

Subcommittee on Pure Water Southern California and Regional Conveyance

Drought Mitigation Portfolio Progress Update: An Operational Perspective

Item 3c January 23, 2024 Item 3c Drought Mitigation Progress An Operational Perspective

Subject

Update on Drought Mitigation Portfolio Progress

Purpose

Provide an operational perspective on how new drought mitigation programs and projects can be implemented in the next drought and how potential future projects can be operated for additional reliability

Next Steps

- Incorporate lessons learned from last drought
- Continue partnerships for drought and surplus year actions
- Participate in CAMP4W to inform decisions on future drought reliability projects

History of Continuous "Portfolio" Development



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Balancing Investments and Risk



Improving Drought Reliability

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Improving Drought Reliability Questions Received during Drought Mitigation Workshops

- How can we reoperate our system in another drought, like the one that occurred in 2020 through 2022?
- How will our new/near-term actions help?
- What if the next drought is worse?
- How would future long-term actions like new conveyance and reservoirs help?

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Outline for Today

Case Study: (1) Future three-year drought sequence with conditions like 2020 to 2022, and (2) a four-year drought

- Benefits of incorporating operational lessons learned from last drought
- Benefits of new near-term projects
- Benefits from long-term actions under consideration (examples)
 - Venice/Sepulveda Pumping Phase 2
 - East/West Conveyance
 - Reservoir

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Case Study Objective

- Explore and increase understanding of operational, resource, and drought action concepts (less focus on specific numbers)
- Additional cases will be studied in the future with various demand, resource, and other assumptions
- Case studies coordinated with CAMP4W process

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Case Study Assumptions

- Re-operation of system, resources, and actions for a three-year drought sequence
- Same demands as 2020 through 2022 with no SWP
 Dependent Area allocation
- Annual SWP Allocations of 20%, 5%, and 5%, with no Health and Human Safety Allocation
- Surface and groundwater storage are "full" (like end of 2019) with the addition of AVEK groundwater storage
- Existing and new drought actions begin May of Year 2
- Fourth drought year added with same conditions as 2022

Improving Drought Reliability

Applying Lessons Learned from the Last Drought

- Keep Carryover at 300 TAF at end of Year 1 (rather than 200 TAF at end of 2020)
- Keep DVL at 800 TAF at end of Year 1 (rather than 700 TAF at end of 2020)
- How is this accomplished?
 - Draft SWP Banking Programs
 - Higher CRA diversion
- Pro: 200 TAF drought benefit
- Con: Could convert Carryover to Table A in a wet year

Review of Existing Drought Actions

Dry Year Operations

Actions implemented during last drought



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Dry Year Operations

New actions to implement in next drought to increase reliability





Meeting East Branch Demands

Year 3 Drought Operations

- Same replenishment as 2022
- Same OSCOP as 2022
- More DVL and AVEK supply available to Central Pool if needed
- SWP Banking supply used in 2022 is now available for West Branch



Year 3 Drought Operations

- Same replenishment as 2022
- Same OSCOP as 2022
- Same Greg Avenue pumping as 2022



Meeting CRW Demands

Year 3 Drought Operations

 Limited supply available after meeting CRW demands



Improved Future Reliability Summary of Case Study: Three-Year Drought Operation

- Year 1 re-operation saves Carryover storage for Year 3
- New actions cover East Branch demands
- East Branch supplies used in 2021 and 2022 are now available to the West Branch in Year 3
- No allocation is needed in Year 3

Key Milestone in Portfolio Development

Portfolio additions in place soon to survive a drought like 2020 - 2022 event without an allocation

2015



2003

• Culmination of collaboration, partnering, planning that began in 2022

2007

• Step forward in improved reliability

AVEK Storage DVL to Rialto B-5A TVMWD Pumping Sepulveda Pumping New Operations

2022

What's

Next?

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2010

Further Improving Future Reliability What happens if the next drought is worse than 2020 - 2022?

- Many possible scenarios and solutions
- Question for CAMP4W
- Examples of operational solutions assuming a 5% SWP allocation in Year 4 in our Case Study scenario
 - New conveyance
 - Further re-operation
 - New reservoir

Year 4 Drought Operations New Conveyance Options

- Prevents geographic specific allocation
- However, new supply needed to avoid any allocation
 - Pure Water
 - Local Supply
 - Conservation



Meeting Additional West Branch Demand



Year 4 Drought Operations Further Re-operation

Additional Operational Actions in Year l

- Build Carryover in Year 1 even higher
 - Start Greg Ave pumping and minimize SWP flow into Central Pool earlier
 - Draw SWP Banking including AVEK
 - Defer shutdowns that use SWP supply
- Pro: Ready to successfully operate in Year 4 with a 5% SWP allocation
- Con: Increased risk of converting Carryover to Table A in a wet year
- Further investigation and coordination needed

Meeting Additional West Branch Demand

Year 4 Drought Operations New Reservoir Option

- Fill in a wet condition like 2023
- Take water in a 4th drought year along with all other actions and operations
- Size to fit need to cover more drought years
- Some fill risk under severe climate change



We've Come a Long Way, but There's More to be Done

- New operations and actions provide a successful conceptual plan to reoperate through a 2020-2022 condition with <u>no allocation</u>
 - Coordination, partnership, and planning still needed to refine plan
- New conveyance provides a means to avoid geographic-specific allocations, but additional supply may be needed to avoid any allocations
- A new reservoir acts as a new supply to avoid allocations, but additional supply may be needed under severe climate change
- CAMP4W process will evaluate new reliability projects such as new conveyance, reservoirs, and supply – for implementation decisions

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Improving Drought Reliability

Next Steps on Coordinated Operations and Resource Management

- Incorporate lessons learned into 2024 operations in case 2024 is the next "2020" start of a drought sequence
- Continue partnership and planning for actions; e.g., OSCOP, replenishment deferrals, and wet-year storage programs
- Participate in CAMP4W to inform decisions on further expanding the portfolio with future drought reliability projects

