DRIP Collaborative Focus Area: Water Supply Infrastructure and Planning

Materials for DRIP Collaborative Workgroup on Water Supply Infrastructure and Planning

Workgroup Meeting: Thursday April 3, 2025 at 2:00PM-3:30PM

Zoom Registration here: https://us02web.zoom.us/meeting/register/qV-pSgiCTHKeE-0sU7vFcQ

Event information here: https://water.ca.gov/News/Events/2025/Apr-25/Meeting-of-DRIP-Collaborative-Water-Infrastructure-and-Planning-Workgroup-April-3-2025

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Initial Statement

DRIP Collaborative – Statement for Focus Area 2025 on Water Infrastructure and Planning

Prelude: Without specific direction to generate a draft problem statement, the workgroup will begin with an initial statement for reflection on water infrastructure in California to spur discussion on scope development.

> *California's aging water supply infrastructure is not well adapted to rapidly changing climate conditions which will require new and rehabilitated infrastructure as well as reoperation. This is particularly true in how we address the extreme weather whiplash of floods and droughts and how that affects our drought resilience at both state, regional, and local levels. Because extreme weather occurrences are projected to increase, California water supply and its infrastructure will be increasingly challenged to meet economic and societal demands, while still needing to address non-water supply issues such as water quality, environmental, and power production needs.*

Current water supply infrastructure was built in the early to mid-20th century such as the Central Valley Project and the State Water Project. Although the state's water supply infrastructure is considered a modern wonder, its components are now 75 to 100 years old and past their design life. Some components operate in manners that they were not intentionally designed. There is a need to revitalize and adapt existing water supply infrastructure and develop new infrastructure to address growing and new demands on the state's water supply under a changing climate.

The state has seen a change in climate which requires its water supply infrastructure to be more flexible and adaptive although the water system and its management may not be easily responsive. For example, water supply reservoirs were designed and operated for a different historic water regime and timing of precipitation than currently observed. Recent changes to hydrology and meteorology have increased extreme events and established new historic levels which increases demands on water supply infrastructure and its operation while leading to more understanding of its limitations. Additionally, there are more uses and requirements over the last 40 years to meet newer demands and regulations such as water quality, the environment, recreational use, and the human right to water.

Water supply infrastructure is not limited to capturing and conveying water from the historically wetter northern locations to the larger population in the central and southern areas of the state. Regional and local water supply infrastructure like reservoirs (New Melones, Don Pedro, and Los Vaqueros), lakes (Diamond Valley Lake, Lake Perris, and Castaic Lake), and conveyance facilities (LA Aqueduct, Hetch Hetchy Aqueduct, and Coachella Canal) were built to support areas of growth within the state. Regional and local water supply managers must look to develop water supplies, storage, and infrastructure to augment their traditional dependance on the larger state-wide water supply projects and infrastructure.

Past DRIP Collaborative Member Comments on Water Infrastructure and Planning

A. Comments from early 2024 (before October 2024 in-person meeting)

2025 Focus Area Primers excerpt of Infrastructure comments:

Ideas previously mentioned by DRIP Members

- Identify and accelerate water system resiliency and actions to increase supply reliability
- Consider additional storage, both surface water storage and underground aquifers
- Upgrade systems for efficient water use
- Install interconnections and consider shared water sources
- Create incentives for green infrastructure, prioritizing for resilience and low impact
- Evaluate further small water system consolidation (physical consolidation)

Potential Infrastructure Discussion Questions

- How can we improve water storage to ensure supply during prolonged dry periods?
- What technologies can enhance water efficiency and reduce losses in the distribution system?
- How can alternative water sources, such as recycled or desalinated water, be integrated?

B. Comments during Oct 2024

DRIP Collaborative Fall 2024 Meeting Summary excerpt of Water Infrastructure comments:

Scope

- What do we mean when we say infrastructure?
  - Response – the workgroup for this focus area could determine that scope.
- The lack of a clear problem statement for infrastructure makes it hard to define. If people are interested, I support forming a workgroup to develop this statement, explore recommendations, and reassess if redundancy becomes an issue.
- Could this still blend into a cross-cutting theme? There's an important value in these cross-cutting themes in being a lens that we look through in every conversation. I think defining the difference between focus area and cross-cutting theme is needed and highlighting those cross-cutting elements as major priorities, like our foundational values could be really important to kind of clarify the next steps.
  - Response – the working group would be able to determine whether this be a focus area or cross-cutting theme.

- Why isn't infrastructure included in land use planning? Would it not make sense to include that discussion if we're talking about where water needs to be and how much and for whom? It seems like how you convey it and store it is all related.
    - Response – many of these focus areas are interconnected. It's up to the Collaborative to choose what and how we talk about them.
    - Response – I agree that infrastructure could fit within Reducing Ecosystem Impacts of Drought and Land Use Planning for Drought Resiliency, as wetlands and riparian habitats serve as infrastructure by reducing the need for additional construction. Protecting these ecosystems supports ongoing efforts.

Expertise:

- Further development of this focus area would benefit from outside expertise. There are many planned efforts in different stages identified by various entities.
    - The Water Commission's Water Storage Investment Program provides funding and tracking of public benefits for surface and groundwater reservoirs
    - The Department's 2022 California Water Supply Strategy (Adapting to a Hotter, Drier Future) outlines actions to improve water supply resilience to droughts and water supply shortages.
    - The State Water Project's 2024 Long-Term Drought Plan outlines objectives, plans, and actions to improve the state water projects long-term drought resilience while contributing towards other actions of resilience.
- The Department members will bring great expertise to this focus area to help inform and increase knowledge of planned efforts.

Support:

- I understand that there's a lot of work being done in this space, I also feel like we're still playing catch-up in aging and failing infrastructure. While the funding and projects we have right now are extraordinarily important, we're also way behind in terms of where the state needs to be in this space.
- Agree that infrastructure should be added as a focus area. This fits well with the other focus areas we've discussed today - you can't really do land use planning without thinking of the infrastructure, and then we should consider the ecosystem impacts by the current infrastructure or the lack of infrastructure.
    - Response – there is the opportunity to add sub-topics to the other focus areas. For example, in the Reducing Ecosystem Impacts of Drought problem statement, there could be a callout to water infrastructure and its role in potential solutions.
- While infrastructure hasn't been fully defined for our purposes today, it's crucial to consider—either as a focus area or cross-cutting issue—since our aging infrastructure directly impacts clean, reliable water delivery. Nature-based solutions and new infrastructure ideas also need to be factored into all areas, as practical application is key. I'm open to discussing later how to categorize it, but it's an important point to address.

C. July 2024 DRIP Collaborative in-person meeting

Presentation by Molly White, SWP Assistant Division Manager, Water Management (pages 112-118): July 12 2024 DRIP Collaborative meeting slides

Related State Bodies and Ongoing Actions, Programs, Initiatives

- DWR – 2024 State Water Project Long-Term Drought Plan: this plan consolidates information and actions taken during past droughts along with descriptions of the actions taken by the SWP to plan for and prepare for future droughts.
- DWR – Integrated Regional Water Management: integrated regional water management is a collaborative effort to identify and implement water management solutions on a regional scale that increase regional self-reliance and manage water to achieve social, environmental, and economic objectives.
- DWR - Watershed Resilience Program: offers financial and technical support to enhance watershed health, improve water quality, and increase climate resilience across California's diverse landscapes. The program is conducting five pilot planning projects to test and apply the watershed resilience approach in various representative regional settings in the state and lay the foundation for future efforts.
- DWR – Urban Water Management Plans: these plans support long-term resource planning to ensure sufficient water supplies to meet existing and future water needs. Information collected from these plans informs local, regional, and statewide water planning.
- DWR – Water Plan/Water Budget Team: this team works to produce a strategic water plan that meets California Water Code requirements, guides State investments in innovation, and advances integrated water management
- SWRCB – Drinking Water Partnerships and Consolidation: these partnerships include formal and informal agreements between water systems and communities that strengthen the ability of the State Water Board to ensure safe and sustainable drinking water.
- Sustainable Groundwater Management Act: this act, passed in 2014, created a framework for local agencies to form groundwater sustainability agencies that regulate groundwater consumption and mitigate overdraft. Since its passage significant progress has been made by local agencies toward the goal of ensuring sustainable groundwater conditions over the next 50 years.
- SB 659 – Water Supply Solutions Act of 2023: this law requires DWR, as part of the 2028 Water Plan Update, and each subsequent update, to provide actionable recommendations to develop additional groundwater recharge opportunities that increase the recharge of the state’s groundwater basins. The bill requires the department to consult with the SWRCB, the nine regional water quality control boards, and the advisory committee. The bill also requires recommendations to identify immediate opportunities and potential long-term solutions to increase the state’s groundwater supply, and include, among other things, best practices to advance all benefits of groundwater recharge.
- Association of California Water Agencies – Innovation Webpage: collection of case studies demonstrating innovative work in water agencies across California
- DWR - Dam Safety and Climate Resilience Local Assistance Program: provides State funding for repairs, rehabilitation, enhancements, and other dam safety

projects at existing State jurisdictional dams and associated facilities that were in service prior to January 1, 2023.

- DWR - California Aqueduct Subsidence Program: this program seeks to reduce future subsidence in the San Joaquin Valley and to develop and implement the most beneficial and affordable corrective actions to mitigate the adverse effects of current and future subsidence on the California Aqueduct.
- CNRA – Interagency Infrastructure Strike Team: Created by EO N-8-23, the Strike Team works to maximize federal and state funding opportunities for California innovation and infrastructure projects.
- California Water Commission - Water Storage Investment Program: Proposition 1 of 2014 dedicated $2.7 billion for investments in water storage projects. The California Water Commission is administering the Water Storage Investment Program to fund the public benefits associated with the eight selected projects, such as flood control, ecosystem improvement, water quality improvement, emergency response, and recreation.
- California Coastal Commission – Sea Level Rise Coastal Adaptation Planning Guidance for Critical Infrastructure: this guidance addresses transportation and water by presenting six key considerations for successful adaptation planning. This guidance includes recommendations for interested parties on how to plan effectively for sea-level-rise impacts on coastal infrastructure.
- LCI (formally OPR), GO-Biz, and LWDA – Community Economic Resiliency Fund: created to promote a sustainable and equitable recovery from the economic distress of COVID-19 by supporting new plans and strategies to diversify local economies and develop sustainable industries that create high-quality, broadly accessible jobs for all Californians