# Summary of DRIP Virtual Meetings - Focus Area Recommendations

Three virtual meetings took place in late February/early March to begin developing recommendations to possibly discuss in the April 2024 DRIP Collaborative Meeting. The recommendation ideas for each focus area are summarized below, with the potential recommendation leads identified. Recommendations marked with an \* are those that were discussed in detail.

## **Drought Relevant Data**

#### **Drought Metrics and Indicators\***

Develop drought indicators and metrics (potentially as part of a drought early warning system) at the regional and sub-sector levels to improve drought decisions, actions, and resilience.

Potential Leads: Alvar Escriva-Bou, ???

#### Thresholds and Actions\*

Identify and refine drought thresholds, tied to indicators and metrics, that ensure a coordinated state and local response that will most improve overall drought resilience.

Potential Leads: (not yet determined)

### Data Inventory and Gaps

Understand the availability, interoperability, and quality of existing water data and identify priority data gaps that, if filled, would most contribute to improved resiliency.

Potential Leads: (not yet determined)

## **Drought Preparedness for Domestic Wells**

#### SB552 Language Update\*

Identify minor SB552 adjustments needed to enhance the law's feasibility and implementation to promote effective execution by state and local governments.

Potential Leads: Justine Massey, Sierra Ryan

## Well Monitoring and Data

Understand the current availability of domestic well data and make recommendations on how improved data can be collected that would benefit both state, county, local, and domestic well owners.

Potential Leads: (not yet determined)

#### **Education and Support of Well Owners**

Create a dedicated support program for well owners focused on improved education and understanding of water shortage risk (groundwater levels) and potential support and actions.

Potential Leads: (not yet determined)

#### Defining Roles and Responsibilities\*

Clarify existing roles and responsibilities across state, county, local agencies, and well owners to ensure a more coordinated response to domestic well water shortage risks.

Potential Leads: Catherine Freeman, ???

#### State Smalls and Rural Schools

Address similar (to domestic wells) water shortage challenges faced by state smalls and rural schools, clarifying current responsibilities and funding available.

Potential Leads: (not yet determined)

#### **Consolidation**

Identify whether domestic well owners can become part of a more sustainable, larger water system that can effectively mitigate water shortage issues in local wells.

Potential Leads: (not yet determined)

## **Drought Definition and Narrative**

#### Drought Definition White Paper\*

Create a white paper that clarifies and documents the variety of definitions used by disparate interested parties, thus clarifying terms and the resulting actions and impacts.

Potential Leads: Katie Ruby

#### Message and Communication\*

Develop a targeted communication strategy, tailored to each unique audience, that better communicates the risk of water shortage in a hotter, drier future and the actions that will be needed going forward. *Potential Leads: (not yet determined)* 

These preliminary recommendations are noted to have interplay, as shown in Figure 1, which illustrates the connections between the recommendations across the three focus areas.

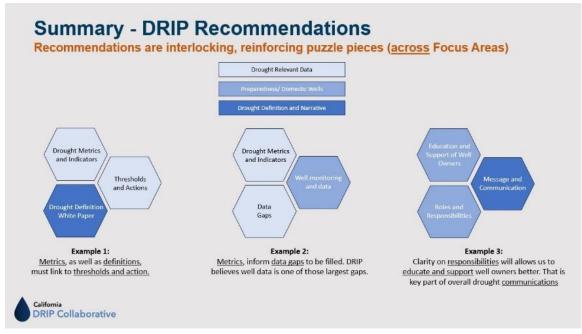


Figure 1. Examples of how recommendations might relate across focus areas.

# Recap of DRIP Virtual Meetings: Focus Area Recommendations

This document summarizes the discussions of the three virtual meetings. Agenda items repeated across meetings (Recap of DRIP Recommendation Process and Introduction of Recommendation Template) are mentioned once. Items with focus-area specifics are noted separately.

Each virtual meeting discussed the California Water Commission's recent drought strategies report; proposed strategies that overlap with the three focus areas are noted in the end of this document.

# Agenda

The following agenda guided each virtual meeting:

- 1. Recap DRIP recommendation process
- 2. Revisit relevant focus area problem statement and Oct 25 DRIP actions
- 3. Introduce recommendation template; Share sample for relevant focus area
- 4. Brainstorm on other possible recommendations
- 5. Align on next steps, including DRIP lead for each potential recommendation

# Recap of DRIP Recommendation Process

Recapped the material covered in the January virtual meetings introducing the recommendation process. The process was emphasized to be DRIP member led, involving input from all DRIP members to ensure an approach that incorporates diverse perspectives and expertise.

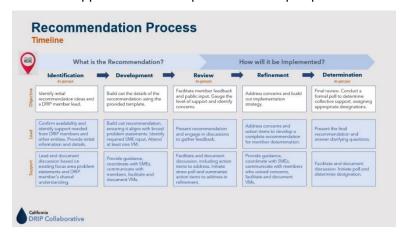


Figure 2. DRIP Recommendation Process first introduced in January Virtual Meetings. At time of this virtual meeting, most recommendations are just before the Identification step (April DRIP meeting) of the timeline.

# Introduction of Recommendation Template

Part 0: <u>Recommendation Declaration</u> requires proposing member(s), a brief description, focus area, and intended benefit to the Drought Risk Management Cycle. **This document must be filled out and submitted to <u>DRIP@water.ca.gov</u> by April 1<sup>st</sup>, 2024 to propose recommendation at April meeting.** 

Part 1: <u>Detailed Recommendation Description</u> includes title, impacts, implementers, alignment with initiatives, and timeframe, to be completed between April and July 2024 meetings.

Part 2: <u>Implementation Considerations</u> covers steps, success metrics, challenges, funding, and equity, with completion by October 2024 meeting. DRIP members are not expected to have all answers.

# **Drought Relevant Data**

February 23, 2024

#### **Attendees**

- <u>DRIP Members/Alternates</u>: Alvar Escriva-Bou, Sierra Ryan, Catherine Freeman, Katie Ruby, Suzanne Pecci, Andrew Altevogt, Grace Person, Laura Ramos
- <u>Development Team</u>: Anthony Navasero, Julie Ekstrom, Glen Low, Sam Magill, Zoe Kanavas, Sanaz
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# Drought Relevant Data: Problem Statement

As California faces a hotter, drier future, the absence of clearly defined, actionable drought metrics and indicators poses a significant challenge to prioritize drought actions effectively and understand their full impacts. To ensure adaptive, effective, and localized strategies through all phases of the water lifecycle, it is crucial to bridge data gaps, ensure data accessibility and interoperability, and support modeling for climate-ready decision making across the state.

These challenges are interconnected and form four key subtopics, each building upon the other, to address issues related to drought-relevant data:

- 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, federal, and Tribes) 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

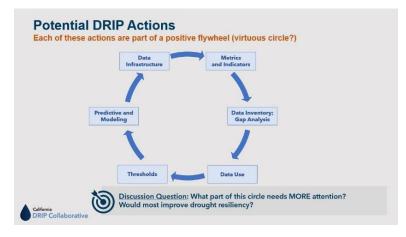


Figure 3. Potential DRIP Actions related to Drought Indicators/Data Focus Area. Suggested actions from October 2023 meeting fell under six general themes: (1) Metrics & Indicators, (2) Data Inventory & Gap Analysis, (3) Data Use, (4) Thresholds, (5) Predictive Modeling, (6) and Data Infrastructure.

# Sample Recommendation: Metrics and Indicators

This recommendation (presented by Alvar Escriva-Bou) proposes developing an actionable list of metrics and indicators for improved drought coordination, especially at the sector and regional level. It would likely include a drought early warning system to guide proactive and emergency responses. The

development would build upon existing initiatives like Water Shortage Vulnerability Scoring, CA Water Watch, SWB SAFER Drinking Water Needs Assessment, UCLA-NIDIS collaboration, CA Water Data Consortium, CWC Drinking Water Tool, and US Drought Monitor.

## Discussion: 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

#### Discussion: Thresholds

The importance of identifying and establishing meaningful thresholds for drought metrics and indicators was mentioned. Participants discussed whether thresholds should be a separate recommendation from the metrics and indicators, or whether we should aim to integrate these into a single recommendation given their obvious linkages. A preference was expressed to ensure DRIP maintains a holistic view across all the recommendations and how they relate. It was also mentioned that DRIP would not be responsible to necessarily define the exact indicators, that would be done by others if the recommendation was approved and later implemented.

# Discussion: Implementation for All Possible Data Recommendations

Implementation must address the importance of temporal data and the limitations of one-off funding, which offers only a snapshot in time and does not support continuous monitoring. There are also challenges of accessing and utilizing private data, with specific mention of companies like PG&E that have monitoring systems but are not mandated to report this data. Additionally, the conversation noted the variability in data reporting across counties and the costs associated with determining the relevance and importance of different data sets.

# **Drought Preparedness for Domestic Wells**

March 6, 2024

#### **Attendees**

- <u>DRIP Members/Alternates</u>: Sierra Ryan, Justine Massey, Tami McVay, Grace Person, Jason Colombini,
   Laura Ramos, Catherine Freeman, Katie Ruby, Suzanne Pecci, Andrew Altevogt
- <u>Development Team</u>: Anthony Navasero, Julie Ekstrom, Glen Low, Sam Magill, Zoe Kanavas

# Drought Preparedness for Domestic Wells: 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 small water systems:

- 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 highincome 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.

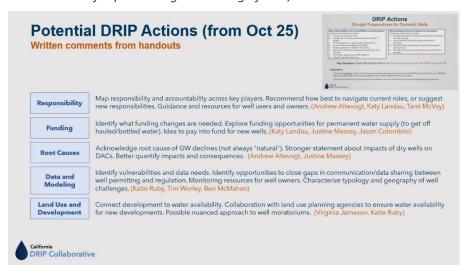


Figure 4. Potential
DRIP Actions related to
Drought
Indicators/Data Focus
Area. Suggested
actions from the
October 2023 meeting
fell under five general
themes: (1)
Responsibility, (2)
Funding, (3) Root
Causes, (4) Data and
Modeling, and (5) Land
Use and Development.

# Sample Recommendation: Update SB 552 County Language

This sample recommendation was presented by Julie Ekstrom based on comments during the 2023 DRIP Collaborative meetings. The key components of this recommendation include (1) mandating each county to adopt a plan, (2) establishing a five-year plan update deadline, (3) required counties to report task force status and submit plan to State by specified deadlines, (4) enforcing the State to review those plans, (5) mandating the State submit a comprehensive implementation report to the legislature every five years, (6) directive for the State to appoint a staff person as point of contact for county task forces, and (7) commissioning a legislative study to better understand county's evolving needs Key suggestions include drafting contributions focused on defining roles in drought response and funding mechanisms, establishing co-funding programs, and fostering collaboration among various regulatory groups. There's also an emphasis on mapping out goals to assist domestic well owners, clarifying county involvement processes, and highlighting the necessity of state commitment and funding to support county efforts, addressing challenges like water hauling restrictions.

# Discussion: Well Monitoring and Data

It was emphasized that we don't really know the total number or extent of domestic wells, and that more monitoring is needed to better understand the scope of the problem. This may require a more standardized approach to data collection, so that data can be made interoperable and usable by all.

# Discussion: Defining Roles and Responsibilities

Roles and responsibilities of well owners, local/county entities, and state authorities need to be clarified. Key points included establishing clear responsibilities with the corresponding funding mechanisms, with clarity on where there are existing gaps. It was acknowledged there is great diversity in the across the state, which must be reflected. Another participant highlighted the need for a structured process to clarify county roles in well management, stressing the importance of state support and guidelines.

#### Discussion: State Smalls and Rural Schools

The discussion highlighted the need for more attention to state smalls and specifically rural schools, given complexities of internal agreements and funding. The conversation suggested a deeper exploration of state smalls, their responsibilities, and funding opportunities. Additionally, it was mentioned that the State Water Board holds regulatory authority over schools, providing them with relatively easier access to funding for projects.

## **Discussion: Consolidation**

A related discussion focused on the climate resilience district concept from SB-852, which establishes funding districts to support community efforts, particularly in rural areas. The conversation explored leveraging this mechanism for areas like Sonoma County and incorporating schools or rural communities into these districts. One participant noted their organization's strategy of working with city-level General Plans to address consolidation challenges. Another participant mentioned a grant-supported initiative in Santa Cruz County to develop a consolidation guide, outlining necessary steps based on a well's sphere of influence and suggesting that state directives may be needed to encourage municipal water systems to expand their customer bases.

# Discussion: Education and Support of Well Owners

The conversation emphasized the need for collaboration among the private sector, county planning, and local communities in managing wells and preparing for droughts. It included a suggestion to form an

advisory committee and enhance well monitoring by separating it into official monitoring and community engagement. The idea was proposed to facilitate the conversion of local well protection programs into legal entities to simplify funding access.

An experience was shared about testing a backup well on a farm, which was found to be dry due to holes in the well casing, rather than a significant drop in water level. This incident underscored the broader issue of aging infrastructure and the need for a safety net for families dependent on old wells, highlighting the importance of addressing infrastructure challenges in water access.

# **Drought Definition and Narrative**

March 7, 2024

## **Attendees**

- <u>DRIP Members/Alternates</u>: Justine Massey, Tim Worley, Katie Ruby, Tami McVay, Laura Ramos, Katie Ruby, Suzanne Pecci, Andrew Altevogt, Jason Colombini
- Development Team: Anthony Navasero, Julie Ekstrom, Glen Low, Sam Magill

# 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.

#### Potential DRIP Actions (from Oct 25) Written comments from handouts **Definition White Paper** Communication and Narrative · Must address users uniquely, given vastly different impacts · Define drought as it applies to triggers/actions · Drive toward definition of resilience · Need a clear local tie, both with impacts and benefits · It can be hard to communicate and make policy decisions Use the narrative to get us to action oriented concepts when conditions vary across the state (no one Need to differentiate between emergency response (acute) vs For a white paper, we need to be clear on intended audience and usage so this isn't just another report It can be hard to communicate and make policy decisions when conditions vary across the state (no one-size-fits-all) I like the suggestion around making this a forward-looking piece vs historical documentation . Coordination in public messaging is needed to avoid confusion (Andrew Altevogt, Katy Landau, Katie Ruby) . Communications campaign on our permanent water challenge (Katy Landau, Justine Massey, Jason Colombini, Tim Worley, California DRIP Collaborative

Figure 5. Potential DRIP Actions related to Drought Definitions and Narrative Focus Area. Suggested actions from the October 2023 meeting fell under two themes: (1) Definition White Paper, and (2) Communication and Narrative.

# Sample Recommendation: Drought White Paper

This sample recommendation was developed from conversations held throughout the 2023 DRIP Collaborative meetings and presented by Katie Ruby. The recommendation proposes a white paper be developed to clarify the varied definitions of drought. This paper aims to create clarity by including a literature review, an integrated view of water supply impacts, a discussion on the scale and impact differences, a forward-looking water shortage analysis under various climate scenarios, and guidelines for the paper's audience and usage.

Participants stated that the paper should be community-friendly, written in plain language, and be actionable. The potential implication of definitions on funding mechanisms is critical. There was a discussion on how conservation and climate change (potentially controversial topics) might be addressed in the paper. Suggestions included discussing conservation as an ongoing practice, not just in dry years, and using simple terms for drought severity to aid local water agencies in communication. Effort needs to link to Sustainable Groundwater Management Act (SGMA) and Groundwater Sustainability Agencies (GSAs) work. Additionally, it was advised that the paper should provide clarity on related concepts such as water shortage and drought resilience.

# Discussion: Message and Communication

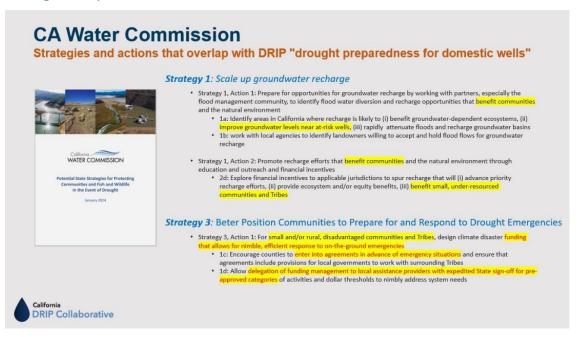
The discussion began with personal experiences and community observations regarding water usage and drought awareness. One participant shared a family story illustrating the challenges of promoting water conservation, highlighting the emotional value people place on the things they use their water for (lawns, flowers, gardens, etc.). The discussion then shifted to how individuals not connected to municipal water systems could be informed about water conservation, suggesting local churches and diverse communication methods as effective channels. Another example was the significant water usage by evaporative coolers in homes, particularly in the San Joaquin Valley, stressing the importance of public awareness regarding water consumption and available funding opportunities for conservation. GSAs and power providers were suggested as potential ways to disseminate conservation messages. It was emphasized that communication needs to be continuous, part of everyday conversation and linked to ongoing education. The concept of relative drought severity was discussed as it relates to communicating during both the "good times and bad times".

# CA Water Commission Strategies: Commonality with DRIP Focus Areas Drought Relevant Data



Figure 6. CA Water Commission strategies that overlap with Drought Relevant Data.

# **Drought Preparedness for Domestic Wells**



**Figure 7.** CA Water Commission strategies that overlap with Drought Preparedness for Domestic Wells.

# **Drought Definition and Narrative**



**Figure 8.** CA Water Commission strategies that overlap with Drought Definition and Narrative.