fat and happy”
	“All cool!”
	Normal, everyday efficiency
	Caution: Dry Conditions
	Drought I: Voluntary saving
	Drought II: Restrictions
	Drought III: Extreme Restrictions

Implementation

- Wider stakeholder input (especially water suppliers)
- State & water association education and adoption campaign
 - Governor, DWR, SWRCB, Water Commission
 - Multiple associations
- State communication of statewide condition (level)
 - DWR, SWRCB
 - Frequency: Weekly?
 - Direct communication + News (weather reporters) + Website posting
- Local agency communication using same symbolism
 - “Here is what you need to do” linkage to WSCP
 - Website, other customer communication channels

7. Communication Program

DRIP Lead: Tim Worley (CalMutuals)

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8. Drought Case Studies

DRIP Lead: Saharnaz Mirazad, Elea Becker Lowe, and Ben McMahan (OPR)

Recommendation Idea

Compile a suite of drought related case studies across sectors and geographies of California to highlight the complicated drought realities that diverse communities across the state are facing. Case studies may focus on drought-specific impacts to natural, built or social systems, including compounding or cascading impacts, or highlight existing approaches to addressing those vulnerabilities. This will help inform DRIP areas of focus and priority actions while capturing nuanced and diverse experiences across sectors and geographies of the state.

This compilation will help guide drought narrative developments by showcasing the range of unique and context-dependent complexities of drought related issues in California, with focus on projections for more frequent and extreme weather events and impacts. Partners should include DRIP members and collaborators representing community perspectives.

Previously discussed by DRIP: Sharing diverse case studies has been discussed in nearly all of the 2023 DRIP meetings

Related recommendations: Drought Indicators and Metrics, Drought White Paper, Communication Program

What clarification questions do people have on this recommendation idea?

8. Drought Case Studies

DRIP Lead: Saharnaz Mirazad, Elea Becker Lowe, and Ben McMahan (OPR)

Past DRIP Member comments on *Communication Program*

The ideas behind better documenting drought nuances and local differences has come up repeatedly in DRIP. However, a specific recommendation on creating case studies has not been actively discussed.

Past comments in previous DRIP group meetings that may be relevant:

- Change is happening, and we're all impacted in different ways
- One size DOES NOT FIT ALL
- Planning, planning, planning: key to managing climate crisis
- Focus on long-term resilience
- We need to protect the vulnerable (rural communities, small systems, tribes, environment, etc.)

Drought Impacts (timing & severity) Different for Different Sectors

- **Unmanaged systems**
 - **Risk of catastrophic wildfire** (health & safety, economic)
 - Non-irrigated agriculture (livestock grazing)
 - Fish & wildlife (e.g., salmonids)
- **Managed systems**
 - **Small water systems** (health & safety)
 - Irrigated agriculture
 - Urban water supplies
 - Fish & wildlife (e.g., wildlife refuges, salmonids)

8. Drought Case Studies

DRIP Lead: Saharnaz Mirazad, Elea Becker Lowe, and Ben McMahan (OPR)

Compile a suite of drought related case studies across sectors and geographies of California to highlight the complicated drought realities that diverse communities across the state are facing. Case studies may focus on drought-specific impacts to natural, built or social systems, including compounding or cascading impacts, or highlight existing approaches to addressing those vulnerabilities. This will help inform DRIP areas of focus and priority actions while capturing nuanced and diverse experiences across sectors and geographies of the state.

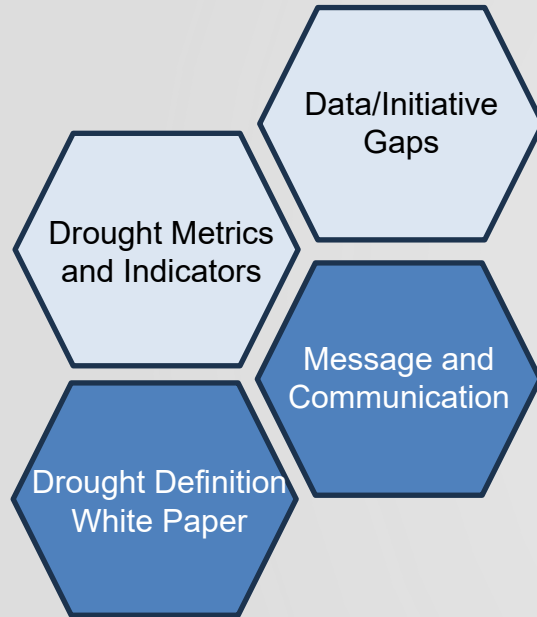
This compilation will help guide drought narrative developments by showcasing the range of unique and context-dependent complexities of drought related issues in California, with focus on projections for more frequent and extreme weather events and impacts. Partners should include DRIP members and collaborators representing community perspectives.

Open discussion, aligned to Part 1 of Template

1. Scope: How might you refine the overall idea and scope of the recommendation?
2. Impacts: Is there a way to refine this idea so that it increases the positive impact?
3. Parties: Who needs to be involved to execute on this idea?
4. Other initiatives: What are related, ongoing efforts that need to be considered?

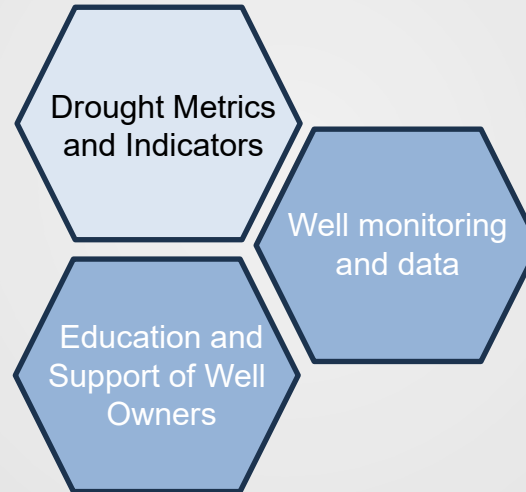
Collect written handouts for other feedback (that we don't have time to discuss live)

How Recommendations are Related



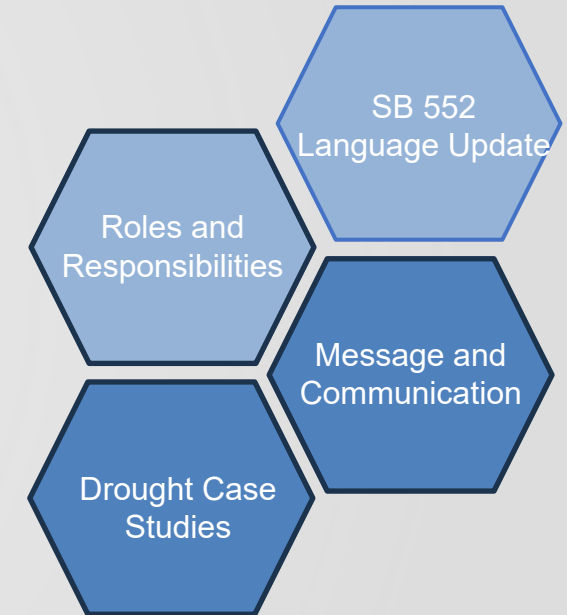
Overlap 1:

Data Gaps and Metrics, as well as definitions, inform how we message and communicate (same portal?)



Overlap 2:

Well monitoring data is intended to be used in state and local databases, which inform metrics. This should also educate and support well owners.



Overlap 3:

Clarity on roles will allow us to message and communicate better (although Tim's rec is more water supplier oriented), creating diverse narratives (informed by case studies)

Summary that links the 8 recommendations

Simple narrative that explains how recs may build on each other

1. We create a holistic evaluation of the disparate drought programs/initiatives today ([Program and Info/Tools Evaluation](#))
2. From that, we identify drought indicators (process and outcome metrics) that best quantify risk and impacts so we can help define the best proactive actions available at a local level ([Drought Indicator and Metrics](#))
3. We apply that to the specific case of domestic wells, given the significant drought related impacts, clarifying the roles of disparate stakeholders to improve coordination across the entire drought lifecycle ([Roles and Responsibilities](#))
4. Where needed, we update SB 552 language to ensure easier feasibility and implementation ([SB 552 Language Update](#))
5. We help specify a potential locally driven well monitoring program, that gets at the critical data gap and builds local awareness and education ([Community Based Well Monitoring Program](#))
6. Meanwhile, we help clarify drought definitions so people can better understand when actions are triggered ([Drought Definition White Paper](#))
7. This is supplemented by documenting and crafting nuanced drought narratives ([Drought Case Studies](#))
8. Which informs us how to communicate, using a standardized approach, but with local flexibility ([Communication Program](#))

BREAK!

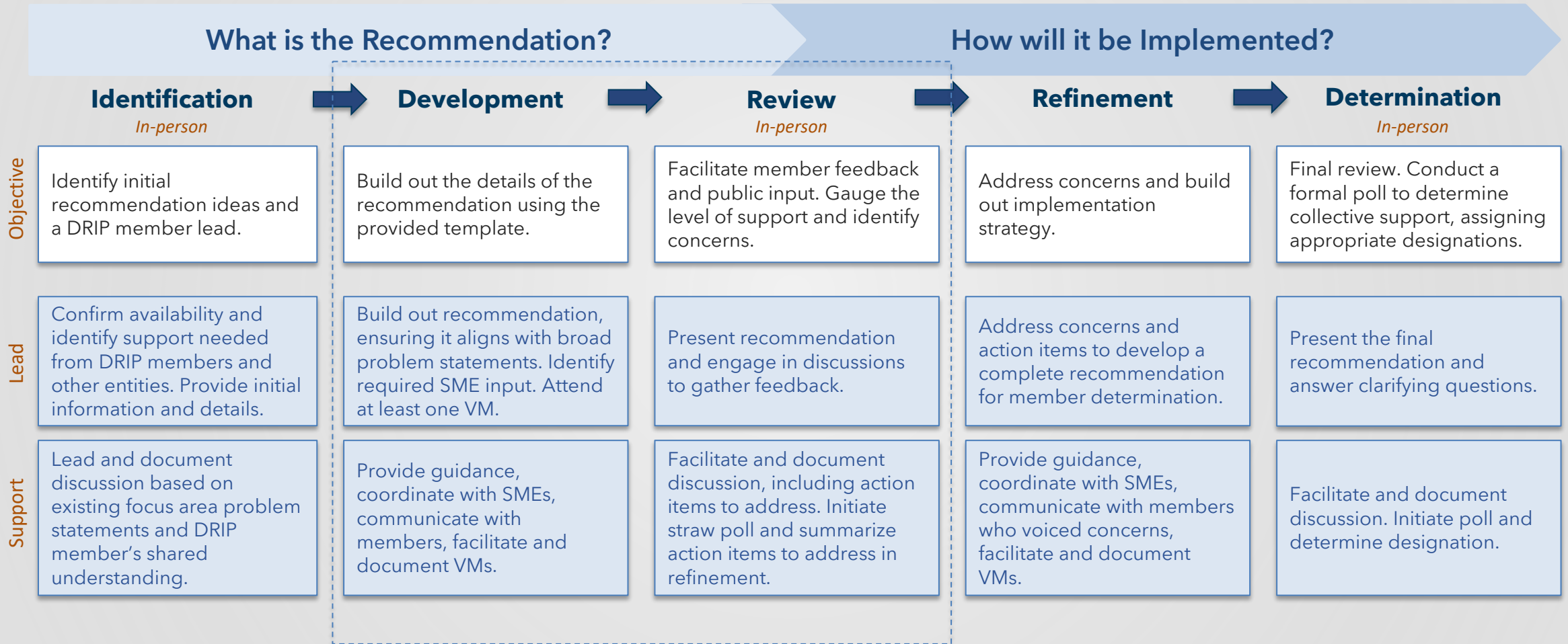
**PLEASE RETURN AT:
3:25!**

EXPECTATIONS MOVING FORWARD

PART 2

Recommendation Process

Timeline



DRIP work between now and July group meeting

Recommendation Process

Template

What is the Recommendation?

Part I: Overview

- Title
- Description
- Impacts
- Implementing Parties & Partners
- Alignment with Other Initiatives

Part 1 for each recommendation will be the focus of the July meeting

How will it be Implemented?

Part II: Implementation

- Implementation Process & Measuring Success
- Implementation Challenges
- Funding
- Equity & Outreach

Part 2 for each recommendation will be the focus of the October meeting

DRIP Workgroup Formation

Proposed Process Going Forward

1. We will create **three workgroups**, centered around each initial focus area. The 2-3 recommendations for each focus areas will be discussed in a holistic fashion to ensure they are complementary and directly address the problem statements
2. Each workgroup is voluntary and **member driven**, with assistance from the DRIP support team
3. The **main purpose** of each workgroup **is to prepare the Part I and Part II templates** for each idea. All work product will be reviewed in DRIP Collaborative group meetings (July and October)
4. Workgroup meetings must **conform to the Bagley-Keene Open Meeting Act**
5. **Workgroups will exist until as needed**

Workgroup 1: Drought Relevant Data

1. Drought Indicators and Metrics
2. Program and Info/Tools Evaluation

Workgroup 2: Drought Preparedness for Domestic Wells

3. SB 552 Language update
4. Community Based Well Monitoring Program
5. Roles and Responsibilities

Workgroup 3: Drought Definition and Narrative

6. Drought Definition White Paper
7. Communication Program
8. Drought Case Studies

Erick Soderlund, Attorney V, CA Department of Water Resources

BAGLEY KEENE OPEN MEETING ACT

DISCUSSION

DRIP Workgroup Expectations

- 1. Purpose.** The workgroups exist for the sole reason to prepare the Part I and Part II templates for each recommendation.
- 2. Effort Required.** The level of effort will likely vary for each Focus Area. Ultimately, DRIP members decide how much time is needed for each workgroup.
 - Although this process is new, it is believed that the biggest driver will be depth of details for each recommendation.
 - It will be a gut call on what details are sufficient to get a recommendation approved (in the Oct meeting).
 - The time needed for each workgroup member will likely be measured in hours (not in days) and mainly consistent of public workgroup calls among DRIP members and respective subject matter experts (SMEs).
- 3. Participation Commitment.** If you volunteer during today's meeting, you need to continue participating in the workgroup until at least July. At public DRIP meetings in July or Oct, members can leave or join a workgroup as they like.
- 4. Non-Workgroup Input.** All DRIP members will be able to review each recommendation again in July and October. So if you decide to NOT join a workgroup, you can still contribute at those meetings. If you want to actively shape the recommendation directly, it is encouraged that you join the corresponding workgroup.
- 5. Assistance.** Workgroups will be aided by the DRIP support team, who will help handle logistics and coordination. We will also help synthesize discussions, as requested by DRIP members (consistent with previous Virtual Meetings).

DRIP Polling / Decision Making Process

- A simple polling system will help put the official "stamp of approval" on DRIP decision points!
- Polls expected for any formal reports and all recommendations to indicate level of consensus.
- Consensus decisions will always carry more weight than lower levels of support as the DRIP seeks agency support or potentially funding for recommendation implementation.
- Decision-making through formal polls will be based on the concept of "consensus with accountability". If you have significant concerns or would like to suggest modifications, we'd love to hear them!
- All feedback from polls will be memorialized for the record.

Proposed Polling Structure

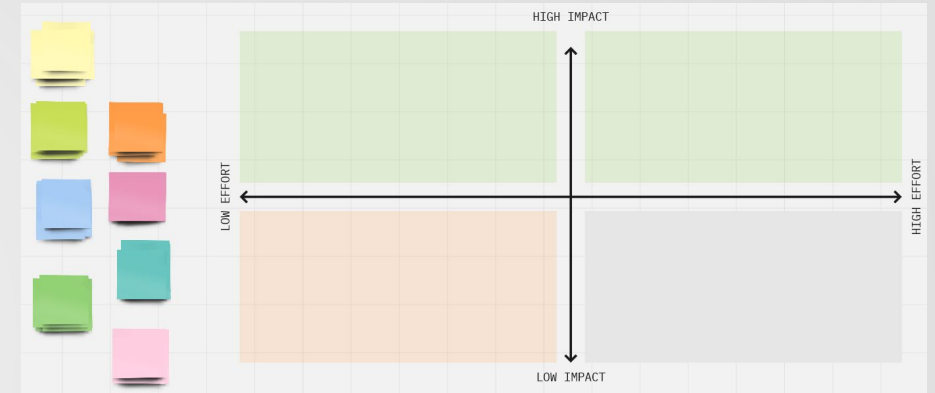
- Polls based on a spectrum instead of just up or down votes.
- For all polls, the facilitator will go around the room to record each member's level of support. Members voting 1 or 2 will be asked to provide additional clarification on their vote or modifications to address their concerns.
- Straw polls will be held for all recommendations in your July DRIP meeting. Straw poll results will help modify recommendations between meetings.
- At your October meeting, a final vote will be taken to show the level of consensus for any subsequent reports.



Sequencing other Focus Areas (for 2025 recs)

In the Oct 2023 DRIP meeting, we briefly discussed these possible Focus Areas:

- Integrating Climate Change Adaptation into Drought Resilience
- Implementation of Nature-based Solutions for Drought Resilience
- Reducing Ecosystem Impacts of Drought
- Water Resources & Operations
- Infrastructure & Planning
- Land Use Planning



Need to define Problem Statements: Akin to the process we did for the initial three Focus Areas, we will go from these broad topics to define targeted Problem Statements. These statements will be created in July 2024 and finalized in Oct 2024.

This will enable us to offer specific and actionable Recommendations in 2025 to address these Problem Statements.

101 Informational Series (to support next Focus Areas)

Knowledge Development Sessions: To help narrow down these broad topics and ensure a common knowledge base of all DRIP members, we discussed conducting open informational sessions.

Within each potential Focus Area, these info topics have been mentioned previously by DRIP members:

- Climate Change Adaptation: [Climate change and water impacts](#)
- Nature Based Solutions: [NBS introduction](#)
- Reducing ecosystem impacts of droughts: [In-stream flows](#)
- Water Resources & Operations: [Groundwater recharge \(Flood-MAR\), water banking](#)
- Infrastructure & Planning: [California water infrastructure, CA Water Watch](#)
- Other misc topics: [Types of water systems, water law, recycled water](#)

DRIP Collaborative Membership Extension

DRIP Collaborative Membership and Continuity

- a) Initial membership for non-state members is for a 2-year period
- b) Scheduled to end in 2024

Membership Extension Process

- a) Membership designed with 2 representatives for each category
- b) Seeking either a one-year extension or two-year extension
- c) This would allow for overlap of membership, which provides continuity
- d) Continuity allows for consistency in the development and adoption of recommendations

DRIP Collaborative Membership Extension

	Name	Organization/Employer	Representative	Additional 1 Year	Additional 2 Years
1	Catherine Freeman, Brian Cote	California State Association of Counties	Local Government		
2	Sierra Ryan	Santa Cruz County	Local Government		
3	Justine Massey	Community Water Center	Community-based organization		
4	David Michalko, Tim Worley	California Association of Mutual Water Companies	Community-based organization		
5	Tami McVay, Emily McCague	Self Help Enterprises	Technical Assistance Provider		
6	Grace Person	CivicWell	Technical Assistance Provider		
7	Suzanne Pecci	Domestic Well Planning Group South American Subbasin	The Public		
8	Brent Haste	Plumas Lake Self Storage, Owner	The Public		
9	Anna Schiller, Robyn Grimm	Environmental Defense Fund	Environment		
10	Redgie Collins	California Trout, Inc.	Environment		
11	Emily Rooney	Agricultural Council of California	Agriculture		
12	Jason Colombini	Jay Colombini Ranch, Inc.	Agriculture		
13	Michael Gerace	Yurok Tribe	Tribal		
14	Matessa Martin	Buena Vista Rancheria of Me-Wuk Indians	Tribal		
15	Alvar Escrivá-Bou	University of California Los Angeles	Experts in Land Use/Water		
16	Laura Ramos	California Water Institute at Fresno State	Experts in Land Use/Water		
17	Ramy Gindi	Los Angeles County Public Works	Public Water Systems		
18	Katie Ruby, Wendy Broley, Amy Martin	California Urban Water Agencies (CUWA)	Public Water Systems		

PUBLIC COMMENT

Public Comment

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.
- 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.

Action Items & Next Steps

Closing Comments



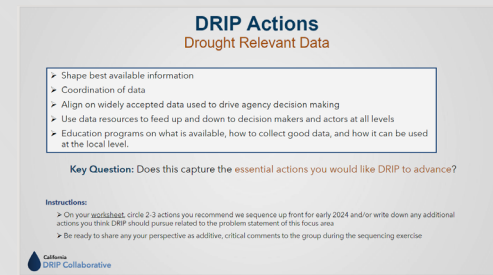
California
DRIP Collaborative

Adjourn

Thank you!

Potential DRIP Actions (from Oct 25)

Written comments from handouts



Metrics and Indicators

Create metrics and indicators (spatial/temporal, by sector), including those critical to measure progress on resiliency. (Nancy Vogel, Katy Landau, Alvar Escriva-Bou)

Data Inventory; Gap Analysis

Identify gaps and how to fill them. Ensure clear metadata. Address redundancy, interoperability. Understand quality, spatial coverage, frequency of data collection. (Andrew Altevogt, Katy Landau, Katie Ruby, Justine Massey)

Data Use

Create clarity on how and where data is being used. Collected by who? Used by who? Think through audiences and uses of data, accessibility. Address potential misuse of data. (Katie Ruby, Tim Worley. Also Ben McMahan)

Thresholds

Identify how data triggers actions. List decisions being informed. Understand the effort to collect the data (from data providers). Document where good, timely decisions are already happening. (Nancy Vogel, Katy Landau, Katie Ruby)

Predictive and Modeling

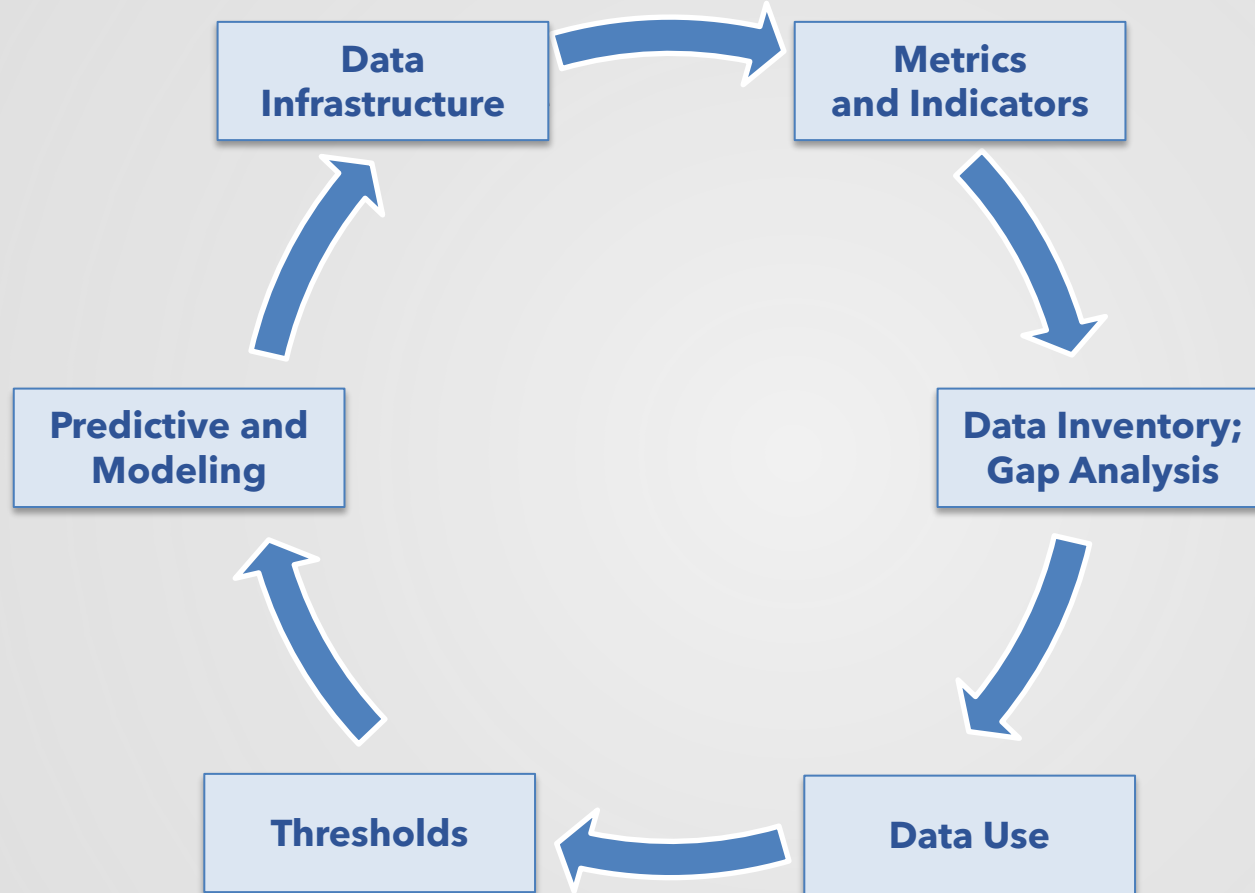
Modeling of future scenarios, linked to needs. Advance sub-seasonal forecasting capabilities. Ensure climate ready decision making. (Andrew Altevogt, Nancy Vogel. Also Jeanine Jones, Ben McMahan)

Data Infrastructure

Invest in expansion/operations of water monitoring infrastructure (CIMIS, stream gages). Improve domestic well data collection, especially in rural areas, to ensure sufficient coverage. (Anna Schiller, Andrew Altevogt)

Potential DRIP Actions

Each of these actions are part of a positive flywheel (virtuous circle?)

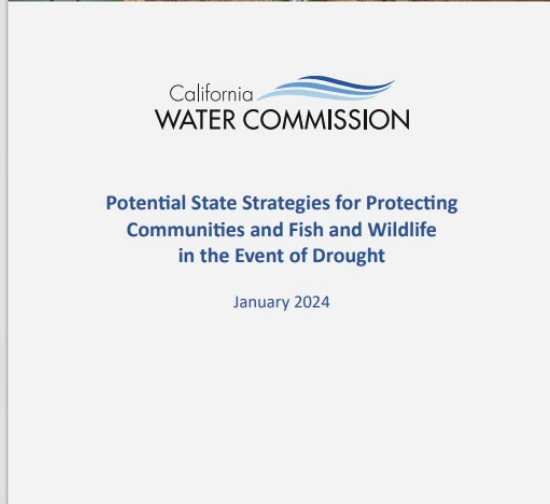


Discussion Question: What part of this circle needs MORE attention?
Would most improve drought resiliency?

CA Water Commission

Strategies and actions that overlap with DRIP "drought relevant data" ideas

Strategy 4: Support improved coordination, information, and communication in drought and non-drought years



- Strategy 4, Action 2: Support sub-seasonal and seasonal forecasting to anticipate drought with local, federal, academic, and industry partners to advance enhanced forecasting at longer timescales
 - 2a: work with federal representatives to ensure that the NOAA implements sub-seasonal and seasonal forecasting requirements called for in the Weather Research and Forecasting Innovation Act
- Strategy 4, Action 3: Develop consistent public information campaign to support local messaging, educate Californians about water, and to spur behavioral changes that support drought resilience
 - 3a: Continue to engage local water agencies and coordinate an inventory of drought communication campaigns by local agencies and State agencies and departments
 - 3b: Partner with leading educators, media experts, and social scientists to develop an ongoing statewide information campaign that...
 - Develops and deploys educational and informational tools with the intent of increasing Californians "water IQ" and spurring behavioral change;
 - Leverages current efforts to develop an ongoing water communication approach;
 - Provides an umbrella campaign that can be customized to meet local needs
 - Used clear and compelling messages to share information about water demand, supply, and management in California's changing hydrology, with the intent of creating a go-to information portal for public water information, particularly during times of drought
 - Revisits the use of the terms "drought" and "drought emergency" in the content of extended dry years and altered climate and introduces terms and concepts such as "aridification" and "water scarcity"
 - 3c: Develop metrics and track the campaign's impact

Potential DRIP Actions (from Oct 25)

Written comments from handouts

DRIP Actions
Drought Preparedness for Domestic Wells

<p>Map responsibilities and accountability across key players. Important considerations include:</p> <ul style="list-style-type: none">> Connect to municipal code.> Identify role of housing professionals and impact of growth.> Provide guidance on general plan development.> Connect GSA responsibility and SGMO.> Provide guidance on Bulletin 74 updates.> Identify consolidation challenges/ opportunities and authority.> Clarify state agency roles (OPR weigh in).> Consider ag well moratorium.	<p>Map funding & technical assistance for key players. Important considerations include:</p> <ul style="list-style-type: none">> Identify pathway for pre-approving emergency contracts for water hauling.> Secure upfront funding for technical assistance providers.> Identify funding administration opportunities beyond state agencies.> Identify resiliency grant opportunities to prevent future dry wells.
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Key Question: Does this capture the essential actions you would like DRIP to advance?

Instructions:

- > On your worksheet, circle 2-3 actions you recommend we sequence up front for early 2024 and/or write down any additional actions you think DRIP should pursue related to the problem statement of this focus area
- > Be ready to share any of your perspective as additive, critical comments to the group during the sequencing exercise



Responsibility

Map responsibility and accountability across key players. Recommend how best to navigate current roles, or suggest new responsibilities. Guidance and resources for well users and owners. (Andrew Altevogt, Katy Landau, Tami McVay)

Funding

Identify what funding changes are needed. Explore funding opportunities for permanent water supply (to get off hauled/bottled water). Idea to pay into fund for new wells. (Katy Landau, Justine Massey, Jason Colombini)

Root Causes

Acknowledge root cause of GW declines (not always "natural"). Stronger statement about impacts of dry wells on DACs. Better quantify impacts and consequences. (Andrew Altevogt, Justine Massey)

Data and Modeling

Identify vulnerabilities and data needs. Identify opportunities to close gaps in communication/data sharing between well permitting and regulation. Monitoring resources for well owners. Characterize typology and geography of well challenges. (Katie Ruby, Tim Worley, Ben McMahan)

Land Use and Development

Connect development to water availability. Collaboration with land use planning agencies to ensure water availability for new developments. Possible nuanced approach to well moratoriums. (Virginia Jameson, Katie Ruby)

CA Water Commission

Strategies and actions that overlap with DRIP "drought preparedness for domestic wells"

Strategy 1: Scale up groundwater recharge



California
WATER COMMISSION

Potential State Strategies for Protecting
Communities and Fish and Wildlife
in the Event of Drought

January 2024

- Strategy 1, Action 1: Prepare for opportunities for groundwater recharge by working with partners, especially the flood management community, to identify flood water diversion and recharge opportunities that benefit communities and the natural environment
 - 1a: Identify areas in California where recharge is likely to (i) benefit groundwater-dependent ecosystems, (ii) improve groundwater levels near at-risk wells, (iii) rapidly attenuate floods and recharge groundwater basins
 - 1b: work with local agencies to identify landowners willing to accept and hold flood flows for groundwater recharge
- Strategy 1, Action 2: Promote recharge efforts that benefit communities and the natural environment through education and outreach and financial incentives
 - 2d: Explore financial incentives to applicable jurisdictions to spur recharge that will (i) advance priority recharge efforts, (ii) provide ecosystem and/or equity benefits, (iii) benefit small, under-resourced communities and Tribes

Strategy 3: Better Position Communities to Prepare for and Respond to Drought Emergencies

Strategy 3, Action 1: For small and/or rural, disadvantaged communities and Tribes, design climate disaster funding that allows for nimble, efficient response to on-the-ground emergencies

- 1c: Encourage counties to enter into agreements in advance of emergency situations and ensure that agreements include provisions for local governments to work with surrounding Tribes
- 1d: Allow delegation of funding management to local assistance providers with expedited State sign-off for pre-approved categories of activities and dollar thresholds to nimbly address system needs

Potential DRIP Actions (from Oct 25)

Written comments from handouts

DRIP Actions
Drought Definition & Narrative

Suggested 1st step: Create a white paper that outlines current drought definitions and processes.


Suggested next steps:

- > **Link to actions:** Provide guidance for what the public can do to take action across different resilience resources.
- > **Education:** Campaign and link to existing programs.
- > **Tie to local:** Continue documenting lessons learned and best practices at the local level.
- > **Drive toward resilience:** Iterate and connect back to drought resiliency.
- > **Ensure no confusion:** Communicate to the media to expand the message.

Key Question: Does this capture the essential actions you would like DRIP to advance?

Instructions:

- > On your **worksheet**, circle 2-3 actions you recommend we sequence up front for early 2024 and/or write down any additional actions you think DRIP should pursue related to the problem statement of this focus area
- > Be ready to share any your perspective as additive, critical comments to the group during the sequencing exercise

 California
DRIP Collaborative

Definition White Paper

- Define drought as it applies to triggers/actions
- Drive toward definition of resilience
- It can be hard to communicate and make policy decisions when conditions vary across the state (no one-size-fits-all)
- For a white paper, we need to be clear on intended audience and usage so this isn't just another report
- I like the suggestion around making this a forward-looking piece vs historical documentation

(Andrew Altevogt, Katy Landau, Katie Ruby)

Communication and Narrative

- Must address users uniquely, given vastly different impacts
- Need a clear local tie, both with impacts and benefits
- Use the narrative to get us to action oriented concepts
- Need to differentiate between emergency response (acute) vs long-term resilience (chronic)
- It can be hard to communicate and make policy decisions when conditions vary across the state (no one-size-fits-all)
- Coordination in public messaging is needed to avoid confusion
- Communications campaign on our permanent water challenge

(Katy Landau, Justine Massey, Jason Colombini, Tim Worley, Anna Schiller)

CA Water Commission

Strategies and actions that overlap with DRIP "Drought definition and narrative"

Strategy 4: Support improved coordination, information, and communication in drought and non-drought years



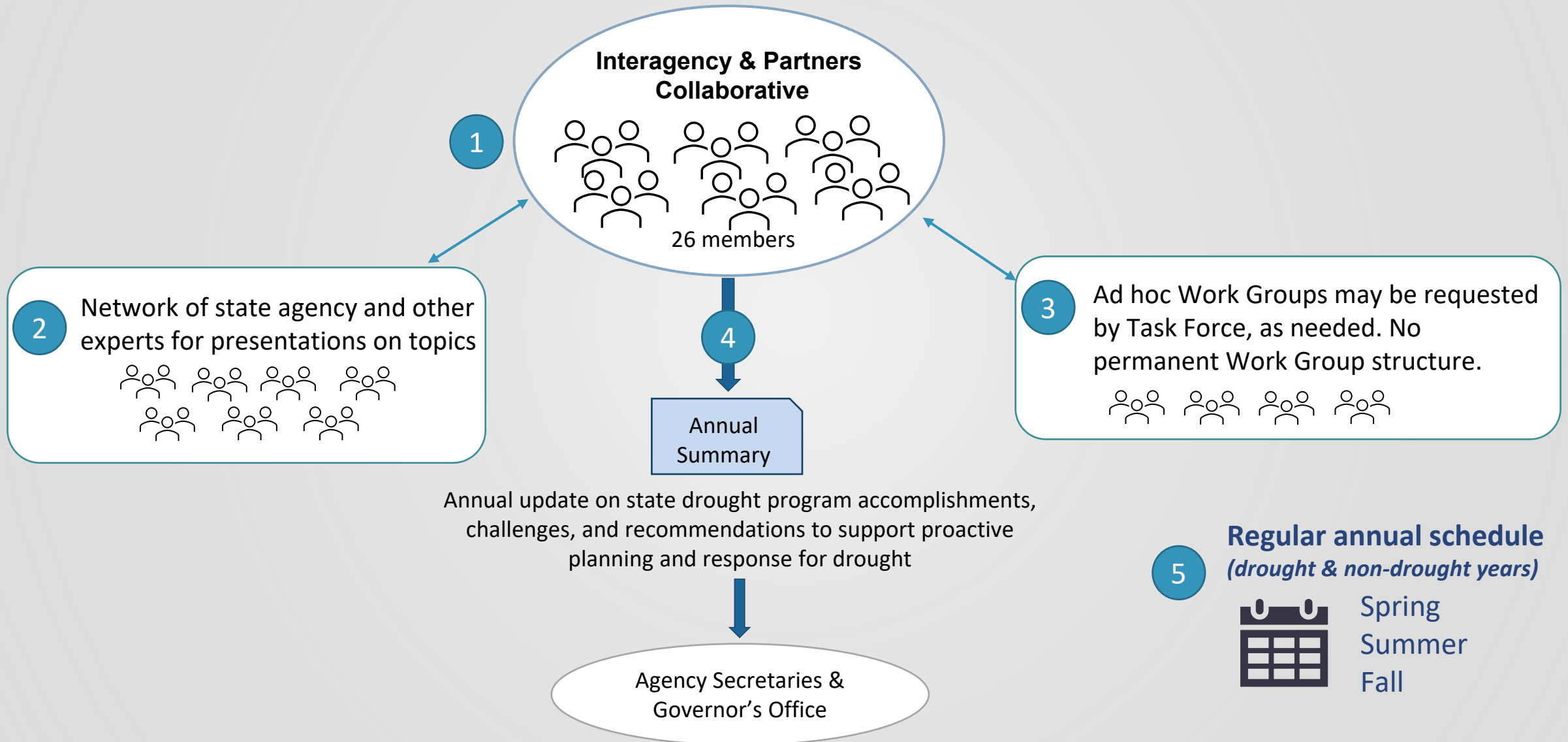
California
WATER COMMISSION

Potential State Strategies for Protecting
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in the Event of Drought

January 2024

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 - 3c: Develop metrics and track the campaign’s impact

DRIP Collaborative Structure



State Agency Members



CALIFORNIA DEPARTMENT OF
WATER RESOURCES



Governor's Office of
Planning and Research



CalEPA
California Environmental
Protection Agency



CALIFORNIA
**NATURAL
RESOURCES
AGENCY**



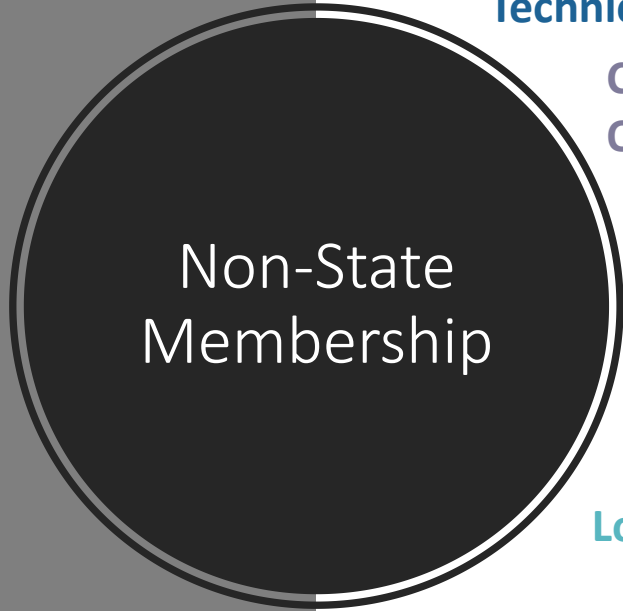
California Department of
Fish and Wildlife



Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

State Agency	Delegate
CA Natural Resources Agency	Nancy Vogel
Department of Water Resources	Karla Nemeth (John Andrew)
CA Dept. of Fish and Wildlife	Josh Grover
California Environmental Protection Agency	Anna Naimark (Katy Landau)
State Water Board	Joaquin Esquivel (Andrew Altevogt)
CA Dept of Food and Agriculture	Virginia Jameson (Tawny Mata)
California Office of Emergency Services	Tina Curry (Lori Nezhura)
Governor's Office for Planning and Research	Saharnaz Mirzazad (Sam Assefa, Elea Becker, Ben McMahan)

State Agency Members: 1 representative each, alternate in parenthesis



Tribal Representatives

Technical Assistance Provider*

Community-based Organizations*

The Public*

The Environment

Agriculture

Local Government*

Experts in Land Use/Water*

Public Water Systems

Non-State Agency Members:
(18 total, 2 per category, asterisk * indicates category specified in Water Code)

Name	Organization
Michael Gerace	Yurok Tribe
Matessa Martin	Buena Vista Rancheria of Me-Wuk Indians
Justine Massey	Community Water Center
Tim Worley	California Association of Mutual Water Companies
Tami McVay	Self Help Enterprises
Grace Person	CivicWell
Suzanne Pecci	Dom. Well Planning Grp South American Subbasin
Brent Hasteley	Plumas Lake Self Storage, Owner
Anna Schiller (Robyn G)	Environmental Defense Fund
Redgie Collins	California Trout, Inc.
Emily Rooney	Agricultural Council of California
Jason Colombini	Jay Colombini Ranch, Inc.
Catherine Freeman	California State Association of Counties
Sierra Ryan	Santa Cruz County
Alvar Escriva-Bou	University of California Los Angeles
Laura Ramos	California Water Institute at Fresno State
Ramy Gindi	Los Angeles County Public Works
Katie Ruby	California Urban Water Agencies (CUWA)