

Part 0. Recommendation Declaration

Recommendation Proposer

Alvar Escriva-Bou, non-state DRIP member (expert in water resource management). Other DRIP members who have previously expressed interest in this idea: Nancy Vogel, Katie Ruby, Katy Landau.

Potential contributing partners outside of DRIP Collaborative: CA Water Data Consortium (CWDC) and CA Data Collaborative (CaDC)

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.

Focus Area

Drought Relevant Data Drought Narrative Drought Preparedness for Domestic Wells

Intended Benefit to the Drought Risk Management Cycle (Please check all that apply)

- Mitigation, Preparation and Capacity
- Forecasting and Monitoring
- Response
- Recovery

Part I: Recommendation Overview

Recommendation Title

Indicators and metrics to improve drought decisions, actions and resilience

Description

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. This early warning system would include drought indicators for risk and outcome metrics at a regional and sector-specific level to inform local and state actions. This came out explicitly from past DRIP Collaborative conversations related to the “Drought Relevant Data” focus area, and arguably would be the first key action to address the overall data problem statement.

The identification of the most actionable (both at state and local level) drought metrics would serve as a focal point for data sharing/coordination, data collection and interoperability, and then more predictive capabilities such as incorporating climate change data and projections. It could help pilot an improved level of coordination, where state requested data is used directly and transparently for shared metrics that multiple stakeholders believe are critical for tracking resilience.

Today, given an uncoordinated approach to drought metrics and dashboards (such as US Drought Monitor, CA Water Watch, separate drought websites from DWR, State Water Board, etc.) it is believed there is inefficient action and results. We can not measure or quantify drought resilience today, in a way that is easily communicated and understood by all critical stakeholders. Aligned upon metrics and indicators could be the foundation for improved drought communication and narratives.

Impacts

The practical outcome of this recommendation would be the identification of a master list of metrics that are aligned upon to be material and helpful for state and local agencies to improve drought response and preparation. These would be tracked and quantified, providing key agencies with the ability to quantify relative improvement in resilience over time. The desired outcome of this would be a measurable improvement in our overall drought resilience, achieved via better management actions and improved decision-making.

If this recommendation is not adopted, we believe the consequence would be continued lack of focus, misunderstanding of drought severity and impacts, lack of coordination on essential actions, and likely continued serious impacts on vulnerable communities. In short, the status quo would continue even though DRIP members believe this is a critical enabler for better decision making.

Implementing Parties and Partners

Implementation would undoubtedly require a mix of state and local agencies. During the evaluation and execution of this recommendation, a key question will need to be addressed: is there a lead agency and/or single home for this work? This is complicated given an existing mix of responsibilities being shared across many agencies and at different levels. Ideally, open data (housed in each authoritative agency) will be maintained, and these new metrics and indicators would have a highly transparent link back to source data and calculations. Whether these news metrics and indicators should simply be displayed on multiple dashboards (versus a single location) would need to be discussed.

Existing entities or stakeholders that would need to be involved cross five different groups: 1) groups reporting needed data 2) data collecting agencies 3) organizations performing metrics calculations 4) open data portals/dashboards communicating the metrics and 5) end users who utilize the metrics and indicators (such as urban agencies, groundwater agencies, irrigation districts, environmental organizations, and small suppliers or domestic well owners). These groups would cross all relevant state agencies, counties, tribal, local water agencies, non-profit groups (including environmental conservation and justice organizations), community based organizations, academics, and key sectors like agriculture and industrial. Any increase in effort needed to collect additional data, would need to be justified and communicated along with the desired metrics.

To ensure successful implementation of this recommendation, it is believed the wide range stakeholders need to be involved from the very beginning, most notably in defining the metrics and indicators. Each stakeholder representation should be given influence to inform and select the metrics, given careful consideration of the effort/cost required to gather the data and the resulting value of the metrics to decision making.

Alignment with Other Initiatives

There are a number of ongoing initiatives already underway that would need to be considered in implementing this recommendation. These would serve as a starting point and foundation for creating the drought metrics and indicators. Lessons learned from these efforts should be addressed.

For example (not an exhaustive list):

- DWR work to assess vulnerability per SB 552 (Water Shortage Vulnerability Scoring and Tool)
- SWB SAFER Drinking Water Needs Assessment, Clearinghouse, other drought tools and methods
- UCLA work with NIDIS to define drought hazard and indicators at section and sub-regional level
- CA Water Data Consortium work on urban water reporting and data streamlining
- Community Water Center Drinking Water Tool
- US Drought Monitor and other federal, tribal efforts

Implementation Time Frame

Approximately how quickly could the proposed recommendation be implemented? Factor time needed to develop, design, permit, construct (if applicable). Select one timeframe:

- Short term (1-2 yrs.) Medium term (2-4 yrs.) Long term (4-5+ yrs.)

Key outstanding questions (for possible discussion on July 12)

1. **Scope.** Is it optimal to limit the scope to just recommending metrics? Or should it go further, for example to link metrics to specific decisions or thresholds (that trigger actions)?
2. **Timing.** When will we define the actual metrics/indicators? Worth doing a short-list in the next few months to make this more tangible? Or does it happen AFTER the rec is approved?
3. **Quantity.** How many metrics should we aim for? Less than 10 or more like 30-40? Should it include metrics that track actual (not just expected) impacts, so is not just “early warning”?
4. **Home.** Is it okay to have the final vote in the Oct 2024 DRIP meeting without first determining the eventual home for the dashboard/metrics?

Part 0. Recommendation Declaration

To be submitted to the DRIP support team prior to commencing work on Part I.

Recommendation Proposer

DRIP Member name, member type (state/non-state) and any partners (DRIP members or external) in development of proposed recommendation.

Ben McMahan & Elea Becker Lowe, on behalf of DRIP member, Saharnaz Mirzazad, and the Governor’s Office of Planning and Research.

Recommendation Idea

Provide a brief (no more than 150 words) description of the idea for a recommendation.

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).

Partners should include technical experts (State/non-State).

Focus Area

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

Intended Benefit to the Drought Risk Management Cycle (Please check all that apply)

- Mitigation, Preparation and Capacity
- Forecasting and Monitoring
- Response
- Recovery

Part I: Recommendation Overview

Recommendation Title

Provide a concise title for your recommendation in fewer than ten words.

Rapid Inventory of Drought Related Tools & Resources Relevant to California

Description

In one or two paragraphs, please provide a brief overview of the recommendation and how it addresses the Focus Area problem statement. Supporting documentation to include an overview of existing trends, the reasons for urgent action, and people currently impacted.

This is a revision of the initial recommendation (as described in Part 0) to focus less on a formal or in-depth evaluation of drought data and resources, and more on an inventory of drought related resources relevant to California. The purpose of this effort would be to ensure that we are broadly aware of existing drought tools and resources, with a general sense of what gaps might remain in the decision support these tools and resources provide. The process would include identifying the key attributes to track for each of the resources [geography, timescale, relevant sector(s), etc.], sorting known tools and resources into this schema, and some limited research to document unknown tools and resources. The outcome of this effort would be a summary of the resources that are relevant to drought related decision making in California, with a simple schema that describes their area(s) of focus (re: sector, geography, etc.), in a format that could support ongoing evaluation and assessment of how they do or don't address drought related issues in CA, and any gaps in data, tools, or indicators that might address CA related drought. The schema could be a discussion item for future DRIP meetings, and we could use a simple referral process (email, a form, etc.) to elevate or highlight resources to ensure their inclusion in this process.

Impacts

What are the expected outcomes or benefits of this recommendation, and how will it specifically enhance drought resiliency in California?

This process would 1) ensure we are broadly aware of drought resources that already exist to avoid any redundancy, 2) help elevate existing tools and resources that are relevant or useful in California, and 3) help identify gaps in the data/resources landscape based on known or emergent need, specific to the California drought context. The outcome or benefit of this overall process would be to serve as a baseline to support subsequent recommendations and effort and could be developed into a standalone resource that summarizes drought relevant tools and resources.

What are the anticipated impacts or consequences of not adopting this recommendation?

No major consequences, rather this 'homework' will support other DRIP recommendations/effort and will help ensure more efficient use of existing resources, and any gaps we identify would help prioritize future efforts framed around these gaps/needs.

Implementing Parties and Partners

Who would be the implementing agency or entity (potentially multiple)?

OPR could help coordinate this effort, as it mirrors a similar process conducted in response to the ICARP TAC's development of a definition of climate vulnerability (which included a cross walk of existing tools, and some assessment of gaps/needs that resulted from that process). Would welcome any additional support from DRIP members, and this has strong alignment potential with the Drought Indicators and Metrics recommendation, as well as the recommendations in the Drought Definition and Narrative focus area.

Which existing entities (e.g., departments or other agencies, private or nonprofit groups, community-based organizations) will the implementing agency or entity need to partner with for successful implementation of this recommendation?

No mandatory participation to implement, but there are two important touchpoints in this process – developing the schema for the inventory and reviewing the list to identify any missing tools/resources. The schema review could take place as a discussion item for DRIP and doesn't need to be overly complicated. The goal would be to identify the baseline attributes required to have this be a worthwhile effort, while still feasible in a shorter turnaround. In the Jun 17th Drought-Relevant Data workgroup discussion, *sector, geography, timescale*, and links to *vulnerable populations/communities* were all mentioned as possible attributes to include. There may be other attributes to consider. It would also be helpful for SMEs and users outside of the DRIP to review the list/inventory for completeness and to suggest additional tools/resources.

Describe the coordination required by federal, state, local and tribal governments to successfully implement this recommendation.

n/a other than if any state/local/Tribal governments would like to submit a resource for inclusion.

Alignment with Other Initiatives

How does the recommendation align with and/or leverage existing state efforts, concurrent public or private initiatives?

This aligns with the Drought Indicators and Metrics recommendation, serving as a precursor to identify the baseline or landscape of existing resources. It would also align with the Drought Definition and Narrative focus area recommendations, as many of these tools and resources are either used in defining different flavors of drought, or as examples of data that help illustrate the Drought Case Studies recommendation. The 'strategic' literature review discussed at the Jun 17th workgroup meeting could also be a shared resource across the DRIP recommendations and working group, or made available publicly (strategic = the short list of academic resources or technical white papers that are essential resources in the drought impacts space, and show we have reviewed crucial prior work in defining/characterizing/mapping drought to inform our recommendations).

This aligns with the Interagency Technical Working Group for the ICARP Vulnerable Communities Platform at OPR, which will be coordinating with agencies on drought related vulnerability later this summer. Any public facing summaries or inventories of drought relevant information could be hosted on the Adaptation Clearinghouse and tagged with relevant sector/hazard information in the database.

Implementation Time Frame

Approximately how quickly could the proposed recommendation be implemented? Factor time needed to develop, design, permit, construct (if applicable). Select one timeframe:

- Short term (1-2 yrs.) Medium term (2-4 yrs.) Long term (4-5+ yrs.)

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Recommendation Proposer

DRIP Member name, member type (state/non-state) and any partners (DRIP members or external) in development of proposed recommendation.

Justine Massey (NGO), Sierra Ryan (Santa Cruz County)

Recommendation Idea

Provide a brief (no more than 150 words) description of the idea for a recommendation.

Senate Bill 552, passed in 2021, outlines the new requirements for small water suppliers, county governments, DWR, and the State Water Board to implement more proactive drought planning and be better prepared for future water shortage events or dry years. The DRIP Collaborative proposes minor adjustments to enhance the law's feasibility and implementation. The recommended amendments aim to streamline the legislation, promoting effective execution by state and local governments in line with the law's original purpose. Key revisions are recommended below.

Focus Area

Drought Relevant Data Drought Narrative Drought Preparedness for Domestic Wells

Intended Benefit to the Drought Risk Management Cycle (Please check all that apply)

- Mitigation, Preparation and Capacity
- Forecasting and Monitoring
- Response
- Recovery

Part I: Recommendation Overview

Recommendation Title

SB 552 Update

Description

In one or two paragraphs, please provide a brief overview of the recommendation and how it addresses the Focus Area problem statement. Supporting documentation to include an overview of existing trends, the reasons for urgent action, and people currently impacted.

Senate Bill 552 (SB 552), passed in 2021, outlines the new requirements for small water suppliers, county governments, DWR, and the State Water Board to implement more proactive drought planning and be better prepared for future water shortage events or dry years. The DRIP Collaborative proposes minor adjustments to enhance the law's feasibility and implementation. The recommended amendments aim to streamline the legislation, promoting effective execution by state and local governments in line with the law's original purpose.

Key recommended revisions:

Counties:

1. Mandate each county to adopt individual plans under an established timeline. Set a five-year plan update deadline, synchronize with relevant updates in local General Plan Safety Elements or Local Hazard Mitigation Plans.
2. Require counties to report Task Force status by specified deadlines and maintain a website that shares this information with the public. Conduct enforcement if counties neglect to create a task force and submit plans by the specified deadline.
3. Revise the language which states "A county shall consider, at a minimum, all of the following in its plan" to "A county shall develop an outline for how each following element will be implemented within its jurisdiction."
4. Set more realistic expectations/guidelines for how often the County Drought Task Forces should meet and what specifically they are supposed to do— i.e., potentially structure task forces to create annual updates.
 - a. For example, in Santa Cruz the alternative path was more helpful than creating a new Task Force: they have a standing water commission and in order to comply pulled together an advisory group for SB 552 plan development. The standing water commission covers topics beyond just a narrow definition of "drought," such as discussing water quality and hearing from GSA representatives regarding overdraft and implementation plans for demand management.
5. Clarify which components of drought resiliency are first-and-foremost the counties' responsibility versus GSAs', where the funding should come from to fulfill such responsibilities, which requirements should be contingent upon state appropriation, and how GSAs and counties can coordinate on shared responsibilities.

State:

6. Ensure DWR review and compliance-dependent approval of plans, following a review approach akin to DWR's review for Urban Water Management Plans (UWMPs). The process to approve plans must also include a public comment period.

7. Mandate DWR to submit a comprehensive implementation report to the legislature every five years, mirroring the approach for UWMPs and Agricultural Water Management Plans (AWMPs).
8. Include a directive for the State to appoint a staff member as point of contact for County Drought Task Forces, ensuring active state agency involvement.
9. Commission a legislative study, involving counties and representative organizations, to assess existing plans and task forces and understand evolving county needs.
10. For available state funding to support domestic well drought assistance, create contracts (with GSAs or Counties) in advance of acute disasters so that urgent funding can be distributed when it is needed.

Public water systems:

11. Add a requirement for public water systems to have insurance (counties can confirm/report on this). One potential vehicle is SB 1188, recently (March 2024) introduced by Senator Laird.
12. Modify language outlining responsibilities of public water systems to limit when affordability can be used as a reason not to meet the requirements. This needs to be clarified and/or refined. At a minimum require an interim step to discuss a process with the State Water Resources Control Board.

Related items:

13. Define the state's role in emergency response—what is a domestic well emergency and at what point does CalOES join/lead the response?
14. Include language in well ordinance updates to limit or add protective requirements for new developments (housing or industry) in water-challenged areas. A possible definition for this could be in areas with documented dry wells in the past five years.
15. Legislate that local water agencies may not have blanket language prohibiting consolidation with struggling wells and small water systems.

Impacts

What are the expected outcomes or benefits of this recommendation, and how will it specifically enhance drought resiliency in California?

- Add clarity in expectations for county drought planning
- Enable county drought plans to benefit from meaningful feedback from DWR as part of review process
- Standardize the baseline of county drought preparedness
- Standardized plans can lead to greater equity if grant programs become available to help fund the implementation of aspects of the plans.

What are the anticipated impacts or consequences of not adopting this recommendation?

- Uncertainty such as the lack of a deadline for county drought plans
- Vastly different standards of drought preparedness per county
- Drought Resilience Plans will not be robust enough to serve as a tool to guide counties' drought preparedness and response

Implementing Parties and Partners

Who would be the implementing agency or entity (potentially multiple)?

- California Legislature is needed to make identified revisions and specifications in the SB 552 statute
- Department of Water Resources; DWR already provides financial and technical assistance support to counties when implementing SB 552. In the past, DWR has held workshops to assist counties to better understand their responsibilities in meeting SB 552 requirements.

Which existing entities (e.g., departments or other agencies, private or nonprofit groups, community-based organizations) will the implementing agency or entity need to partner with for successful implementation of this recommendation?

(See above)

Describe the coordination required by federal, state, local and tribal governments to successfully implement this recommendation.

The CA Legislature would ultimately make amendments to SB 552, informed by the DRIP's recommendations. DWR would remain the agency tasked with facilitating successful implementation of the law, and counties would create and implement their SB 552 Drought Resilience Plans. (Small system requirements would remain in place but are not addressed as part of this recommendation.)

Alignment with Other Initiatives

How does the recommendation align with and/or leverage existing state efforts, concurrent public or private initiatives?

This recommendation aligns with the potential state actions needed to promote drought preparedness and response for communities which are identified within the Water Commission's "Potential State Strategies for Protecting Communities and Fish and Wildlife in the Event of Drought" (p. 19. Available at: https://cwc.ca.gov/-/media/CWC-Website/Files/Documents/2024/01_January/Drought-Strategies-White-Paper_Final.pdf).

Implementation Time Frame

Approximately how quickly could the proposed recommendation be implemented? Factor time needed to develop, design, permit, construct (if applicable). Select one timeframe:

- Short term (1-2 yrs.) Medium term (2-4 yrs.) Long term (4-5+ yrs.)

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Recommendation Proposer

DRIP Member name, member type (state/non-state) and any partners (DRIP members or external) in development of proposed recommendation.

Suzanne Pecci, public member with a domestic well as the sole source of drinking water; member of a Domestic Well Advisory Groups formed under the SGMA which has an interest in developing and implementing a Well Protection Program for the Local Community thru partnering and with coordination.

Recommendation Idea

Provide a brief (no more than 150 words) description of the idea for a recommendation.

The goal of 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.

Focus Area

Drought Relevant Data Drought Narrative **Drought Preparedness for Domestic Wells**

Intended Benefit to the Drought Risk Management Cycle (Please check all that apply)

- Mitigation, Preparation and Capacity**
- Forecasting and Monitoring**
- Response
- Recovery

Part I: Recommendation Overview

Recommendation Title

Technical Support and Funding for a Community Well Monitoring Program

Description

In one or two paragraphs, please provide a brief overview of the recommendation and how it addresses the Focus Area problem statement. Supporting documentation to include an overview of existing trends, the reasons for urgent action, and people currently impacted.

A Community Well Monitoring Network (Community Network) is described as a group of private well owners, usually pumping from the same aquifer, that join or create a network to monitor water levels and/or water quality. This is driven by a variety of reasons which often include: perception of, or quantified threat to, water quantity and/or water quality; an interest and to gain a better understanding of the hydrogeology; or an interest in sustainable management of their water resource.

Contributing factors for the need for a Community Network are the often-decreased staffing and ability of regulatory and science-based agencies to meet monitoring needs of a community. Establishing a Community Network is a recognition of the value it brings to water resource management and supports the community understanding of the competing demands of a local shared resource.

Impacts

What are the expected outcomes or benefits of this recommendation, and how will it specifically enhance drought resiliency in California?

The concept of a Community Network is a proactive program that involves the engagement of a domestic well community to educate on their individual responsibilities to service and maintain their private wells. It provides an opportunity to encourage private well owners to take a personal interest in water levels and quality in their wells in addition to fosters community interest in collaboration and sharing of data to support shared drought resiliency and recovery. This is based on understanding competing demands on a shared water resource and is a proactive effort to complement SB 552.

What are the anticipated impacts or consequences of not adopting this recommendation?

Today there is a significant and acknowledged lack of data on groundwater levels related to domestic wells. If this recommendation is not adopted, it would likely contribute to continued well dewatering issues spanning multiple areas in California. This was chronicled in the most recent drought ([Wells still drying up despite California groundwater law – CalMatters](#)) which described how thousands of well shortages occurred in areas of California that had not previously had these issues.

An example of sustainable water management efforts by GSAs and community members in rural areas are in the South American Subbasin (SASb) and the Cosumnes Subbasin. This is a large, diverse community of private wells comprised of agricultural and agricultural-residential along the Cosumnes River/Deer Creek that has approximately 3,000 to 5,000 private wells. This area is not considered to be

a “disadvantaged community” and has a regional goal to develop new homes on thousands of acres of agriculture land.

In this area, the potential consequences of not adopting proactive community monitoring include the potential of public attention on the dichotomy of wells going dry and residents relying on bottled water and tank trucks delivery for a large rural population while at the same time newly constructed homes are connected to a permanent water source. This highlights the tension of land use planning and the need for housing development, which is often at odds with sustainable use of water resources. We have a rural population which can understand competing water demands and cause and effect. A Community Network is a collaborative action which is supportive of proactive and preemptive water planning and management to implement SB 552 drought resiliency and recovery.

Implementing Parties and Partners

Who would be the implementing agency or entity (potentially multiple)?

Homeowners’ Association, Community Neighborhood Organizations, SGMA Advisory Committees, County Water Agencies, Municipal water providers, and GSAs.

Which existing entities (e.g., departments or other agencies, private or nonprofit groups, community-based organizations) will the implementing agency or entity need to partner with for successful implementation of this recommendation?

All stakeholders sharing water resources within the aquifer and political boundary as well as GSAs and NGO’s. NGO’s with environmental goals and an associated interest of resiliency associated with monitoring and protective actions to protect surface water levels in streams and waterways and interconnected waterways have water level concerns similar to water levels in shallow domestic wells. Many of these groups are active in the [Groundwater Collaborative \(cagroundwater.org\)](http://cagroundwater.org).

Describe the coordination required by federal, state, local and tribal governments to successfully implement this recommendation.

A key challenge in implementing this recommendation revolves around funding. It was stated at the Drought Preparedness for Domestic Wells workgroup meeting on June 4, 2024 that there may be federal or state funding available for projects and actions for implementation of SB 552. This will be a key consideration in completing Part 2 of this template. Coordination with federal agencies would be required to disperse funds and provide technical assistance and oversight.

Overall coordination with existing entities is dependent on the level of regulatory authority required to be involved. It is assumed that local government would play the major role in coordinating with the Community Network—most notably the county who is the implementing agency of SB 552.

Collaboration with GSAs is already prescribed in the SGMA regulations and a significant amount of the implementation of Community Network would be required by the GSA’s who develop the GSPs. It is a goal of the Community Network to inform the GSP refinement and be a precursor to adopt corrective actions. Collaboration could be through the Community Advisory Committee. Local adoption of this Community Network would need to be tailored to the structure and needs of each specific community.

Alignment with Other Initiatives

How does the recommendation align with and/or leverage existing state efforts, concurrent public or private initiatives?

The Community Network will need to align with a diverse set of local stakeholders, most notably related to SGMA. The Community Network could also align with local and private activities and initiatives to include science activities in schools, Future Farmers of America, etc. Community Networks should align with land use agencies and inform the General Plans and Municipal Code amendments especially where development is driven by the large number of bills from the Senate to remove barriers to dense development that may be impactful to domestic well communities. Local network monitoring data should be added to LAFCOs' Sphere of Influence in areas where expansion and development about domestic well communities, where water supply is not identified, and where water and sewer infrastructure extensions are not part of the approval requirements. It is also assumed that local monitoring data would be reported to State agency authorities, especially if they are providing funding or technical assistance to set up the local networks.

Implementation Time Frame

Approximately how quickly could the proposed recommendation be implemented? Factor time needed to develop, design, permit, construct (if applicable). Select one timeframe:

- Short term (1-2 yrs.)** Medium term (2-4 yrs.) Long term (4-5+ yrs.)

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Recommendation Proposer

Justine Massey, non-state NGO: Community Water Center. Received initial support from DRIP members Sierra Ryan, Tami McVay, and Andrew Altevogt

Recommendation Idea

Provide a brief (no more than 150 words) description of the idea for a recommendation.

When domestic wells fail to provide safe drinking water, due to impaired water supply or quality, it impacts Californians' Human Right to Water. California currently lacks a comprehensive approach to address the urgent drinking water needs of households served by failing domestic wells and lacks a comprehensive policy for reducing the growth of dry domestic wells in the future. The DRIP Collaborative agrees that clarifying the roles and responsibilities related to domestic wells and drought is an important foundation to develop a comprehensive policy. We recommend an outside, non-DRIP Collaborative entity, such as the Legislative Analyst Office or academic researcher, provide clarity on the existing roles and responsibilities of the state and local governments and any other responsible parties on how domestic wells are managed, maintained, and responded to when an outage or other problem occurs. The purpose of this is to manage expectations, support coordination, and document the existing gaps in law or implementation for domestic wells related to preparedness and response for water shortage. This should include who has the responsibility, what the role is, and through what mechanism (legal or otherwise) 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. Included in this analysis should be areas of drought management for domestic wells that remain unclear or absent entirely. Potential or real implications of these gaps and a prioritization of gaps to fill should be included in the roles and responsibilities analysis.

Step 2 of this phased recommendation is that the DRIP Collaborative relies on the roles and responsibilities and gaps analysis to build new recommendations for how to fill the gaps agreed upon as high priorities. For example, as part of this framework, Groundwater Sustainability Agencies (GSAs) and Nitrate Management Zones must 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 overextraction, in accordance with their responsibilities under the Sustainable Groundwater Management Act, CV-SALTS, and the Irrigated Lands Regulatory Program. These responsibilities can overlap, and coordination should be worked out in advance to minimize response time when residents' Human Right to Water is impacted. Overall planning and implementation of long-term solutions should likely be coordinated by a single entity with a responsibility to domestic well communities and with the authority to hold parties involved accountable to fulfilling their responsibilities. This entity could perhaps be a special office of the State Board responsible to the Executive Director and able to effectively coordinate with the Division of Drinking Water, Division of Financial Assistance, Office of Public Participation, and Division of Water Quality. Proposed roles are outlined below.

Focus Area

Drought Relevant Data
Drought Narrative
Drought Preparedness for Domestic Wells

Intended Benefit to the Drought Risk Management Cycle (Please check all that apply)

- Mitigation, Preparation and Capacity**
- Forecasting and Monitoring
- Response**
- Recovery

Part I: Recommendation Overview

Recommendation Title

Roles and Responsibilities

Description

In one or two paragraphs, please provide a brief overview of the recommendation and how it addresses the Focus Area problem statement. Supporting documentation to include an overview of existing trends, the reasons for urgent action, and people currently impacted.

When domestic wells fail to provide safe drinking water, due to impaired water supply or quality, it impacts Californians' Human Right to Water. California currently lacks a comprehensive approach to address the urgent drinking water needs of households served by failing domestic wells, and lacks a comprehensive policy for reducing the growth of dry domestic wells in the future. The DRIP Collaborative agrees that clarifying the roles and responsibilities related to domestic wells and drought is an important foundation to develop a comprehensive policy. We recommend an outside, non-DRIP Collaborative entity, such as the Legislative Analyst Office or academic researcher, provide clarity on the existing roles and responsibilities of the state and local governments and any other responsible parties on how domestic wells are managed, maintained, and responded to when an outage or other problem occurs. The purpose of this is to manage expectations, support coordination, and document the existing gaps in law or implementation for domestic wells related to preparedness and response for water shortage. This should include who has the responsibility, what the role is, and through what mechanism (legal or otherwise) 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. Included in this analysis should be areas of drought management for domestic wells that remain unclear or absent entirely. Potential or real implications of these gaps and a prioritization of gaps to fill should be included in the roles and responsibilities analysis.

This analysis should include the following components:

- Existing roles and responsibilities for domestic wells related to the drought risk management cycle
- Areas of drought management for domestic wells that remain unclear or absent entirely.
- Potential or real implications of these gaps and a prioritization of gaps to fill
- Prioritized list of gaps that if addressed would most effectively contribute to improving drought management related to domestic wells
- Available funding resources

For example, as part of this framework, Groundwater Sustainability Agencies (GSAs) and Nitrate Management Zones must 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 overextraction, in accordance with their responsibilities under the Sustainable Groundwater Management Act, CV-SALTS, and the Irrigated Lands Regulatory Program. These responsibilities can overlap and coordination should be worked out in advance to minimize response time when residents' Human Right to Water is impacted. Overall planning

and implementation of long-term solutions should likely be coordinated by a single entity with a responsibility to domestic well communities and with the authority to hold parties involved accountable to fulfilling their responsibilities. This entity could perhaps be a special office of the State Board responsible to the Executive Director and able to effectively coordinate with the Division of Drinking Water, Division of Financial Assistance, Office of Public Participation, and Division of Water Quality. Proposed roles are outlined below.

Impacts

What are the expected outcomes or benefits of this recommendation, and how will it specifically enhance drought resiliency in California?

Improved coordination for domestic well drought response and long-term solutions will result in fewer delays and more coherent implementation of California's laws and policies to preserve drinking water access.

What are the anticipated impacts or consequences of not adopting this recommendation?

Without this coordination, efforts to resolve dry domestic wells can be hampered by unresolved questions of jurisdiction and responsibility. Delays while residents are awaiting solutions for their drinking water needs are distressing and at odds with California's Human Right to Water law. Further, emergency response and interim supplies can cost the state millions. By clarifying these roles now, relevant agencies and responsible parties can get prepared, execute any necessary Memoranda of Understanding, and arrange for reliable funding mechanisms to go into effect when the need arises.

Implementing Parties and Partners

Who would be the implementing agency or entity (potentially multiple)? Please see below.

Which existing entities (e.g., departments or other agencies, private or nonprofit groups, community-based organizations) will the implementing agency or entity need to partner with for successful implementation of this recommendation? Please see below.

Describe the coordination required by federal, state, local and tribal governments to successfully implement this recommendation.

- State Water Board and/or Department of Water Resources
 - Develop a framework to facilitate (or require, when appropriate) domestic well water quality sampling and require that results be uploaded to a common platform
 - Set guidelines for what constitutes an adequate long-term solution (e.g. monitoring and maintenance requirements for POU/POE treatment)
 - Fund implementation of solutions when there is no party responsible for causing the urgent drinking water challenges—limited capacity with current deficit
 - Provide planning costs for consolidation projects
 - Analyze whether proposed fee structures will actually meet needs (i.e. GSA & NZ mitigation costs) & ensure accountability

- Adjust DAC designation to acknowledge cost-of-living (especially applicable on the coast); refer to metrics developed in 2023 affordability analysis in the Needs Assessment
- Develop specific cost-per-connection funding limits for domestic well consolidation projects that reflect the inherently higher cost of developing public water supply and distribution infrastructure from the ground up
- Issue General Planning guidance for new domestic well developments
- Provide additional support to technical assistance providers which offer well replacement services when the need for long-term solutions is greater than the available technical assistance capacity
- County, LAFCO, and/or local special districts
 - Track specific local needs and solutions and ensure they are met
 - Require domestic well sampling and assessment (i.e.. condition of the well, screened interval, depth to water table) and data sharing as part of well permitting
 - Outreach and well testing (directly or via contracted TA providers)
 - Facilitate discussions between local water agencies and struggling wells and water systems.
 - Manage a website with information on local services and licensed contractors (well drillers, water haulers)
 - Established contract with the State to pay for bottled water, hauling, or POU systems when funding is available—would require significantly more (and stable) funding to do this statewide
 - Deploy interim drinking water solutions if technical assistance providers aren't available in the county
 - LAFCO must Identify locally disadvantaged communities in outlying county areas and study service deficiencies in disadvantaged communities including deficiencies in water access. LAFCO must develop recommendations and cost estimates for extending services to communities through their Municipal Service Review. (Under SB 244)
 - Community service districts/Public utility districts are obliged to consider all requests for interties and/or consolidation
- Parties Responsible for Causing Urgent Drinking Water Challenges
 - Water districts, irrigation districts
 - Required cost share of feasibility study and solution implementation, based on contribution to declining groundwater levels or contamination.
 - Management Zones
 - Well Testing
 - Bottled Water
 - Short and long-term impacts from nitrate contamination
 - Remediation costs
 - Water quality monitoring for nitrate (and co-contaminants as some MZs have contracted with the state)
 - Groundwater Sustainability Agencies
 - Domestic well mitigation due to GSA management (overpumping, project impacts)
 - Aggregation of groundwater pumping fees and penalties

- Groundwater pumping cost assessment
 - Representative Monitoring
 - Future parties
 - Ensure requirements are open for other programs established to be part of the same standards for pursuing long-term solutions
- Technical Assistance Providers
 - Provide technical assistance including outreach, community engagement, planning and engineering assistance.
 - Provide third-party accountability to ensure equitable results.
- Domestic Well Owners
 - Allow well soundings and water quality testing

Alignment with Other Initiatives

How does the recommendation align with and/or leverage existing state efforts, concurrent public or private initiatives?

This recommendation links existing responsibilities and clarifies how entities should coordinate to avoid delays in responding to domestic well drought emergencies.

Implementation Time Frame

Approximately how quickly could the proposed recommendation be implemented? Factor time needed to develop, design, permit, construct (if applicable). Select one timeframe:

- Short term (1-2 yrs.)
 Medium term (2-4 yrs.)
 Long term (4-5+ yrs.)

Part 0. Recommendation

To be submitted to the DRIP support team prior to commencing work on Part I.

Recommendation Proposer

Katie Ruby, California Urban Water Agencies (CUWA) (non-state)

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.

Focus Area

Drought Relevant Data Drought Narrative Drought Preparedness for Domestic Wells

Intended Benefit to the Drought Risk Management Cycle (Please check all that apply)

- Mitigation, Preparation and Capacity
- Forecasting and Monitoring
- Response
- Recovery

Part I: Recommendation Overview

Recommendation Title

Drought Definitions White Paper

Description

This recommendation is to develop a white paper that discusses drought definitions and their implications for various sectors in California. The purpose of the white paper is to clarify terminology and create a common understanding of what “drought” means in terms of water availability and access for different types of water users (e.g., urban, rural, agricultural) and the environment. The white paper would include a literature review of drought definitions, including their use cases (e.g., triggers for response) and impacts. Additionally, the paper would identify potential shortcomings of existing definitions and response actions associated with different types of drought and discuss opportunities to improve water resilience.

It is recommended that this white paper be developed in conjunction with Drought Case Studies, which would further elucidate drought impacts by highlighting diverse experiences and discussing drought terminology in context of relatable stories. Together, these recommendations would provide a more complete picture of what drought is and how it is experienced by different groups.

Impacts

Expected outcomes/benefits:

- Document and clarify existing terminology related to drought, such as water availability, water access, reliability, and resilience. Include quantitative definitions if available.
- Provide a comprehensive overview of factors that influence water supply conditions (including quality and quantity), demands, and environmental needs, to equip readers with a realistic understanding of water availability in their community.
- Highlight geographic variation (e.g., based on supply source[s] and competing demands) and identify opportunities to enhance local and regional resilience.
- Discuss triggers for action, where applicable, and potential gaps/opportunities for improvement. For example, certain actions are driven by emergency declaration, and there is an opportunity to be more proactive.
- Improve the public’s understanding of drought and acknowledgement of water shortage conditions to promote more proactive preparation and appropriate response.

What are the anticipated impacts or consequences of not adopting this recommendation?

- Continued confusion among different stakeholders and the public when it comes to drought. The term “drought” can elicit certain reactions that may not be aligned with actual water shortage conditions in a given region or community.
- Inadequate or inequitable drought preparation/response that does not fully address the needs of different water users and the environment.

Implementing Parties and Partners

Who would be the implementing agency or entity (potentially multiple)?

Which existing entities (e.g., departments or other agencies, private or nonprofit groups, community-based organizations) will the implementing agency or entity need to partner with for successful implementation of this recommendation?

Describe the coordination required by federal, state, local and tribal governments to successfully implement this recommendation.

Development of this white paper will require coordination among multiple state agencies and community partners. It is recommended that the Department of Water Resources (DWR) take the lead on documenting definitions, with input from the State Water Resources Control Board, California Department of Fish and Wildlife, Office of Emergency Services, and Department of Public Health.

The Governor’s Office of Planning and Research (OPR) could support collection and development of case studies through existing outreach channels. It is recommended that OPR cast a wide net in sourcing case studies, seeking input from state agencies, Tribal advisory groups, local agencies, and community groups.

Alignment with Other Initiatives

This recommendation relates to the “Rapid Inventory of Drought Tools and Resources” recommendation (under the Drought Relevant Data focus area). It is suggested that development of the white paper follows development of this inventory, which will document existing resources that could then serve as a starting point for the white paper literature review.

The white paper should reference and build upon existing resources, such as the recent California Water Commission White Paper, [Potential State Strategies for Protecting Communities and Fish and Wildlife in the Event of Drought](#) (January 2024).

Implementation Time Frame

Approximately how quickly could the proposed recommendation be implemented? Factor time needed to develop, design, permit, construct (if applicable). Select one timeframe:

Short term (1-2 yrs.) Medium term (2-4 yrs.) Long term (4-5+ yrs.)

This is recommended as medium-term to follow the Rapid Review of Drought Tools and Resources recommendation. It is assumed that much of the work to develop the resource inventory could feed into the literature review.

Key outstanding question for discussion:

- Does the list of implementing parties and partners seem correct? Who are we missing?
- Are there other related initiatives that the implementing parties/partners should be cognizant of and/or coordinating with?

- Would you recommend a particular structure or way to categorize impacted groups? Some examples:
 - Sector-based: Urban, rural, agriculture, environment
 - People, built environment, natural environment
 - Other?
- How do you envision DRIP's ongoing role in supporting implementation of this recommendation?

Part 0. Recommendation Declaration

Intent: Offer a recommendation for developing a continuous communication program to elevate public awareness and activate appropriate responses according to near-term and longer-term water conditions.

Recommendation Proposer

DRIP Member name, member type (state/non-state) and any partners (DRIP members or external) in development of proposed recommendation.

Proposed by Tim Worley, non-state DRIP member (representing the California Association of Mutual Water Companies, “CalMutuals”), who was solely responsible for creating the proposal.

Recommendation Idea

Provide a brief (no more than 150 words) description of the idea for a recommendation.

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.

Focus Area

Drought Relevant Data Drought Narrative Drought Preparedness for Domestic Wells

Intended Benefit to the Drought Risk Management Cycle (Please check all that apply)

- Mitigation, Preparation and Capacity
- Forecasting and Monitoring
- Response
- Recovery

Part I: Recommendation Overview

Recommendation Title

Simplified Water Supply Communication Platform

Description

Because droughts impact regions and water suppliers differently, inconsistent messaging often confuses the public, resulting in a less effective response than is needed statewide or in a local water service area. A simple method such as color coding is needed to convey the level of drought concern at a statewide level and at a local level, using a consistent and flexible communication platform that can be readily tailored to a retail water supplier audience. In addition, many residents forget that a water shortage will come back, and that actions should be taken to increase their resilience to the next drought. A supporting campaign and widespread adoption will, over time, improve public understanding of the increased variability of water supplies, and foster appropriate individual actions for greater resilience.

This program would be used continuously in state communications, particularly by the departments of the Natural Resources Agency and Cal EPA, as well as the Governor's Office of Emergency Services. Statewide water supply conditions would be communicated frequently, perhaps weekly, with a simple message of what California residents should know, and to check on the supply condition in their local area.

Impacts

What are the expected outcomes or benefits of this recommendation, and how will it specifically enhance drought resiliency in California?

California needs greater public awareness and actions by residents and businesses to improve resilience to increased variability of water supply, ranging from flooding to drought. Increased awareness and understanding would improve individual actions to increase resilience (such as everyday water conservation) and response when supply shortages occur. This program would launch an improved communication tool that is simple to understand and readily adaptable to different geographic scales to promote consistent messaging. A campaign would promote statewide adoption of one consistent communication tool for relevant water supply messaging to broader areas regions of the state, and that may also be adjusted to conditions at the local level of a groundwater sustainability agency or retail water supplier.

What are the anticipated impacts or consequences of not adopting this recommendation?

Inattention, confusion, and poor awareness will continue to describe public knowledge of California's extreme water supply variability. Potential actions by residents and businesses to improve drought resilience in wetter years will be harder to achieve. Eliciting the appropriate emergency response during a drought or other extreme conditions will require more strenuous public education campaigns, and as an emergency continues "drought fatigue" will reemerge as a barrier to improved resilience and response.

Implementing Parties and Partners

Who would be the implementing agency or entity (potentially multiple)?

The Department of Water Resources (DWR) would have the lead role in implementing this program. DWR, supported by the California Data Exchange Center (CDEC), currently posts on its website a Daily Statewide Hydrologic Update showing a percentage of “normal precipitation” for the water year; however, this information is not pushed out regularly and contextualized for public understanding of its variability. A new communication program would need to be launched by the Governor, working through his Cabinet to promote adoption by all relevant state agencies. DWR would promote adoption and use of the communication platform by all local and regional water supply agencies. DWR would also be responsible for delivering statewide messages on the determined frequency (such as a weekly update), with distribution to print and broadcast media as well as to water supply agencies via a listserv function.

Which existing entities (e.g., departments or other agencies, private or nonprofit groups, community-based organizations) will the implementing agency or entity need to partner with for successful implementation of this recommendation?

DWR’s Public Affairs Office would need to partner with a multitude of existing entities. Local water agencies would have an implementation role by using the communication platform to deliver messaging to their own audiences. Other partners in this effort would include weather reporters, associations of drinking water and irrigation systems, and organizations concerned with watershed or environmental protection. These partners would promote and adopt use of the messaging platform.

Describe the coordination required by federal, state, local and tribal governments to successfully implement this recommendation.

Coordination is needed in two ways: (1) information collection and interpretation; and (2) information communication.

1. Information collection and interpretation: This text comes directly from the DWR website.

The [California Data Exchange Center](#) currently operates a data exchange program with various Federal, State, and other public agencies. This data exchange program involves the automated transfer and receipt of data and information via network connections. Following are the major agencies involved in data exchange:

- National Weather Service ([NWS](#)): weather forecasts, river bulletins, full weather data
- U.S. Bureau of Reclamation ([USBR](#)): reservoir operations, reservoir summary reports
- U.S. Army Corps of Engineers ([USACE](#)): precipitation, snow water content, reservoir operations, reservoir summary reports
- Pacific Gas & Electric ([PG&E](#)): precipitation, snow water content
- Sacramento Municipal Utility District ([SMUD](#)): precipitation, reservoir operations
- U.S. Geological Survey ([USGS](#)): river gage data, river flow rating tables and shifts

2. Information communication: Coordination is primarily needed between DWR and local and Tribal water leaders and public information officers (or equivalent). More of these connections may need to be developed. Coordination with federal agencies such as the National Oceanic and Atmospheric Administration (NOAA), the federal Environmental Protection Agency (US EPA), and the Federal

Emergency Management Agency (FEMA) may also be useful. Various nongovernmental organizations, such as California Water Efficiency Partnership (CalWEP), water associations, environmental advocates, and others, may also be helpful in promoting this initiative.

Alignment with Other Initiatives

How does the recommendation align with and/or leverage existing state efforts, concurrent public or private initiatives?

The California Water Commission included “Strategy 4” in its white paper, adopted January 2024, called “Support Improved Coordination, Information, and Communication in Drought and Non-Drought Years.” Embedded in the strategy is this action: “Develop a consistent public information campaign to support local messaging, educate Californians about water, and to spur behavioral changes that support drought resilience,” which also includes several supporting activities.

This program also aligns with the regulation scheduled for adoption by the State Water Resources Control Board, “Making Water Conservation a California Way of Life,” which seeks to strengthen drought resilience by reducing urban residential and commercial water use.

Within the DRIP Collaborative work, this recommendation may be furthered by the efforts led by Alvar Escriva-Bou to define better drought indicators and metrics. There will be a need for indicators to describe other (non-drought) water availability conditions also.

Implementation Time Frame

Approximately how quickly could the proposed recommendation be implemented? Factor time needed to develop, design, permit, construct (if applicable). Select one timeframe:

Short term (1-2 yrs.) Medium term (2-4 yrs.) Long term (4-5+ yrs.)

Key outstanding questions for discussion:

- It may be inaccurate to use a single symbol to describe water conditions statewide, so would it be better to use a symbol for each hydrologic region of the state? Will this be practical and useful?

Part 0. Recommendation Declaration

To be submitted to the DRIP support team prior to commencing work on Part I.

Recommendation Proposer

DRIP Member name, member type (state/non-state) and any partners (DRIP members or external) in development of proposed recommendation.

Ben McMahan & Elea Becker Lowe, on behalf of DRIP member, Saharnaz Mirzazad, and the Governor's Office of Planning and Research.

Recommendation Idea

Provide a brief (no more than 150 words) description of the idea for a recommendation.

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 definitions developments and align with the proposed Drought Definition White Paper 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.

Focus Area

Drought Relevant Data Drought Narrative Drought Preparedness for Domestic Wells

Intended Benefit to the Drought Risk Management Cycle (Please check all that apply)

- Mitigation, Preparation and Capacity
- Forecasting and Monitoring
- Response
- Recovery

Part I: Recommendation Overview

Recommendation Title

Provide a concise title for your recommendation in fewer than ten words.

Drought Narrative Case Studies: How drought affects CA communities and examples of successful outcomes

Description

In one or two paragraphs, please provide a brief overview of the recommendation and how it addresses the Focus Area problem statement. Supporting documentation to include an overview of existing trends, the reasons for urgent action, and people currently impacted.

Many existing efforts are underway to understand, communicate, and address drought in California. Considering the variability of California's diverse climate and geographies and recognizing that different communities will experience the impacts of drought in unique ways, case study narratives should call attention to a variety of specific examples of drought-related challenges, as well as solutions to those challenges that could be considered models of success. Drought narrative case studies will be designed primarily to compliment the development of a Drought Definitions White Paper by providing specific examples of drought experiences and solutions that acknowledge the many facets of drought related impacts across sectors and geographies, and fragmented approaches to building drought resilience. Secondly, case studies may be distributed on various alternative and/or multi-media platforms to communicate the diverse impacts of drought and action-oriented solutions.

Case studies may uplift nuanced perspectives, including tribal expertise, community-lived experience, and expert practitioner input, presenting a diverse array of experiences and actions from those closest to the impacts of drought that can improve our collective understanding and inspire more resilient outcomes. Case studies should provide written examples that complement the Drought Narrative White Paper and leverage the information collected through the proposed Rapid Inventory of Drought Relevant Tools and Resources. Alternative platforms and formats may be supportive to featuring completed work, and used to inform decision-making, improve general understanding, and connect with diverse audiences. This may include creating videos or hosting case study summaries on websites such as the [ICARP Climate Adaptation Clearinghouse](#). Additional efforts through a communications campaign can further uplift these examples in locally relevant contexts and venues. Case studies should be written for a general audience and include examples from diverse audiences (e.g., practitioners, planners, decision-makers, scientists, tribal communities, private well-owners, and other residents).

Impacts

What are the expected outcomes or benefits of this recommendation, and how will it specifically enhance drought resiliency in California?

Developing a suite of case studies will help demonstrate the range of diverse impacts of drought and water scarcity which can inform decision-making and general understanding. Case studies that illuminate the significance and urgency of drought impacts across different sectors (e.g., agriculture, housing, public health, industry), geographies (e.g., rural & urban), and various communities will help

engage Californians in taking action. Examples of successful drought mitigation practices can be included to highlight model pathways for future resilience-building. Examples of drought-related challenges and specific extreme events will help prioritize potential issues areas of focus.

What are the anticipated impacts or consequences of not adopting this recommendation?

Lack of clear examples in the Drought Definition White Paper will contribute to further confusion or misunderstanding about the challenges and solutions available to addressing drought issues in California.

Implementing Parties and Partners

Who would be the implementing agency or entity (potentially multiple)?

Members of the DRIP Collaborative should collectively contribute to the compilation of these case studies through their respective networks. The Governor’s Office of Planning and Research may support by providing case study templates, develop processes for collection and review, and provide a space on the [ICARP Climate Adaptation Clearinghouse](#) to host completed products. Other partnerships with State and local agencies and non-government contributors will be critical to uplifting diverse examples across sectors, geographies and communities of the state.

Which existing entities (e.g., departments or other agencies, private or nonprofit groups, community-based organizations) will the implementing agency or entity need to partner with for successful implementation of this recommendation?

This recommendation will be successful with broad input and support from State agencies, non-government partners, and community representatives.

Describe the coordination required by federal, state, local and tribal governments to successfully implement this recommendation.

Federal, state, local and Tribal government perspectives should be included to demonstrate the breadth of water management stewardship relevant to drought issues across the state.

Alignment with Other Initiatives

How does the recommendation align with and/or leverage existing state efforts, concurrent public or private initiatives?

This recommendation aligns with and may uplift progress on the Drought Definitions White Paper; Communications Program; and the Rapid Inventory of Drought Tools and Resources. Case studies can further elevate existing campaigns, such as, “Save Our Water”, or other statewide and locally relevant initiatives, delivering clear examples to inform diverse and broad audiences.

Implementation Time Frame

Approximately how quickly could the proposed recommendation be implemented? Factor time needed to develop, design, permit, construct (if applicable). Select one timeframe:

Short term (1-2 yrs.) Medium term (2-4 yrs.) Long term (4-5+ yrs.)

The recommended implementation timeline is short term, but following the Rapid Inventory of Drought Tools and Resources and in alignment with the development of a Drought Definitions White Paper to ensure criteria for development of case studies aligns with the information compiled and produced through those two actions. It is assumed that much of the work to develop the data inventory will feed into the literature review that will help inform the scope and breadth of these examples. Implementation may continue on an ongoing basis to support longer-term communications campaigns and compile new examples over time.