Meeting Minutes
Drought Resilience Interagency & Partnership (DRIP) Collaborative

Meeting 3

Sacramento State University, Training Room, DRN 104 and 105

304 S Street, Sacramento

October 25, 2023, | 10:00am- 5:00pm

The meeting was live streamed and recorded. The recording can be viewed at: https://www.youtube.com/watch?v=WhkvmNQIxlA

Meeting materials (including the presentation) are available online at: https://water.ca.gov/drip.

A list of Drought Resilience Interagency & Partnership (DRIP) Collaborative members (members) is included in **Appendix A**. The DRIP staff development team includes:

- Anthony Navasero, California Department of Water Resources (DWR) Drought Coordinator
- Julie Ekstrom, DWR Division of Regional Assistance/Water Use Efficiency Branch Senior Scientist
- Glen Low, Earth Genome
- Clare Keating, Earth Genome
- Sam Magill, Sacramento State University Consensus and Collaboration Program

Meeting Overview

Members of the DRIP collaborative met for their third meeting on October 25, 2023, in Sacramento. The following bullet points provide a brief overview of meeting outcomes; additional detail is provided in the summary below. Key action items, takeaways, and outcomes include:

- DRIP Members were supportive of the DRIP process in general to develop problem statements and actions for focus areas, and stressed the need to make sure any final recommendations or actions have a clear policy directive, funding request, etc.
- Members expressed support for an additional set of Virtual Meetings (VM) to define problem statements and actions for additional, subject specific focus areas.
- Staff will develop a process for continued refinement of focus areas to ensure specific recommendations can be developed by and agreed to by the DRIP in 2024

Welcoming Remarks and Introductions

Anthony Navasero opened the meeting and thanked participants for attending. He then reviewed desired outcomes for the meeting, including:

- Develop shared understanding of problem statements, roles and responsibilities, timeline, and resources for high-priority focus areas based on outcomes of 1 and 2.
- Develop shared understanding of sequence for addressing remaining DRIP focus areas.
- Present and confirm process for developing the Annual Report
- Present process for future DRIP governance/participation

After opening remarks, Glen Low reviewed the proposed DRIP roadmap, including the next steps for focus area problem statement development and next steps in moving from general goals to specific actions. After the presentation, the following comments were received from DRIP members (where provided, staff responses to comments are provided in sub-bullets below):

- Senate Bill 552 includes a mandate for counties to convene drought task forces. The use of the word "shall" regarding each task force requires specified representatives to be invited to participate and implies compliance with the Brown Act, including all public noticing and transparency requirements.
- How will we move from general problem statements for focus areas to specific actions? The overall process is much clearer now than it was at the beginning of the DRIP in April 2023, but it is still unclear how DRIP "agreement" is defined.
    - Staff noted that governance will be included as part of the discussion later in the afternoon.
- The presentation and recent VMs focus on three priority focus areas. When will the other focus areas be discussed?
    - Staff noted the agenda includes an exercise for sequencing remaining high-priority focus areas later in the discussion.

DRIP Discussion/Refinement of Priority Focus Areas

Glen led a presentation and discussion to finalize problem statements and begin the identification of actions for the three highest priority focus areas, including Drought Preparedness for Domestic Wells, Drought Relevant Data, and Drought Narrative. A short summary of the presentation and discussion for each focus area is provided below; DRIP members also provided additional feedback on problem statements and actions in a separate worksheet. Worksheet responses will be posted to the DRIP website at https://water.ca.gov/drip.

Focus Area 1: Drought Preparedness for Domestic Wells (Domestic Wells)

Glen provided the following DRAFT problem statement for the Domestic Wells focus area:

> "As California faces a hotter, drier future, drought preparedness for domestic wells is paramount. Domestic wells, reliant on groundwater, face declining levels during prolonged dry periods, compromising both water quality and availability. Despite SB552's requirement for proactive planning and specific actions, the issue of domestic well preparedness affects and may be affected by a broad spectrum of entities and groups that require clarity in the areas of responsibility, funding, and cross-sector coordination."

Members were asked to discuss this initial draft with each other. After individual discussions, the following comments were provided in plenary:

- The problem statement currently doesn't reflect the opportunity to address the root cause of water shortages. As we adjust how we talk about drought, we can talk about the management of groundwater supplies and how DRIP can address acute and chronic well issues/ensure supplies are available to meet demands.
- It is important to categorize activities to address domestic well shortages. We need to think about emergency response and preparedness, long-term planning, jurisdictional issues, and funding. We need to have a clear understanding of each one of these issues, who is currently working on them, and how they overlap or connect.
- When wells go dry, water is brought to households (either bottled or hauled). I think more about resiliency issues, how to maintain groundwater basins, and how to establish monitoring networks. Monitoring data is critical for decision makers to assess and protect the health of basins.
- The DRIP membership is well suited to make progress on domestic well issues. We also need to include state small water systems in our discussions.
- There is a lot of variability regarding domestic well issues. Some organizations represent well users and small water systems from 8,000 feet in elevation to less than sea level.
- We want the DRIP product to be as effective as possible. Problem statements should be focused on securing up-front funding. Legislative directive action is the best way to receive funding. Focus area recommendations could take the format of "Problem statement (defining the issues); with x amount of funding provided, we could secure x, y, and z benefits."

In addition to discussion of the problem statement, DRIP members were asked to consider a series of actions to address Domestic Wells. The following discussion was recorded:

- Metering domestic wells would be challenging and may be unsafe in some parts of the state due to property access issues. It's also important to remember that water from domestic wells isn't "free": energy costs associated with pumping can be very expensive. NOTE: the DRIP has not recommended metering of domestic wells.
- Foothill communities face unique causes for dry wells, including drought/water shortage, agricultural pumping, geology (i.e., fractured rock). Drought is not the only cause of water shortage: water scarcity is an issue regardless of what the cause is.
- Groundwater Sustainability Agencies (GSAs), required by the Sustainable Groundwater Management Act (SGMA) have no jurisdiction over domestic well permitting.
- The DRIP could consider monitoring requirements for new or second wells on individual parcels and require well log information for home sales/property transfers.
- Modifications to SGMA may be needed to provide additional regulatory power similar to urban water plans.
- Education is critical for the empowerment of domestic well owners to manage their own wells.
- Communication between state and non-state agencies is important to address jurisdictional issues and provide a backup to outreach efforts at the local level.

After discussion of the Domestic Wells problem statements and initial actions, Glen presented a process and next steps for the focus area. Additional VMs will be held in the first quarter of 2024 to outline and sequence specific actions and develop a workplan for integration into the 2024 DRIP roadmap. Members were encouraged to reach out to DRIP staff at drip@water.ca.gov for an invitation to the next suite of virtual meetings.

Focus Area 2: Drought Relevant Data (Data)

Glen provided an overview of the problem statement and initial actions for the Drought Relevant Data Focus Area. The initial problem statement is included below:

> "As California faces a hotter, drier future, a lack of sector-specific metrics and streamlined data coordination hinders timely decision-making, jeopardizing drought resilience. To ensure adaptive, effective, and localized strategies throughout the drought lifecycle, it is crucial to bridge data gaps, unify drought data, and integrate climate change analytics across decision-making tiers statewide."

Participants were asked to discuss this initial draft and sample actions with each other. After individual discussions, the following comments were provided in plenary:

- We need to connect shallow well data with environmental conditions.
- The general public does not have access to reliable domestic well information.
- We need to consider where "good data" exists and utilize it as much as possible; we should avoid "reinventing the wheel".
- Different parts of the state are in drought at different times. There is a lot of variability in the data across the state and between different sectors.
- California has an existing monitoring network in need of increased investment. We should invest in more operations and maintenance of the existing system before building something else.
- Building trust to increase data sharing is crucial to educating people that data will be used to help them and not for the state specifically.
- The DRIP's role should be to inform policy. We need to define our goals and structure outputs/actions to maximize on-the-ground impacts and funding opportunities.

After the discussion, Glen walked through the next steps for finalizing the Data problem statement and actions. Similar to Domestic Wells, continued VMs will be held in the first quarter of 2024.

Drought Definition and Narrative

Glen provided an overview of the problem statement and initial actions for the Drought Definition and Narrative focus area. The initial problem statement is included below:

> "Because drought has many different definitions, from biophysical to social, people vary greatly in their perception and experience of it. Historically, drought planning has focused on physical definitions, often neglecting (or ignoring) more nuanced social aspects and indicators that often play out over varying timescales. The narratives people form around drought offer varied

interpretations of drought effects and suitable adaptation strategies, making "drought resilience" a debated and nuanced term, often different for different audiences."

Participants were asked to discuss the initial draft together and return to plenary. After small group discussions, the following comments were recorded:

- DRIP members provide varying input on the need for a single drought definition. Some members felt even using the term “drought” may not be appropriate. Others felt finding a “perfect” definition could be time consuming, and just to use the existing DWR definition provided by Jeanine Jones during VM2.
- Defining drought should include a clear linkage to policy. The narrative DRIP develops could trigger policy actions/reactions.
- A change in thinking is needed. The narrative can help drive a shift in behavior. Californians need to understand that drought is a long-term condition (as opposed to an acute threat).
- We need to educate both the public and decision makers that the state can’t “build its way out” of drought. Any definition should be linked to both historical practices and current/future conditions. A significant shift is needed from prior practices.
- At the federal level, the US Department of Agriculture (USDA) drought definition already drives policy: a drought designation triggers insurance payments for certain crops. We have to link data to whatever definition is developed to justify policy decisions.
- State definitions should be tied to local policies. There is a lot of pressure at the local level to maintain current well usage levels.

Similar to the previous focus areas, continued VMs will be held in early 2024 to refine the problem statement and actions as needed. Staff also proposed the development of a white paper to outline key concepts including current drought definitions and actions.

Closing Thoughts on Priority Focus Areas

Glen closed the priority focus area discussion by asking DRIP members if discussion outcomes and the next steps as described demonstrated clear progress. Members stressed the need for DRIP recommendations to include suggested mandates and clear policy linkages in the final problem statements/actions.

Sequencing Remaining Focus Areas for Inclusion in the DRIP Roadmap

Clare Keating, Earth Genome, presented a series of other focus areas identified by DRIP members in VM1 for problem statement/action development. She noted that these additional focus areas are very broad, will require further definition from DRIP members, and will require additional VMs. The additional focus areas for discussion included:

- Integrating Climate Change Adaptation into Drought Resilience
- Implementation of Nature-Based Solutions for Drought Resilience
- Reducing Ecosystem Impacts of Drought
- Water Resources and Operations

- [Water] Infrastructure and Planning
- Land Use Planning

After Clare's opening presentation, Sam Magill provided a brief overview of an exercise to sequence these additional focus areas. The goal of the exercise was to solicit DRIP guidance on which focus areas should be addressed next, instead of working to define problem statements during the meeting. Participants were instructed to write each focus area on a sticky note and consider the impact of the focus area (high or low impact) and the expected level of effort to address them (high or low effort). Members then placed each sticky note in a 2x2 matrix designed to identify which focus areas can be addressed to ensure high impact items are addressed first.

High impact/low effort items can be thought of as "low hanging fruit" and could be addressed first, followed by high impact/high effort, low impact/low effort, and low impact/high effort. For the purposes of this summary, only high impact/low effort and high impact/high effort results are provided below (a complete image of the sequencing exercise results is provided below in Appendix B):

- High impact/low effort:
    - Land Use Planning: 7 members
    - Water Resources and Operations: 8 members
    - [Water] Infrastructure and Planning: 7 members
    - Nature-Based Solutions: 3 members
    - Integrating Climate Chane Adaptation: 7 members
    - Reducing Ecosystem Impacts: 1 member
- High impact/high effort:
    - Reducing Ecosystem Impacts: 14 members
    - Land Use Planning: 10 members
    - [Water] Infrastructure and Planning: 8 members
    - Water Resources and Operations: 6 members
    - Integrating Climate Change Adaptation: 8 members
    - Nature-Based Solutions: 3 members

After the initial exercise, DRIP members reconvened to discuss the results. The following discussion was recorded:

- Multiple participants noted that for some of the focus areas listed, the DRIP may need to include feedback from/discussion with additional outside experts.
- Participants also commented that some of the focus areas could be "nested" within or across multiple other items (for example, all drought solutions could incorporate the concept of reducing ecosystem impacts of drought or integrating climate resilience). However, members stressed that these issues should not be lost or minimized and are critical to address drought impacts across the state. Forecast informed reservoir operations (FIRO) and Flood-MAR are similar items that could be included in multiple focus areas.
- Funding to address focus areas is not specifically mentioned or a stand-alone item but could be considered a "cross-cutting" issue to be incorporated into all problem statements and actions.

Outreach and engagement around each issue is similar: although not listed as a separate focus area, it must be included for each item listed above.

- Ecological impacts of drought have not been discussed in detail to date but should be considered for all action items or as a standalone focus area.
- Climate Change should include specific actions as opposed to just focusing on adaptation activities within other focus areas.
- Land Use Planning is primarily addressed at the local (county) level. Addressing land use planning in the context of drought requires coordination with all 58 counties in California and may be extremely challenging. Moreover, despite being settled science, the term "climate change" may be politically charged in some jurisdictions.

Presentation of Annual Report Outline and DRIP Governance Structure

Julie Ekstrom provided an overview of the first DRIP Annual Report. The first Annual Report will be used to memorialize feedback received during DRIP meetings, express the DRIP Collaborative's support for funding and other changes to support proactive planning and implementation of drought efforts. The first draft of the Report will be produced in early December, with a final draft expected/published in January 2024. Future Reports will include specific, DRIP-approved recommendations to address the focus areas.

Sam reminded DRIP members that the first Report is primarily administrative and will not require specific DRIP approval. Future Reports and any recommendations will use the decision-making protocols laid out in the DRIP Charter: all decisions will be consensus-seeking; where consensus is not possible, a simple majority vote will be used to solicit approval.

After the presentation, the following DRIP member discussion was recorded:

- Future reports need to include a specific "ask" from agencies and the California Legislature to ensure they don't get shelved. Feedback loops should be developed to ensure future recommendations don't get lost.
- The DRIP was convened via legislation and should be publicly circulated.
- The California Natural Resources Agency (CNRA) will speak to the CNRA legislative liaison and expects to share the Report with relevant legislative committees.

Public Comment

Sam opened the floor to public comment. Comments are directly attributed to members of the public. The following comments were recorded:

- Member of the Public Sonia Sanchez commented: In regard to this conversation, the US Drought Monitor/California Drought Monitor is NOT an accurate representation of drought. It does not capture what is taking place in our aquifers and if there is going to be a metric that triggers state response or funding for drought, it cannot be the Drought Monitor. I've brought this up before

and heard from DWR that they are looking at developing a new tool that will capture drought related to aquifers and that is really needed. The general public hears that "the drought is over" because that's what is shared in the media and they use the Drought Monitor as a gauge, which again is inaccurate. I also highly support a statewide messaging campaign around dry wells education and resources available.

- Redgie Collins, CalTrout (DRIP Collaborative Member, not present in person), commented, “I would encourage us to think about how we include a focus area that looks deeply at drought planning for in-stream flow requirements for ecosystems, especially given the recent push for Scott and Shasta instream flow, multiple pending tribal water adjudications throughout the state, as well as public trust well ordinances.”'
- Redgie continued that, “I think instream flow requirements to meet ALL beneficial uses, including tribal fishing and fish and wildlife benefits would be a great focus area. He also said that “I want to point out the makeup of this DRIP collaborative. There are only two representatives that focus on ecosystem concerns, primarily.” Redgie closed by saying, “We cannot avoid climate change as a term. It’s an accepted scientific fact, and as a public body we cannot mislead any folks who may not know that. “
- Member of the Public and Community Water Center (CWC) advocate Kjia Rivers stated, “The DRIP Collaborative is one of the three main arms under SB552. I ask that the Collaborative really focus their efforts on implementation of SB 552 at the local level. A successful county implementation of SB 552 should be really considered as one of the main efforts for drought preparedness for domestic wells. CWC has been following county implementation of SB552 and has provided feedback on county drought resilience plans. To date these plans did not fully consider each element required under SB 552, such as the creation of a consolidation plan for domestic wells and state small water systems, thorough analysis of domestic well communities at risk for drought, and an analysis of how plans will fill funding gaps to ensure local drought response can be robust. It's really imperative that the Collaborative work together to determine what is needed to ensure that DWR has the power to provide feedback and confirm completeness of drought resilience plans. We really need a backstop to ensure that these plans will be effective and prepare for domestic well impacts. If this doesn't happen, we need to determine how domestic well users will be supported in the future, knowing that we’re entering a period where state funding may not be as available for this type of support. We must consider how we work together to ensure that GSAs will continue to provide funds under mitigation plans to support hauled water, bottled water, and how all activities will be coordinated.”

Informational Updates

After Public Comment, a series of information updates were provided on the following topics:

- Hydrological Update (Jeanine Jones, Interstate Regional Manager, DWR)
- Update/Status Report on SB552 County Task Forces (Julie Ekstrom)
- Update on Domestic Well Data (Ben Brezing, Senior Water Resources Engineer, Sustainable Groundwater Management Office, DWR)
- Overview of Informational “101” Series (Clare Keating)

Each presentation is summarized below, including any subsequent discussion by DRIP members.

Hydrological Update

Jeanine Jones, DWR, provided an update on hydrology and current conditions. She noted that DWR provides a full recap of the 2023 water year online at https://water.ca.gov/-/media/DWR-Website/Web-Pages/Water-Basics/Drought/Files/Publications-And-Reports/Water-Year-2023-wrap-up-brochure_01.pdf.

Jeanine presented that California reservoirs currently store a high amount of water dating back to 1977, with the statewide average at 129% of historic averages. Groundwater levels do not appear to be significantly impacted by the historic precipitation in 2023, but groundwater often takes much longer to recharge than surface water supplies. She closed by discussing the outlook for the 2024 water year and noted that there is little correlation between national El Niño forecasts and conditions in California.

Update/Status Report on SB 552 County Task Forces

Julie provided an update on SB 552 County Task Forces, noting that DWR has published a guidebook for county task forces and the development of county drought resilience plans. According to DWR staff discussions with counties, 27 (47%) of California Counties have convened drought task forces. Two counties have adopted county drought resilience plans (Santa Cruz and Tulare Counties). A total of 19 counties have applied for technical assistance to develop plans, and 3 have applied for non-competitive planning grants.

After the presentation, the following Member discussion was recorded:

- What is the enforcement mechanism/penalty if counties do not complete a drought resilience plan or convene a task force?
    - The SB 552 law does not include any mechanism for the State to assess county compliance with the requirements, nor penalize or otherwise compel compliance..
- Will county plans (and DRIP recommendations) be accessible to the public?
    - DWR has created a sharing portal for counties to submit plans. All submissions will be made public. Counties that participate in DWR's County Drought Resilience Planning Assistance Program are expected to submit their plans through this sharing portal. Note that SB 552 doesn't require counties to submit plans to the State, nor is there a due date for the plan in the legislation.
- Members discussed the possibility of a DRIP recommendation to create the authority to enforce SB 552 compliance. One suggestion included making grant or technical assistance funding contingent on completing a drought resilience plan; others discussed the potential for making recommended legislative language revisions to add requirements for State review of the plans and verifying standing task forces.

Update on Domestic Well Data

Ben Brezing, DWR, provided an update on California domestic well data, as requested by State Water Board DRIP Member in the July 20 meeting. Ben presented how wells in California are record highlighted the difficulty of monitoring domestic well conditions as no legislative directive or funding currently exists to maintain a statewide well inventory. A "patchwork" system of monitoring systems and inventories is

maintained at various levels (county, DWR, State Water Resources Control Board (SWRCB), California Water Commission, etc.) but provides an incomplete account of where wells are used and what the condition of water supplies is in many areas. He noted that domestic wells are highly vulnerable to drought, and a consistently maintained, publicly accessible inventory will help the state and local governments understand vulnerabilities and plan solutions.

After the presentation, the following discussion was recorded:

- Where do new rules associated with nitrate contamination fit in?
    - This is yet another program to collect data from. Generally, this information goes into the SWRCB's Groundwater Ambient Monitoring and Assessment (GAMA) Program.
- What would it take to develop a reliable statewide inventory?
    - Likely dedicated staff in each county to collect data and maintain the inventory. It would also require IT support at the state level and some form of enforcement.
- What type of information would you suggest for the inventory?
    - We need both spatial and temporal measurements.
- Artificial intelligence programs could assist with some of the data collection and analysis. UC Berkeley's WESS Program started some of this work for the Community Water Center.

Informational "101 Series

Clare provided an overview of topics for future "101" level informational updates or webinars. These topics were mentioned by DRIP members during VM1, and include:

- Groundwater recharge (Flood-MAR)
- In-stream flows
- Groundwater banking
- Recycled water
- California Water Watch: localized drought conditions
- Water law
- Water systems
- Nature based solutions
- Climate change and water impacts

She asked DRIP members if the list was complete, and whether any members would be willing to lead discussions around any of the topics. She encouraged anyone interested in leading or otherwise helping to host a presentation to contact staff at drip@water.ca.gov.

After the presentation, the following discussion was recorded:

- Laura Ramos volunteered to assist with informational presentations.
- Clarification question: What is meant by "water systems"?
    - Primarily an overview of the major different types of water systems (i.e., urban, small community systems, the State Water Project, etc.)
- Monitoring systems and telemetry (for example the current UC Davis Consumnes River monitoring effort) could be added as a topic. We could also tap community-based monitoring volunteers to
- Look at the domestic well situation through a variety of lenses (i.e., cost for monitoring, replacing problem wells, etc.)
- An informational session on Nature Based Solutions and Infrastructure could be beneficial.

Action Item Review and Next Steps

Sam reviewed a brief list of specific action items and next steps, including:

1. DRIP members are encouraged to reach out to DWR staff directly regarding any concerns or suggestions for modifying the DRIP process.
2. DRIP staff will develop a first draft of the Annual Report in early December 2023 and post a final draft in January 2024.
3. DRIP staff will develop a process for the next series of VMs in the first quarter of 2024. VMs will be used to refine problem statements and continue definition of actions for the domestic wells, data, and drought narrative focus areas, and begin development of problem statements and actions for the other focus areas discussed during the October 25th meeting.
4. Jeanine Jones may reach out to DRIP members interested in joining a letter of support requesting federal funds for improved forecasting systems.

After the action item review, Anthony thanked participants for attending, provided closing comments, and formally adjourned the meeting.

ADJOURN

Appendix A. Meeting Participation

Drought Resilience Interagency Partnership & Collaborative Members

Members Overview

Present

- Alvar Escriva-Bou (University of California, Los Angeles (UCLA))
- Andrew Altevogt (State Water Resources Control Board (SWRCB))- Alternate for Joaquin Esquivel
- Anna Schiller (Environmental Defense Fund (EDF))
- Ben McMahon (Governor's Office of Planning and Research (OPR))
- Brent Hastey (Plumas Lake Self Storage)
- Catherine Freeman (California State Association of Counties (CSAC))
- Emily Rooney (Agricultural Council of California)
- Grace Person (CivicWell)
- Jason Colombini (Jay Colombini Ranch)
- Josh Grover (Department of Fish and Wildlife (CDFW))
- Justine Massey (Community Water Center (CWC))
- Katie Ruby (California Urban Water Agencies)
- Katy Landau (California Environmental Protection Agency (CalEPA))- Alternate for Anna Naimark
- Kris Tjernell (Department of Water Resources (DWR))- Alternate for Karla Nemeth
- Laura Ramos (California Water Institute, Fresno State)
- Nancy Vogel (California Natural Resources Agency (CNRA))
- Redgie Collins (California Trout, Inc.)
- Russ Bryden (LA County Public Works)
- Saharnaz Mirzazad (Governor's Office of Planning and Research (OPR))
- Sierra Ryan (Santa Cruz County)
- Suzanne Pecci (Domestic Well Planning Group, South American Subbasin)
- Tami McVay (Self Help Enterprises)
- Tim Worley (California Association of Mutual Water Companies)
- Virginia Jameson (California Department of Food and Agriculture (CDFA))

Absent

- Emily Moloney, Buena Vista Rancheria of Me-Wuk Indians
- Emily Rooney, Agricultural Council of California
- Lori Nezhura, (California Office of Emergency Service (CalOES))
- Michael Gerace, Yurok Tribe

Appendix B. Complete Focus Area Sequencing Results