

2025 State Water Project (SWP) Delivery Capability Report (DCR)



Credit: DWR Pixel, May 13, 2023



CALIFORNIA DEPARTMENT OF
WATER RESOURCES

2026 CWEMF Annual Meeting
April 20, 2026

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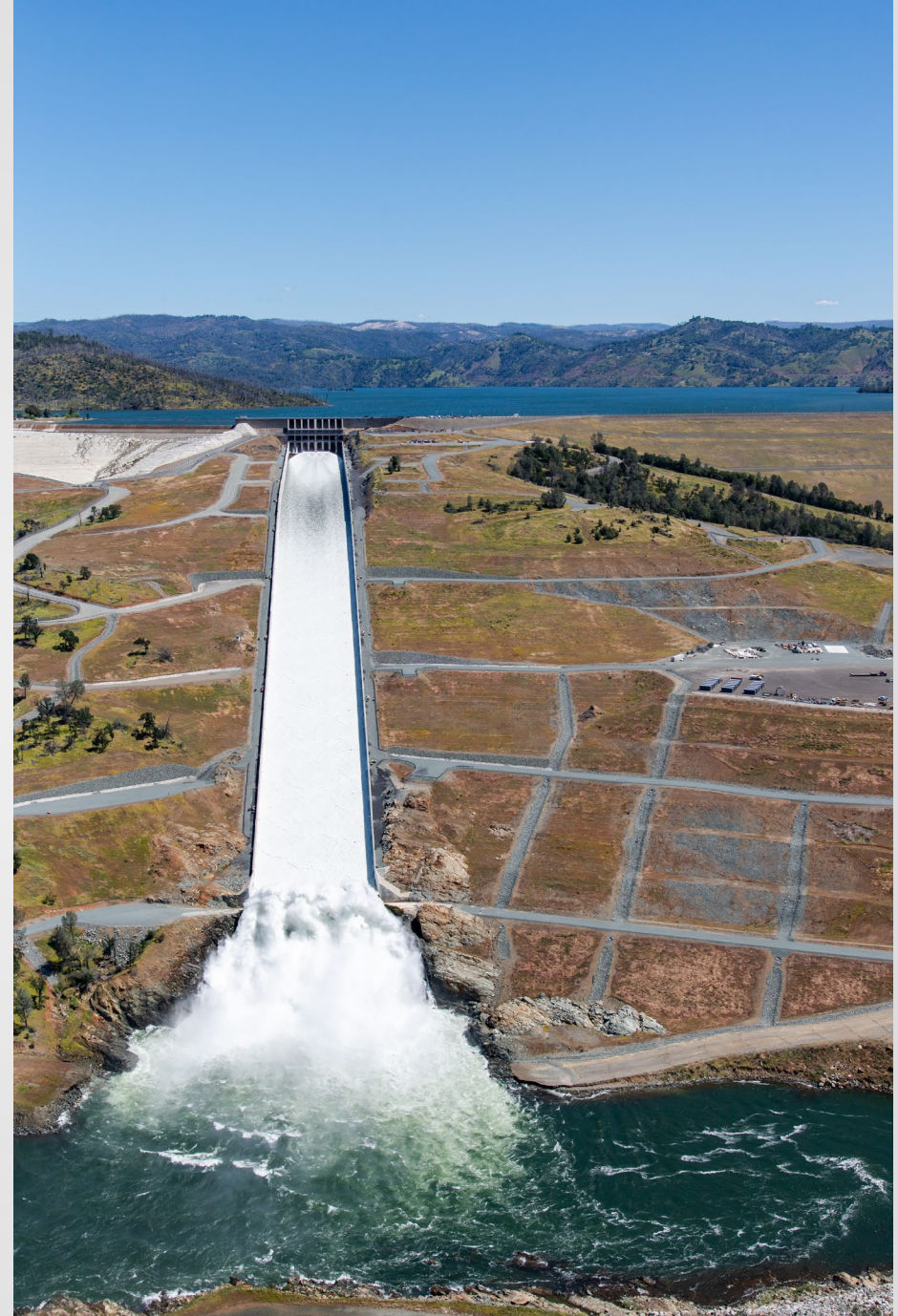
Outline

- Introduction
- Assumptions Overview
 - Existing Conditions
 - Future Conditions
 - DCR 2023 Differences
- Next steps
- Q&A



Delivery Capability Report (DCR)

- Bi-annual report of existing delivery capability
 - Over a range of hydrologic conditions
 - Long-term average
- Future delivery capability added in 2007 looking 20-years into the future (business as usual + climate change)

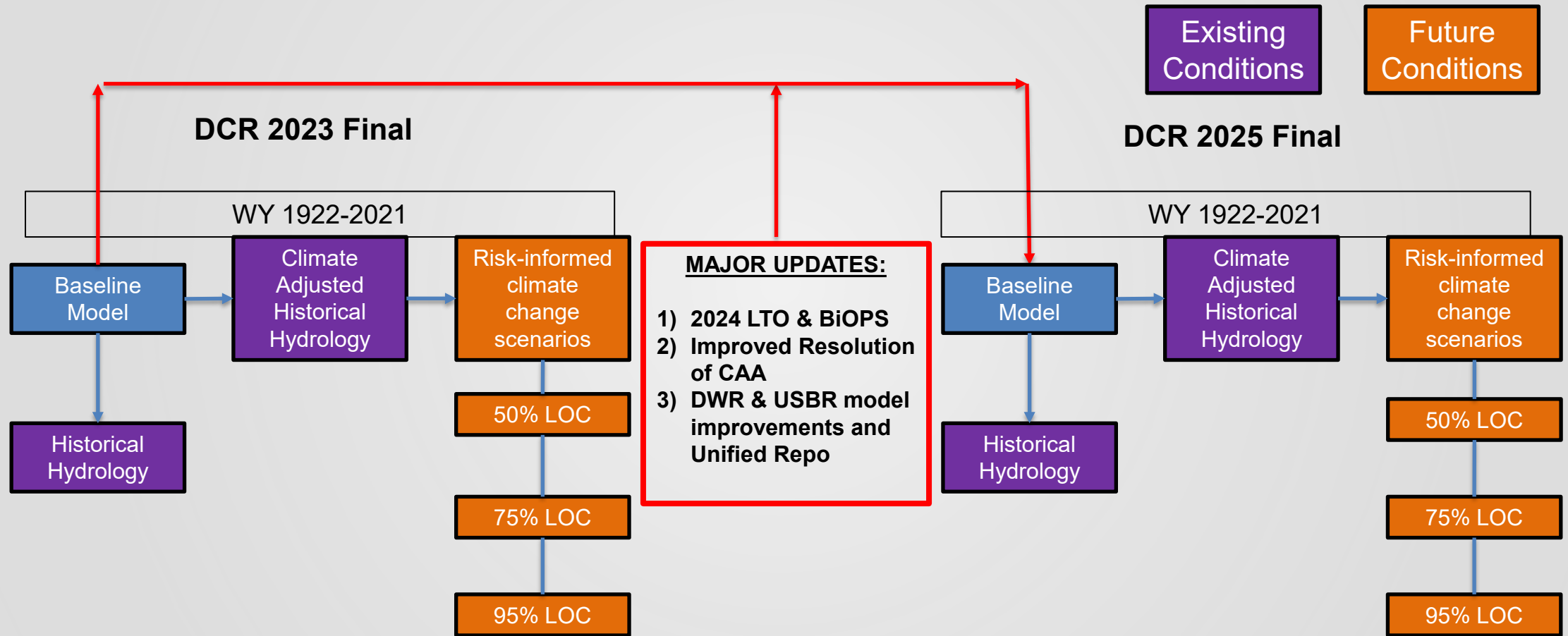


Why the DCR?

- Fundamental for drought planning
- Important input for Groundwater, Urban Water, Agricultural, and Integrated Regional Water Management Plans



Assumptions Overview



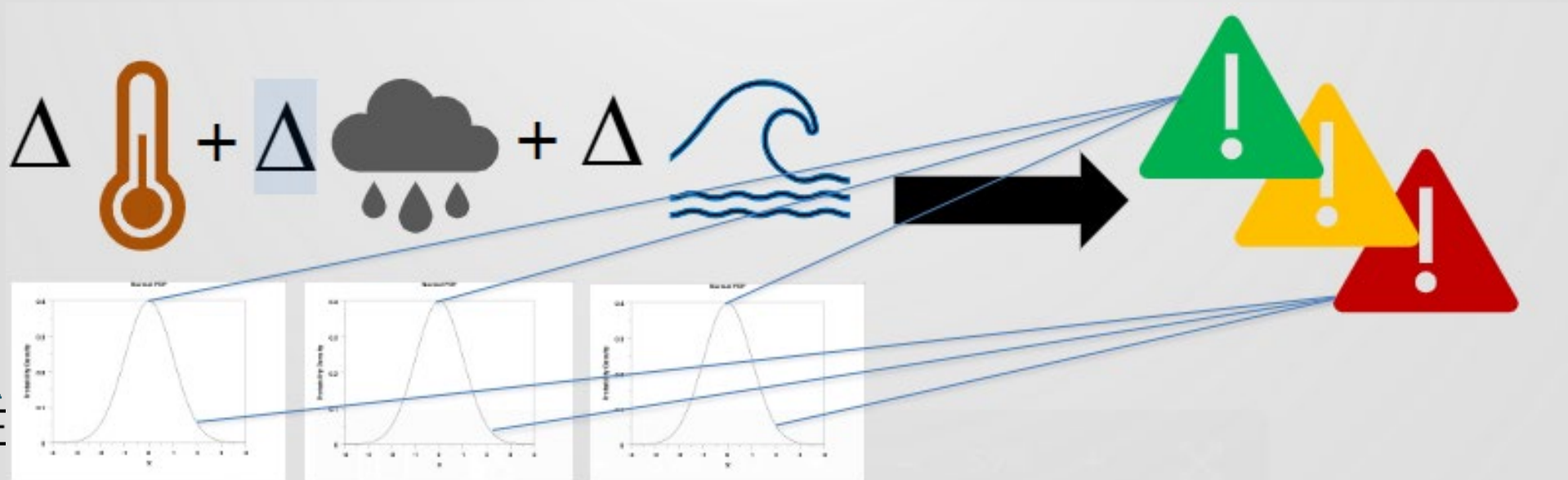
Assumptions: Existing Condition

- CalSim 3
- Hydrology:
 - Updated climate adjusted historical hydrology
 - Simulation period - 100 years (Water Year 1922-2021)
- **CAA Capacity – 2025 Aqueduct Subsidence Levels**
- Regulations:
 - **2024 Incidental Take Permit (ITP) for SWP**
 - **2024 Biological Opinions (BiOPS)**
- **Model Improvements- DWR and USBR updates**
- **DSM2 Surrogate Update (ANN)**



Assumptions: Future Condition

- Using risk-informed climate change hydrology, operations and regulations assumptions remain the same
- CA Aqueduct Capacity restored to design capacity for 2045 Future Condition scenarios
- Sea Level Rise: 23cm and 30cm

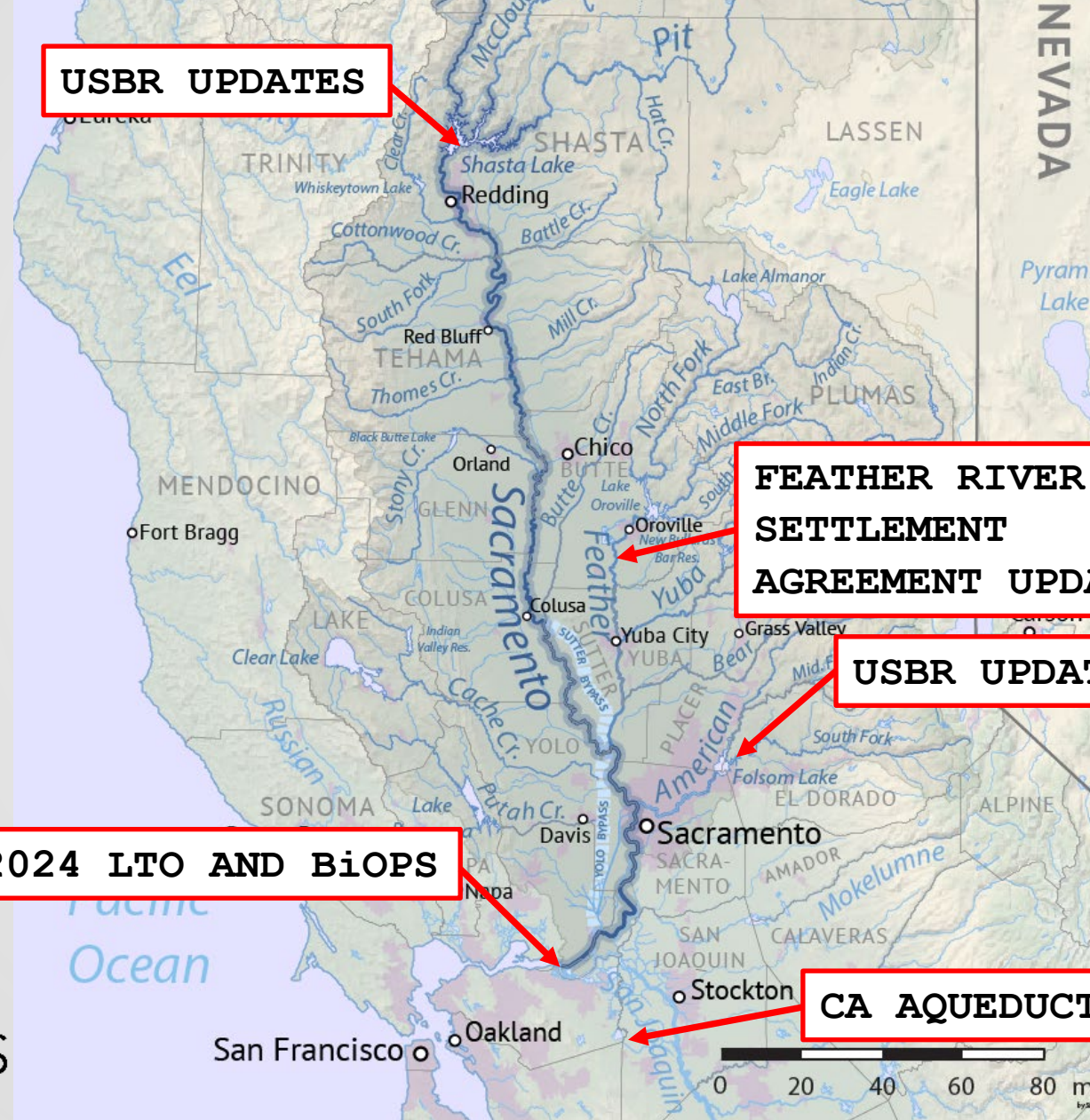


Differences Between the 2023 and 2025 DCR

	Final DCR 2023 Existing Conditions	DCR 2025 Existing Conditions
Simulation Period	1922-2021	Same as DCR 2023
Hydrology	Adjusted Historical (Danube)	Adjusted Historical (Yukon)
Regulations	• 2020 SWP ITP • 2019 BiOPS	• 2024 SWP ITP • 2024 BiOPS
CAA Capacity	• Design	• 2025 Subsidence Levels
Model Improvements	-	• Improved Resolution of the CA Aqueduct • USBR Updates • Feather River Settlement Agreement Updates • DWR-USBR Unified Code Repository



Baseline Model Updates Visual



Regulations

- New regulations issued since DCR 2023:
 - ITP issued by CA Dept. of Fish and Wildlife (CDFW) on 11/04/2024
 - <https://water.ca.gov/News/News-Releases/2024/Nov-24/New-Operating-Permit-Issued-for-Californias-State-Water-Project>
 - Biological Opinion issued by US Fish and Wildlife Service (USFWS) on 11/08/2024
 - https://www.usbr.gov/mp/bdo/docs/11.8.24_lto-final-biological-opinion.pdf
 - Biological Opinion issued by National Marine Fisheries Service (NMFS) on 12/06/2024
 - <https://www.fisheries.noaa.gov/resource/document/endangered-species-act-section-7a2-programmatic-biological-opinion-reinitiation>
 - Action 5 Operations Plan issues by USBR on 12/5/2025
 - https://www.usbr.gov/mp/nepa/nepa_project_details.php?Project_ID=54661

2024 ITP and BiOPS

(continued)

➤ What changed?

- Changes to Old Middle River (OMR) Flows
- Suisun Marsh Salinity Control Gate (SMSCG) Summer/Fall Operation
- North Bay Aqueduct Diversion Constraints



2024 ITP and BiOPS

(continued)

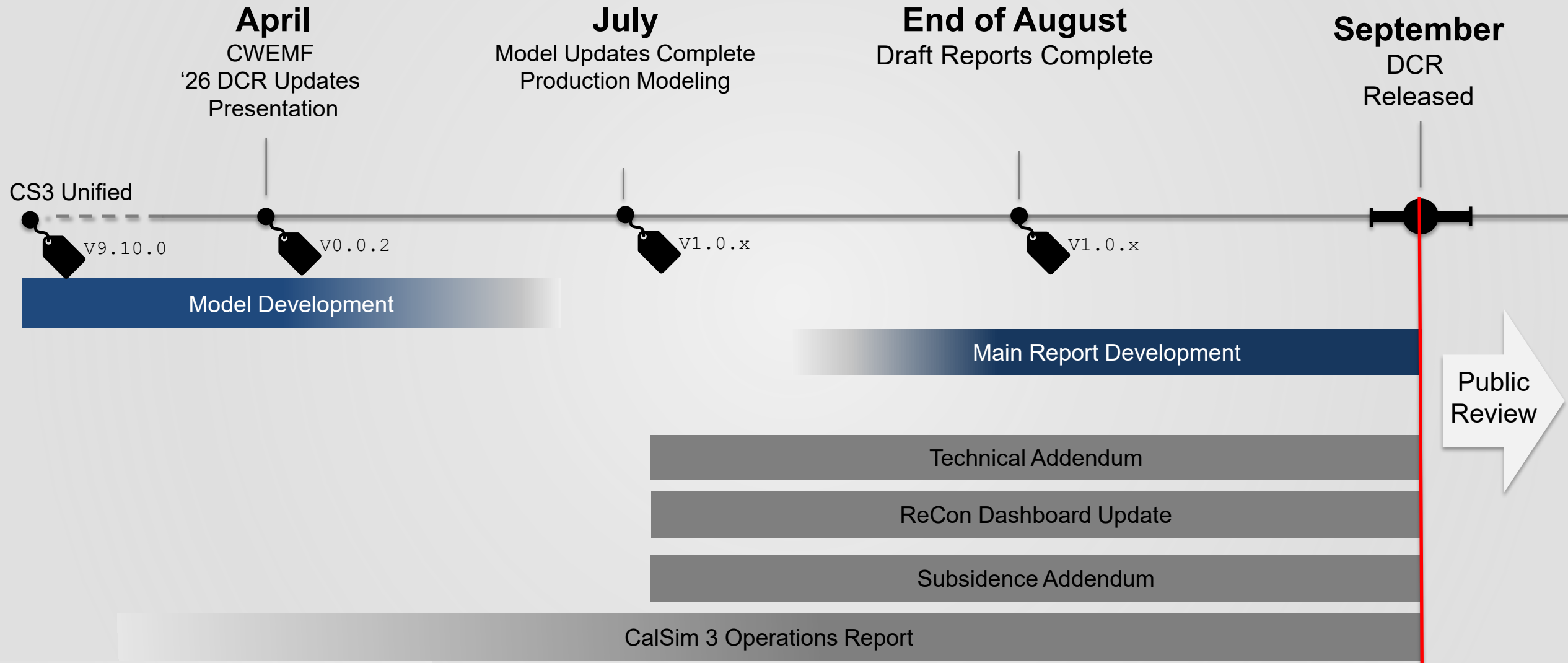
➤ What changed?

➤ CVP Operation Assumptions

- Shasta End-of-September Carryover Target
- Minimum flow below Goodwin Dam
- CVP Allocation
 - Settlement/Exchange
 - Refuges
 - Agricultural Service
 - Municipal & Industrial Service



2025 Delivery Capability Report Timeline



Additional References

- DCR ReCon Dashboard
 - [Results Console](#)
- DCR Deliverables
 - <https://water.ca.gov/Library/Modeling-and-Analysis/Central-Valley-models-and-tools/CalSim-3/DCR>
- CalSim On Demand Training
 - [Training Overview - CalSim 3 Documentation](#)



The screenshot shows the homepage of the California Department of Water Resources. It features a navigation bar with links to Home, Library, Modeling & Analysis, Central Valley models and tools, and CalSim 3. The main content area is titled 'Delivery Capability Report and Studies' and contains a paragraph about the 2023 report, a list of links, and contact information for the SWP Delivery Capability Report.

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The screenshot shows the 'CalSim 3 Documentation' website. It includes a search bar, a navigation menu with links to Home, Hello CalSim, Post-Processing, Model Setup, Lookup Tables, Common CalSim 3 Variables, Common CalSim 2 Variables (Legacy), Glossary, and FAQ. The main content area is titled 'CalSim On-Demand Training' and contains a welcome message, a list of topics covered, and a list of objectives for the workshop.

CalSim On-Demand Training

Welcome! The California Department of Water Resources Modeling Support Office hosted a 6 session, 18-hour CalSim 3 fundamentals training workshop in Winter 2025 to provide participants with an overview of WRIMS and CalSim 3.

Topics covered during the workshop ranged from a high-level conceptual understanding of CalSim 3 to ground-level code implementation of facilities, hydrology, regulations, and operations.

At the end of this workshop, participants should be able to:

1. Understand the role of CalSim 3 and its application as a planning model
2. Obtain an overview of the CVP-SWP system as it is modeled in CalSim 3
3. Identify key assumptions and limitations of the model
4. Understand hydrology development in CalSim 3, including sources of Input Data
5. Understand how the Delta and its requirements are simulated within CalSim 3
6. Understand how reservoirs and allocations are simulated within CalSim 3
7. Analyze and Interpret Study results, including post-processing tools

For More Information

- **Monday, 3:30-5:15pm, Session 7: Updates in CalSim Development (Zachary Roy, DWR)**
 - CalSim Solvers, CalSim Cycle Structure, WRESL+ Compiler, etc.
- **Tuesday, 1:15-3pm, Session 16: Updates in CalSim Hydrology (Ryan Lucas, USBR)**
 - C2VSIM, CSHydro, Land Use, etc.
- **Wednesday, 10-11:45am, Session 25: Developments in 2026 on Historical Hydrology and Calibration of the CalSim Historical Model (James Polsinelli, DWR)**
 - CSHydro, CS3 GW-DLL, CS3 Historical Model, etc.



Acknowledgements

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Q&A

**For detailed inquiries, please reach out at:
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