

Meeting Summary

Drought Resilience Interagency & Partners (DRIP) Collaborative

Summer 2024 Meeting

California Natural Resources Agency, Room 02-302A/B

715 P Street, Sacramento

July 12, 2024 | 10:00 am - 5:00 pm

The meeting was live streamed and recorded. The recording can be viewed at:

<https://www.youtube.com/live/8cHhwLamDNO>

Meeting materials (including the presentation) are available online at: <http://www.water.ca.gov/drip>

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

- Anthony Navasero, California Department of Water Resources (DWR), Drought Coordinator
- Julie Ekstrom, DWR, Supervisor in the Water Use Efficiency Branch
- Zoe Kanavas, DWR
- Kira Haynes, DWR
- Glen Low, Earth Genome
- Orit Kalman

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Meeting Objectives

Objective #1: Review and refine Part I templates for the initial eight recommendations.

Objective #2: Review opportunities to expand on additional focus areas that were previously identified by DRIP members.

Welcome Remarks and Setting Intentions

Joaquin Esquivel, Chair of the State Water Resources Control Board, opened the meeting with welcoming remarks, reflecting on the State's response to the 2012-16 drought and emphasizing the importance of the DRIP Collaborative's work. Joaquin touched on the looming problem drought poses for vulnerable communities – particularly those that get their water supply from domestic wells – as well as the environment. Joaquin emphasized the need for this group to identify how it can best address problems associated with drought.

Orit Kalman established a quorum among the members with a roll call. The list of members present in the meeting is shown in [Appendix A](#). New member Carolina Hernandez introduced herself to the group.

Glen Low reviewed the activities of the DRIP Collaborative in 2023 and 2024. Key activities include the foundation building (building relationships, process design, focus narrowing) of 2023 and, in 2024, recommendation development and the establishment of workgroups to support refinement of those recommendations. Looking ahead, Glen reviewed the anticipated timeline for the October 2024 and April 2025 meetings. In the October 2024 meeting, the DRIP Collaborative is anticipated to hold a formal vote on the recommendations and review problem statements for the 2025 focus areas. In the April 2025 meeting, the DRIP Collaborative is anticipated to, if needed, finalize the 2024 recommendations and introduce the 2025 recommendations. After the presentation, the following question was received from a member (with the DRIP Development Team answer noted):

- Will the DRIP Collaborative continue to move the 2024 recommendations forward into 2025?
Response: While the DRIP Collaborative would ideally track the progress of the recommendations after they are approved, the group is not responsible for the implementation of the recommendations.

Informational Updates

Hydrology Update: 25:18-34:05, slides 12-29

Jeanine Jones, Interstate Resources Manager for DWR, provided an update on hydrology and current conditions. Jeanine presented California's 2024 water year data, noting precipitation at 102% of average with relatively wetter conditions in the southern regions. Statewide reservoir levels are at 116%, benefiting from water year 2023's carryover. There has been no update to USGS's runoff forecasts since the April 2024 meeting. Groundwater levels show mixed degrees of change over the past year, however the trend of groundwater level change over the past 20 years show steady decline. The average temperature for the first half of the year is slightly warmer than historic averages, but not at record-breaking temperatures. However, the current heatwave California is experiencing is anticipated to break duration records for extremely high temperatures. Water project allocations include 40% from the State Water Project and up to 100% in some areas of the Central Valley Project. California has transitioned from experiencing El Nino to La Nina; however, these climatic conditions have limited correlation to California precipitation levels. Wildfire risk is higher due to low fuel moisture caused by the recent high temperatures.

Review of the Focus Areas Recommendations Process

Glen Low reviewed the recommendation development process for the three 2024 focus areas. In the April 2024 meeting, the recommendations were introduced, and workgroups were formed to support the development of those recommendations. The additional development required for the recommendations is the completion of Part I and II of [the recommendation template](#). Part I defines what the recommendation is by providing the title, description, and anticipated impacts, identification of potential implementing parties & partners as well as the implementation time frame, and stating the alignment with other ongoing initiatives. Part II defines how the recommendation will be implemented by identifying the implementation process and success metrics, implementation challenges, funding, and equity & outreach.

Since the April 2024 meeting, the three workgroups met to discuss the Part I draft compiled by the recommendation lead. The refined Part I of each recommendation was then shared with the entire DRIP Collaborative membership to [collect feedback](#). This helped shape the recommendation discussions during the July 2024 meeting.

Drought-Relevant Data Focus Area Recommendations

DRIP Collaborative members discussed the development of two recommendations as part of the Drought Relevant Data Focus Area:

[Recommendation 1: Drought Indicators and Metrics](#): 46:07-1:06:25, slides 41-48

Katie Ruby presented an overview of this recommendation on behalf of the recommendation lead, Alvar Escriva Bou. This recommendation proposes to develop a practical drought early warning system to inform drought management actions to minimize drought impacts. This early warning system would include indicators for drought status and expected impacts at a regional and sector-specific level to inform local and state actions. Katie presented a mock-up of what the system could look like (slide 44) and connected this mockup to recommendation 7, the Communication Program.

From the June 2024 workgroup meeting, key issues were raised (slide 42), including the need to clearly define the purpose and scope of this program, to identify other ongoing initiatives and recommendations this connects to, and to define long-term ownership of the system/product.

Feedback provided using the pre-meeting evaluation indicates that members were generally supportive of the recommendation. Members identified concerns and additional information that are needed to fully develop the recommendation including the need to build upon existing initiatives and recommendations, more specifically define what the indicators would be, and define the scope/scale at which this system would be applied.

After the presentation, the following questions and comments were received from members (with the response noted):

Audience:

- Who is the audience for this system? This will impact the level of sophistication of the indicators and the scale at which it is applied.

Response: The public would likely be the main audience for this system as some local water systems already have their own systems to trigger conservation and curtailment.

- How would this be presented to the public?

Response: This recommendation is more focused on choosing the right data and metrics to use, there are other recommendations (i.e. Recommendation 7: Communication Program) that will address mode of communication.

Relevance:

- Emphasize the need for flexibility in the application of these systems and the need to solicit and incorporate feedback from local water entities.
- Emphasizing the need to provide, at least, high-level descriptions of potential indicators and provide recommendations on how to apply these indicators.

Linkage to other systems:

- Do we have the shortcomings of NOAA's national drought monitor documented? Considering [DWR's Water Watch](#) system, how would this proposed system build off existing efforts?

Response: The key difference would be that in addition to reporting the hydrologic conditions of a region (precipitation, temperature, etc.), this system would account for local conditions of water storage, conveyance, and supply.

Implementation Considerations:

- The DRIP Collaborative may nominate key experts to carry this recommendation forward.

Following the discussion, a straw poll was conducted to gauge support for the recommendation among the DRIP Collaborative members. The results of that vote were:

- 1, I cannot support the recommendation as written: 0
- 2, I support the recommendation, but additional information is needed: 7
- 3: I support the recommendation as presented: 14.

Additional, hand-written comments from the members were recorded in the worksheets, including the need to specify the system's audience, scope, and long-term maintenance, identify practical funding streams to support the development and maintenance of this system, and emphasis on need for outreach, particularly to Tribes and disadvantaged communities, when developing the list of indicators.

Recommendation 2: Rapid Inventory of Drought Related Tools and Resources: 1:06:47-1:25:10, slides 50-55

Elea Becker Lowe presented an overview of this recommendation on behalf of recommendation lead, Ben McMahan. This recommendation proposes to develop a living resource that helps identify the relevance and usefulness of tools/resources, along with any gaps, as it relates to drought/water resources decision making in California. Elea noted the role that the Office of Planning and Research (OPR) can play in the implementation of this recommendation, namely through [ICARP](#) or the [Vulnerable Communities Platform](#).

From the June 2024 workgroup meeting, key issues were raised (slide 50), including the broadness of the initial scope and desire to pivot to a rapid inventory, the need to create categories to group tools and resources into, and maintain focus on identifying gaps.

Through the pre-meeting evaluation, members were generally supportive of the recommendation and flagged concerns to address and additional information (slide 54) they require to be fully supportive of

this recommendation moving forward, including clarification of the implementing parties, additional details on the evaluation process for different tools, and defining the inventory update cadence.

After the presentation, the following questions and comments were received from members (with the response noted):

Tools Categories:

- Additional categories/considerations to use in the tool evaluation may include ease of accessibility of the data source, the data resolution, the data latency, the data scalability, and the cost of data access.
- A category to add would be for resources that address aquatic resources, ecosystem benefits, etc.
- Additionally, it would be helpful to frame the inventory around the negative impacts of drought and then build the inventory in the context of those negative impacts.
- What is the scale of the tools? Scale not only in the sense of state-wide or local/small systems, but also will this inventory cover all tools available, or will it be narrowed to only cover tools applicable to certain audiences/situation?

Implementation Considerations:

- Emphasize the need for the inventory to be continually updated, state agencies could support this initiative by providing regular updates to the inventory.
- One of the potential challenges will be keeping this inventory up to date, considering the rapid onset and closing of projects in response to water shortage events.
- This should be organized in a dashboard with the public audience in mind.
- Who would “own” the review of the inventory?

Linkage to other systems:

- How would this inventory be advertised? How can we ensure it is visible and accessible not only for state agencies, but for the public as well?

Response: The ICARP team is very open to incorporating this recommendation into the Adaptation Clearinghouse as one potential place for hosting the inventory.

Following the discussion, a straw poll was conducted to gauge support for the recommendation among the DRIP Collaborative members. The results of that vote were:

- 1, I cannot support the recommendation as written: 0
- 2, I support the recommendation, but additional information is needed: 8
- 3, I support the recommendation as presented: 12.

Additional, hand-written comments from the members were recorded in the worksheets, including the need to clarify the scale of the tools being evaluated and where the inventory would be hosted/maintained (for example, the Adaptation Clearinghouse from OPR), the need to conduct extensive outreach in developing the list of tools, and the need to couple the output of this recommendation with a communication campaign (i.e., Recommendation 7: Communication Program).

Public comment: 1:26:10-1:29:05

Charlotte Gallach, Kings River Conservation District: Noted the lack of nexus between flood and drought, what considerations is this group taking to connect those? Also, in my experience, the public likes “categories” like we do for hurricanes or tornados, and we can have specific actions tied to those categories.

Drought Preparedness for Domestic Wells Focus Area Recommendations

DRIP members discussed the development of three recommendations as part of the Drought Preparedness for Domestic Wells Focus Area:

Recommendation 3: SB 552 Update: 1:31:12-1:52:17, slides 59-64

Sierra Ryan presented an overview of this recommendation on behalf of recommendation lead, Justine Massey. This recommendation proposes minor adjustments to enhance [SB 552'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.

From the June 2024 workgroup meeting, key issues were raised (slide 59), including avoiding unfunded mandates, balancing mandatory versus guiding language, and defining “water-challenged areas”.

Feedback from the pre-meeting evaluation indicates that members had mixed support for this recommendation and flagged significant concerns and additional information (slide 62) that are needed to fully develop the recommendation, including the perceived lack of support from counties, additional vetting of the line-item amendments, and lack of allocated funding paired with mandates.

After the presentation, the following questions and comments were received from member (with the response noted):

Challenges

- Given the wide range of opinions among the DRIP Collaborative members, addressing proposed amendments may not be possible.

Soliciting Feedback

- Counties should be consulted about suggestions for SB 552 improvements (possibly using the California County Café series).
- The recommendation should be restructured with input from interested parties (i.e., water systems, county representatives, etc.) on what changes to SB 552 would be helpful.

Following the discussion, a poll was conducted to gauge support for the recommendation among the DRIP Collaborative members. The results of that vote were:

- 1, I cannot support the recommendation as written: 15
- 2, I support the recommendation, but additional information is needed: 4
- 3, I support the recommendation as presented: 0.

Given the lack of support for this recommendation, Orit conducted a second vote for this recommendation to assess whether the workgroup should address the concerns and reframe the original recommendation or stop work on the recommendation. There were 14 votes to rework the original recommendation and 3 votes to not continue work. Additional hand-written comments from the members were recorded in the worksheets, which support the results of the second vote and recommending that advocates pursue legislative changes – and to check in with counties to ask what they would “fix” about SB 552.

Recommendation 4: Community Well Monitoring Program: 1:52:17-2:17:35, slides 65-70

Suzanne Pecci presented an overview of this recommendation. This recommendation proposes to establish a community network of domestic well owners to monitor their wells for quantity and quality. Through this, the recommendation aims to create a better understanding of climate change, hydrogeology and competing demands of a shared resource as a basis for drought resiliency. It would encourage domestic well owners' active participation in planning and management of groundwater as a shared resource and shared responsibility. Suzanne shared that she envisions this recommendation to be implemented in two phases: the first would focus on the establishment of a pilot Network, initial documentation of wells, and the creation of agreement forms between relevant parties; the second would focus on the continued operation and coordination of the Network.

From the June 2024 workgroup meeting, key points were raised (slide 65), including defining who a Community Well Monitoring Network (Network) is comprised of, the need for coordination with key local groups (GSAs, land use agencies, LAFCo, counties, environmental groups, etc.), and incorporating guidelines (technical and educational guidance) for the Network.

Through the pre-meeting evaluation, members were supportive of the recommendation and flagged concerns to address and additional information (slide 69) they require to be fully supportive of this recommendation moving forward, including checking for possible overlap with ongoing or upcoming DWR activities, clarifying exactly what the DRIP Collaborative would be doing to support this proposal, and concerns about data ownership and sharing.

After the presentation, the following questions and comments were received from members:

Alignment with Other Initiatives

- There is potential overlap between this proposal and the Multi-benefit Land Repurposing Program
- The State Water Resources Control Board supports the [Groundwater Ambient Monitoring and Assessment \(GAMA\)](#) and [Central Valley Salinity Alternatives for Long-Term Sustainability \(CV-SALTS\)](#) programs; both programs fund the monitoring of groundwater sources and could be leveraged to move this recommendation forward.

Data Privacy Concerns

- A major concern would be data confidentiality and privacy. If a well goes dry and the monitoring data is shared publicly, it could jeopardize the property and its occupants (some examples include property value decrease and family dynamic impacts).
 - Response: It's important to emphasize the volunteer aspect of this recommendation. This recommendation is intended for domestic well owners who want to voluntarily join the program as means to (1) fill data gaps in domestic well monitoring and (2) educate well owners in water resources planning and drought resilience. We could also consider anonymizing the data as well.

Public Response

- The roll out of this recommendation would need to be regionalized. Communities in different parts of the state would response quite differently to the request to monitor their well.

Following the discussion, a straw poll was conducted to gauge support for the recommendation among the DRIP Collaborative members. The results of that vote were:

1, I cannot support the recommendation as written: 0

2, I support the recommendation, but additional information is needed: 16

3, I support the recommendation as presented: 4.

Additional, hand-written comments from the members were recorded in the worksheets, including concerns about data ownership and sharing and the need to clarify the scope of the recommendation (reframe as a pilot program) and the voluntary nature of domestic well owners' participation.

Recommendation 5: Roles and Responsibilities: 2:17:37-2:33:40, slides 71-76

Sierra Ryan presented an overview of this recommendation on behalf of recommendation lead, Justine Massey. This recommendation proposes to identify 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.

From the June 2024 workgroup meeting, key issues were raised (slide 71), including the need to clarify existing roles before suggesting updates to responsibilities, possibly outsourcing the review to a third-party (for example the Legislative Analyst Office or an academic researcher), and to vary the designated roles and responsibilities based on causes/responsible parties.

Through the pre-meeting evaluation, members were supportive of the recommendation and flagged concerns to address and additional information (slide 74) they require to be fully supportive of this recommendation moving forward, including further discussion on alignment with other initiatives and the need to get a broad, holistic view of existing regulatory programs that can cause conflicting or duplicative efforts.

After the presentation, the following questions and comments were received from member (with the response noted):

Concerns

- I feel uncomfortable assigning roles without consulting the named parties.
 - Response: The first step and primary focus of this recommendation is to identify the current roles and responsibilities connected to domestic wells. The second step is to identify gaps in responsibilities.

Specific Agencies to Address

- This recommendation can address the roles and responsibilities of SGMO and GSAs.

Recommendation Scope Expansion

- Comment: This recommendation could be expanded to identify the available funding opportunities from the various named parties.

Following the discussion, a straw poll was conducted to gauge support for the recommendation among the DRIP Collaborative members. The results of that vote were:

1, I cannot support the recommendation as written: 0

2, I support the recommendation, but additional information is needed: 4

3, I support the recommendation as presented: 14.

Additional, hand-written comments from the members were recorded in the worksheets, including discomfort with defining the roles/responsibilities of parties without their input/buy-in and the suggestion to remove the list of proposed roles altogether.

Public comment: 2:33:43-2:38:13

Charlotte Gallach, Kings River Conservation District: Why isn't there drought insurance? This could be implemented at a local community level. This could help alleviate some stress caused by the drought.

Chris, Sleepy Valley Water Company in northern Los Angeles County: Assigning responsibility to private water companies can lead to exorbitant costs that are not sustainable for rural mutual companies. For monitoring wells, I think it will be challenging to get public buy-in, while the intention is to better model, the outcome could be people losing insurance (for example, some have lost fire insurance for their home due to recent fire risk mapping).

Drought Definition and Narrative Focus Area Recommendations

DRIP members discussed the development of three recommendations as part of the Drought Definition and Narrative Focus Area:

Recommendation 6: Drought Definitions White Paper: 2:41:27-2:56:05, slides 81-87

Katie Ruby presented an overview of this recommendation. This recommendation proposes 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, agriculture) and the environment. Katie emphasized that this white paper would be best developed after Recommendation 2: Rapid Inventory of Tools and Resources to avoid duplicative efforts.

From the June 2024 workgroup meeting, key issues were raised (slide 81), including the need to define a range of terms besides "drought" (i.e., water availability, water access, drought resilience), the need for local-regional variation in definitions, and to make the terminology realistic and actionable for the public.

Through the pre-meeting evaluation, members showed mixed support of the recommendation of the recommendation and flagged concerns to address (slide 85) they require to be fully supportive of this recommendation moving forward, including a lack of the demonstrated value-add that this white paper would bring to the state-wide conversation on drought.

After the presentation, the following questions and comments were received from member (with the response noted):

Implementing Party

- I like the idea of an academic institution carrying this recommendation forward, I think it should be a low priority for a state agency to take this on.

Reframing the Recommendation

- This recommendation could be completed as part of recommendation 2 or 8.
- The focus of the white paper could be expanded to define drought resilience rather than just a definition of drought.

Following the discussion, a straw poll was conducted to gauge support for the recommendation among the DRIP Collaborative members. The results of that vote were:

1, I cannot support the recommendation as written: 0

2, I support the recommendation, but additional information is needed: 15

3, I support the recommendation as presented: 5.

Additional, hand-written comments from the members were recorded in the worksheets, including that this is a low priority for some members while others are ready to move this forward to identify the appropriate implementers and funding sources.

Recommendation 7: Communication Program: 2:56:08-3:18:22, slides 88-94

Tim Worley presented an overview of this recommendation. This recommendation proposes to establish a simple, consistent, and frequent top-down public messaging on water conditions.

From the June 2024 workgroup meeting, key issues were raised (slide 88), including the extensive outreach that would be required for adoption of this communication program, the difficulty in simply communicating the complicated nature of local water supply availability, and the need to link this recommendation with Recommendation 1: Drought Indicators and Metrics.

Through the pre-meeting evaluation, members were generally supportive of the recommendation and flagged concerns to address and additional information (slide 92) they require to be fully supportive of this recommendation moving forward, including the need for more specific on the type of information to be communicated, the platforms to be used, and the public outreach/engagement strategy. Many comments emphasized the need to have this recommendation follow Recommendation 1: Drought Indicators and Metrics.

After the presentation, the following questions and comments were received from member (with the response noted):

Concerns

- After the State Water Resources Control Board passed the Making Conservation a Way a Life, I'm leaning away from a communication platform that indicates when we need to start or stop conserving. The messaging should continuously support water conservation regardless of shortage levels.
- A clean, useful communication platform can be extremely expensive to develop and maintain.

Recommendation Sequencing

- I think developing a communication program is too premature; this recommendation elevates the need for Recommendation 1: Drought Indicators and Metrics to be pursued.
- While this recommendation would benefit greatly from the completion of Recommendation 1, the state does have defined water shortage levels that trigger conservation; these water shortage levels could be communicated through this program.
- I think we could redirect resources that would go to this recommendation to Recommendation 1.
- Storytelling should be incorporated across all the recommendations.

Alignment with Existing Initiatives

- An existing effort is UC Berkeley's Collaboratory for Equity in Water Allocation (COEQWAL); this is meant to be a planning tool that is inclusive of many water users' perspectives.

Following the discussion, a straw poll was conducted to gauge support for the recommendation among the DRIP Collaborative members. The results of that vote were:

1, I cannot support the recommendation as written: 3

2, I support the recommendation, but additional information is needed: 17

3, I support the recommendation as presented: 0.

Additional, hand-written comments from the members were recorded in the worksheets, including the importance of a public education campaign to promote conservation and the need to ensure alignment (and value-add) to existing and related communication platforms. Many comments, again, emphasized the need to have this recommendation follow Recommendation 1: Drought Indicators and Metrics.

Recommendation 8: Drought Case Studies: 3:18:24-3:36:49, slides 95-101

Elea Becker Lowe presented an overview of this recommendation. This recommendation proposes to acknowledge diverse drought experiences through narrative case studies from various contributors (i.e. communities, practitioners, Tribes, government, etc.), and use existing resources and platforms to share these examples publicly.

From the June 2024 workgroup meeting, key issues were raised (slide 95), including combining this recommendation with Recommendation 6: Drought Definitions White Paper as well as making explicit connections to Recommendations 1 and 2. In addition, the workgroup members stressed the need to feature experience across California's diverse climates and uplift examples of both challenges and successes.

Through the pre-meeting evaluation, members were supportive of the recommendation and flagged concerns to address and additional information (slide 99) they require to be fully supportive of this recommendation moving forward, including establishing criteria for selecting case studies to feature and to make explicit connections to the other recommendations, namely Recommendations 2 and 6.

After the presentation, the following questions and comments were received from members (with the response noted):

Framing and Types of the Case Studies

- Case studies should be representative of drought outcomes and have an action-oriented goal and used to communicate resources and information.
- Some of the case studies should be sector-oriented and geography-oriented, there are nuances in those different contexts to dealing with drought that should be highlighted.
- Suggest looking back to previous droughts to see what stories can be told. In addition to looking at the different sectors and climate impacts of drought, consider a housing, agricultural, or economic lens as well.

Audience

- Clarify the intended audience - who will these stories be oriented towards, how will they be crafted, and when will they be told?

Alignment with Other Recommendations

- This recommendation could be a great platform to feature the work done by the other recommendations the DRIP Collaborative is developing, namely Recommendation 4: Community Well Monitoring Network.

Following the discussion, a straw poll was conducted to gauge support for the recommendation among the DRIP Collaborative members. The results of that vote were:

1, I cannot support the recommendation as written: 0

2, I support the recommendation, but additional information is needed: 5

3, I support the recommendation as presented: 15.

Additional, hand-written comments from the members were recorded in the worksheets, including to feature the impact of drought on fish and wildlife in addition to human and community impacts.

Public Comment: None.

Alignment Across Recommendations

Glen facilitated a follow-up discussion on how the eight recommendations might best align and opportunities to leverage different proposed activities. The discussion emphasized that effective communication requires clarity of thought and understanding. It was suggested that the communication program could be the second phase of Recommendation 1: Drought Indicators and Metrics. The importance of Recommendation 5: Roles and Responsibilities was highlighted, with connections made to Recommendations 3, 4, and 8. The sequencing of activities was deemed crucial, and there was a call for more concrete, actionable steps rather than theoretical plans. Concerns were raised about the lack of synchronization among various agencies working on drought issues, with support for initiating Recommendation 2: Rapid Inventory of Drought Tools and Resources to address these concerns and effectively link to the roles and responsibilities defined in Recommendation 5.

2025 Focus Areas Development

Zoe Kanavas facilitated this discussion which featured Subject Matter Expert (SME) presentations on the potential 2025 focus areas and cross cutting topics. The presentation highlights and key comments from members are noted for each focus area/cross-cutting topic.

Water Resources & Operations and Infrastructure & Planning: 3:57:10-4:16:32, slides 112-118

Molly White, DWR, introduced her work in overseeing the water management activities of the State Water Project (SWP). In this introduction, Molly described [drought water supply planning for SWP](#), the Forecast-Informed Reservoir Operations (FIRO) project in the Yuba-Feather Reservoir, SWP infrastructure, namely the Delta Conveyance and California Aqueduct Subsidence projects, and SWP planning through the recently released [2023 Delivery Capability Report](#) and forthcoming SWP Climate Action Plan. Additional SWP activities and partnerships mentioned include the multi-agency development of a drought toolkit, implementing portions of the Water Storage Investment Program, planning of the West False River drought salinity barrier, and the initiative to locate and secure additional SWP storage sites. After the presentation, the following questions and comments were received from members (with responses noted):

- Is there a role that you see the DRIP Collaborative playing in this field?
 - Response: The SWP team is willing to come back to have more focused discussions with the workgroups about this.
- I think the DRIP Collaborative could use the framework developed for the drought water supply strategy by SWP to inform our recommendations.
- The DRIP Collaborative should uplift creative solutions of repurposing existing infrastructure to supply water to vulnerable populations and at-risk ecosystems.
- SWP has the biggest tool for water supply available in California and they absolutely need to inform any conversations the DRIP Collaborative has around this focus area.

- We need to advocate for more storage solutions south of the Delta.

Reducing Ecosystem Impacts of Drought: 4:16:35-4:36:50, slides 119-125

Sandi Matsumoto, The Nature Conservancy and the California Water Commission, gave a follow-up presentation to her informational update given in the April 2024 meeting. Through her presentation, Sandi communicated that while California has ecosystems that evolved to deal with drought, climate change has exacerbated drought impacts, making it harder to adapt. To reduce impacts from drought on freshwater ecosystems, we must (1) continually build resilience to drought and (2) take emergency action during drought to reduce harm. Sandi suggested that the DRIP Collaborative look to recent and past programs designed to address drought impacts and gather lessons learned from those efforts. After the presentation, the following questions and comments were received from members (with responses noted):

- This as a focus area is worthwhile, however this needs to be incorporated into the recommendations already underway. For example, one of the metrics/indicators in Recommendation 1 should be focused on ecosystems.
- The [California Environmental Flows Framework \(CEFF\)](#) seems like a hopeful solution. What is needed to move it forward? Where does it stand now?
 - Response: There are ongoing demonstration projects. We need “win” examples in less altered watershed to show CEFF’s benefits for water reliability and ecosystem health.
- What are the limitations on implementing instream flows? What state agencies should have the authority to implement those flows?
 - Response: 96% of our rivers do not have flow protection and when you add a flow restriction during a drought, it is too late. Hopefully when people see the benefits, it will motivate them to develop agreements (i.e., voluntary agreements). Regulatory pressure or the potential for regulations might help motivate.
- What are incremental improvements that the DRIP Collaborative might be able to help with?
 - Response: Emphasize the need to protect both groundwater supply and instream flows. Uplift the stories of when action wasn’t taken fast enough, document the environmental impacts, and use this as a catalyst for next actions. A group that is currently doing this is [the Environmental Water Network](#).
- The Farm Bill may be a funding source for these kinds of projects.

Land Use Planning: 4:36:51-4:54:00, slides 126-132

Eric Chu, Governor’s Office of Planning and Research (OPR), presented on how OPR develops and provides guidance for land use planning, primarily focusing on the State General Plan Guidelines (GPG) which will be updated in portions from 2024 to 2027. The DRIP Collaborative could inform the next update by providing relevant examples and best practices on water conservation, groundwater recharge, and use of drought-tolerant landscaping. The update will also include guidance on an optional Water Element; the DRIP Collaborative’s expertise could be very useful in developing this section. After the presentation, the following questions and comments were received from members (with responses noted):

- On the optional water element, how many counties do this?

- Response: OPR does not currently maintain a database of general plans (that is under development now), so cannot provide an exact number. Can say that at least some of the counties have a water element in their general plan.
- Surprised that water is optional for land use planning. Also land use and planning should acknowledge the need for more support and implementation and funding for multi-benefit work related to land use.
- Is there a conservation component in general plans?
 - Yes, conservation is a required element of general plans.
- Does the GPG include housing requirements for local governments? These continue to be updated every 8 years when it takes 20 years to build new water supplies.
 - Response: The housing component of general plans must be updated every 8 years.
 - Follow-up: Does that mean there is no need to connect housing to water?
 - Response: No, there are many local government codes and ordinances that require a connection between the housing and water elements, but OPR cannot require that connection.
- Drought impacts on ecosystems can be incorporated into land use planning. For example, adding requirements for buffers and for how close activities can be to waterways or ecosystems.

Climate Change Adaptation & Nature-Based Solutions: 4:54:05-5:26:28, slides 133-146

Lindsay Correa, DWR, presented about California's climate change policies and strategies, noting several guides and reports the state has published that touch on climate adaptation, particularly [the California Climate Adaptation Strategy](#). DWR also has a Climate Change Program that performs a wide range of services for water managers, including maintaining the [Resources for Water Managers webpage](#).

Clessi Bennet, California Natural Resources Agency (CNRA), presented on the new climate targets set this year to enact [AB 1757 \(2022\)](#). Clessi began by explaining that nature-based solutions are land management practices that increase the health and resilience of natural systems. After presenting the target setting approach, Clessi shows the acreage-based target set to meet by 2045 (slides 144 & 145).

After the presentations, the following questions and comments were received from members (with responses noted):

- In reference to the 3.4 million acres target for drought resilience, could you provide examples of how that could be achieved?
 - Response: Some practices may include compost application, cover cropping, and buffer strips. All these techniques aim to increase the soil's organic matter content to build microbial diversity; this will increase the water holding capacity of the soil.
 - Follow-up: Would it consider the conversion of permanent crops to annual crops? This would allow for land fallowing in drought years.
 - Response: That would not be included for this specific target, however in [the Climate Smart Strategy](#), land fallowing and flood plain restoration are discussed and are solutions we want to uplift going forward.
- Are barrier removal and floodplain reconnection discussed as strategies for these targets?
 - Response: Barrier removal is not discussed as a strategy for the targets, because each strategy had to have an adaptation and mitigation component. However, barrier removal is included in our [Climate Smart Strategy](#). Floodplain reconnection is discussed as a strategy for the targets and

in the [Climate Smart Strategy](#). Reconnection is also referenced as a suggested strategy for other state agencies to use as well.

- These presentations highlight the multiple agencies, organizations, and communities that are working on climate change mitigation and adaptation. However, partly due to lack of focus on coordination with communities, many available resources are underutilized. The DRIP Collaborative should be thinking about how to get these resources to communities and how to get communities ready to take on and implement the resources/funding available to them.
 - Response: CNRA must update the Climate Smart Strategy and, in the next update, we want to address the overlap in available resources and barriers to implementation and to achieving the targets. The DRIP Collaborative could support this by helping figure out what those barriers are.
- Could the work that CNRA is doing be used as a resource for technical assistance when implementing some of these strategies? One example where this is needed is in expanding tree canopy in urban areas as many water districts and cities don't have urban forestry expertise.
 - Response: As we are required to meet these targets, we intend to take them to funders and legislators to acquire more funding to support meeting these targets.
- There is an opportunity for a connection between watershed restoration and land use planning.

Public Comment

None.

Reminders and Closing Comments

Anthony Navasero, Drought Coordinator for DWR, thanked the members and public for joining the meeting. In addition, Anthony reminded the non-state membership that DWR will follow-up to confirm their membership extensions.

Appendix A. Meeting Participation

Drought Resilience Interagency Partnership & Collaborative Members

Present

- Amber Garcia Rossow, California State Association of Counties – Alternate for Catherine Freeman
- Brent Hastey, Plumas Lake Self Storage
- Carolina Hernandez, Los Angeles County Public Works
- Carolyn Cook, California Department of Food and Agriculture – Alternate for Virginia Jameson
- Elea Becker Lowe, Governor’s Office of Planning and Research
- Joaquin Esquivel, State Water Resources Control Board
- John Andrew, California Department of Water Resources – Alternate for Karla Nemeth
- Joshua Grover, California Department of Fish and Wildlife
- Joshua Rahm, California Walnut Board & Commission – Alternate for Jason Colombini
- Katie Ruby, California Urban Water Agencies
- Laura Ramos, California Water Institute at Fresno State
- Matessa Martin, Buena Vista Rancheria of Me-Wuk Indians
- Nancy Vogel, California Natural Resources Agency
- Nate Ortiz, Governor’s Office of Emergency Services
- Redgie Collins, CalTrout
- Robyn Grimm, Environmental Defense Fund – Alternate for Anna Schiller
- Sierra Ryan, Santa Cruz County
- Suzanne Pecci, Domestic Well Group
- Tami McVay, Self Help Enterprises
- Tim Worley, CalMutuals
- Tricia Geringer, Agricultural Council of California – Alternate for Emily Rooney

Absent

- Alvar Escriva Bou, University of California, Davis
- Justine Massey, Community Water Center
- Katy Landau, California Environmental Protection Agency – Alternate for Anna Naimark
- Louisa McCovey, Yurok Tribe
- Technical Assistance Provider – vacant seat