Meeting Summary

Drought Resilience Interagency & Partners (DRIP) Collaborative

Reducing Ecosystem Impacts of Drought Workgroup Meeting
California Natural Resources Agency, 715 P St, Sacramento, Room 06-213
March 18, 2025 | 1:00PM to 2:30PM

The meeting recording is available at: https://www.youtube.com/watch?v=az6JVNnCop8.
Meeting materials, including the presentation, are available at: http://www.water.ca.gov/drip

Meeting Objective: Finalize the focus area problem statement and begin brainstorming recommendations to present at the Spring 2025 DRIP Collaborative meeting.

Workgroup members in attendance:

- Redgie Collins, CalTrout
- Anna Schiller, Environmental Defense Fund
- Brent Hastey, Plumas Lake Self Storage
- Sierra Ryan, Santa Cruz County
- Laura Ramos, California Water Institute at Fresno State
- Matessa Martin, Buena Vista Rancheria of Me-Wuk Indians

Absent

- Alvar Escriva-Bou, University of California, Davis

Vision Setting Exercise

To ground the discussion and align on long-term goals, the workgroup participated in a visioning exercise, responding to the prompt: **In five years from now, reducing ecosystem impacts of drought has been addressed. What is one thing that was accomplished to get us there?**

Key themes that emerged include:

- **Sustained Investments in Ecosystem Health and Water Use Efficiency:** Long-term funding for ecosystem restoration and water-use efficiency in agricultural and municipal sectors, with water savings dedicated to supporting consistent in-stream flows and enhancing ecosystem resilience across wet and dry years.
- **Water Storage and Transmission:** Expanded groundwater banking and completed infrastructure to convey stored water to areas of need.
- **Flow Capture and Timing:** Incentives and streamlined permitting for projects that capture high flows for use during dry seasons.

Problem Statement Definition

The workgroup revisited the draft problem statement, originally informed by feedback from the October 2024 DRIP Collaborative meeting. Members refined the framing to better reflect current ecosystem conditions, acknowledge drivers of degradation, and support the development of actionable, broadly supported recommendations. The updated working problem statement is presented below, followed by a summary of the key feedback that informed its development.

Updated Working Problem Statement – Revised Considering Workgroup Feedback on 3/18/25

California's ecosystems - freshwater, terrestrial, aquatic, and coastal - are increasingly degraded due to unsustainable water use, habitat loss, land conversion, and climate-driven stressors. Reduced snowpack, rising temperatures, altered precipitation patterns, and more frequent and severe wildfires have amplified the strain on ecological systems, diminishing their capacity to adapt to or recover from drought. Yet, water and land use decisions often fail to adequately account for ecological health, particularly outside of drought emergencies.
Healthy ecosystems are vital for drought resilience. They buffer against extreme events, sustain water quality and supply, support biodiversity, reduce wildfire severity, and protect public health. However, current policies and investments often overlook the long-term ecological functions critical to both communities and nature.
To strengthen the state's ability to prepare for, respond to, and recover from drought, the following sub-topics represent key challenges to address:

Environmental Flow Protections

Most of California's rivers lack formal environmental flow protections. Critical species - such as salmon, smelt, steelhead, and sturgeon - depend on specific flow conditions, yet enforcement of instream flow requirements is limited. Inconsistent agency mandates and a lack of clarity on legal responsibilities hinder coordinated protections.

Habitat Restoration

Wetlands, riparian corridors, and other key habitats have been dramatically reduced or degraded. Restoration can enhance drought and fire resilience but faces barriers such as complex permitting and fragmented funding. Tailored restoration strategies are needed that recognize the distinct services of different ecosystem types.

Integrated Planning

Ecosystem resilience to drought requires integrating fire management, land use, groundwater-surface water dynamics, and climate projections at the watershed scale. Nature-based solutions are underutilized, and opportunities to center Tribal knowledge and partnerships are often missed.

Existing Tools & Regulations

California's legal tools—including the public trust doctrine, water rights enforcement, and instream flow authorities—are often underused. Strengthening agency roles, enforcement, and public awareness can improve ecosystem protections without new legislation.

Workgroup members proposed the following changes to strengthen and clarify the draft problem statement:

- **Broaden Scope:** Expand focus beyond freshwater ecosystems to include terrestrial and other aquatic ecosystems.
- **Incorporate Fire-Related Impacts:** Reference vulnerabilities linked to fire and the role of healthy ecosystems in fire resilience.
- **Clarify Linkages to Water Use and Public Health:**
  - Some members acknowledged that referencing drinking water in the problem statement could distract from the ultimate purpose to improve ecosystems.
  - Others advocated for including references to agricultural demand, population growth, and public health impacts.
- **Emphasize Degradation Drivers Thoughtfully:** Include root causes of ecosystem degradation where relevant to solutions, while avoiding framing that may appear accusatory or infeasible to address.

- **Update Habitat Loss Data:** Revise the outdated "90% wetland loss" statistic and differentiate between types of wetlands and the unique ecological services each provides.
- **Highlight Gaps in Environmental Flow Protections:** Clarify that the majority of rivers in California lack formal environmental flow protections.
- **Strengthen Drought Resilience Framing:** Make explicit how habitat protection and ecosystem health contribute to long-term drought resilience and reduce the need for emergency interventions.
- **Monitoring and Real-Time Data**: In order to assess impacts of drought, we must know how much water is available in our waterways. California is behind on our stream gaging and publicly available information.
- **Funding**: Drought resiliency requires ongoing and consistent funding for our water infrastructure, data collection, and monitoring.
- **Address Regulatory Tools:**
    - Emphasize the need to leverage underutilized laws and regulations.
    - Highlight enforcement challenges and opportunities related to existing water rights and environmental protections.

Recommendation Brainstorming

The workgroup explored a range of strategies to address the challenges identified in the problem statement. The ideas have been organized by the four subtopics: Environmental Flow Protections, Habitat Restoration, Integrated Planning, and Existing Tools & Regulations. Additional cross-cutting ideas are included under Other Recommendations.

Environmental Flow Protections

- Advance instream flow requirements to protect fish, wildlife, and ecological functions.
- Promote adoption and implementation of existing in-stream flow frameworks and models.
    - However, members cautioned against imposing universal in-stream flow requirements, particularly in areas with unique hydrology and geology.
- Evaluate all water rights during drought and strengthen enforcement of water right restrictions.
- Improve coordination across state agencies to align in-stream flow requirements**.**

Habitat Restoration

- Reconnect waterways to floodplains through restoration projects.
- Support and expand programs such as Multi-benefit Land Repurposing Projects
    - Other programs to potentially highlight are listed under Related State Bodies and Ongoing Actions, Programs, Initiatives in the workgroup packet.
- Streamline permitting process & increase funding and resource allocations for habitat restoration projects.
- Conduct a comprehensive study on wetland loss, distinguishing between habitat types and associated ecosystem services.

Integrated Planning

- Develop watershed-scale environmental water plans.
- Incorporate nature-based solutions in water resource planning
- Integrate fire and forest management & climate change projections into drought planning for ecosystems

- Improve understanding of groundwater-surface water interactions, particularly during drought.
- Explore broader use of Forecast-Informed Reservoir Operations (FIRO) to support ecosystem resilience.
- Strengthen Tribal engagement in ecosystem and water planning efforts.

Existing Tools & Regulations
- Leverage and enforce existing water rights and instream flow protections more effectively.
- Clarify roles and responsibilities for upholding public trust protections, currently often reliant on litigation.

Other Recommendations
- Provide public education on California's dual water supply systems (e.g., Colorado River, Sacramento Valley) and their environmental implications.
- Identify and address common implementation barriers across all categories
- Propose reforms to streamline permitting processes across all categories.

Workgroup Priorities

At the end of the recommendation brainstorming, the members clarified which areas they'd like to prioritize for recommendation development, emphasizing actions that balance strong impact with broad support:
- Advancing environmental flow protections and elevating existing efforts led by state agencies such as the State Water Board and California Department of Fish and Wildlife.
- Pursuing habitat protection opportunities that can be integrated into larger initiatives, such as the Multi-benefit Land Repurposing Program.
- Strengthening enforcement of existing environmental regulations and improving the use of water rights data to support decision-making.
- Integrating forest and fire management into drought resilience planning.
- Streamlining permitting processes to facilitate timely implementation and encourage wide support.

Requests for Future Presentations

To inform and support the development of effective recommendations, workgroup members expressed interest in the following presentations at upcoming DRIP Collaborative meetings:
- **Water Rights Overview:** A presentation by a subject matter expert on California water rights, including an explanation of riparian and appropriative rights and the mechanisms available for enforcement. This would serve as a foundational resource for the group before advancing any recommendations related to water rights or regulatory compliance.
- **State-Federal Drought Coordination:** A presentation detailing recent changes in the coordination and roles of the federal and state governments in responding to droughts and other water shortage events as well as managing California's water systems - particularly the State Water Project and Central Valley Project - and how these changes may affect drought response moving forward.