

SENATE THIRD READING
SB 224 (Hurtado)
As Amended September 2, 2025
Majority vote

SUMMARY

Requires the Department of Water Resources (DWR) to update its water supply forecasting models and procedures by January 1, 2027.

Major Provisions

- 1) Requires DWR to update its water supply forecasting models and procedures that better address climate change by January 1, 2027.
- 2) Requires DWR to report to the Legislature on its progress in adopting a new water supply forecasting model and procedures beginning January 1, 2028 and continuing each year through January 1, 2032. DWR shall also post this report on its website.
- 3) Requires DWR to establish the specific criteria it will use to determine when the updated water supply forecasting model has demonstrated sufficient predictive capability to be ready for use in each of the watersheds. These criteria shall be published on DWR's website.
- 4) Requires DWR to implement a formal policy and procedures for documenting DWR's operational plans and rationale underlying those plans by January 1, 2027.
- 5) Requires DWR to report to the Legislature on its rationale for operating procedures for the previous water year beginning January 1, 2028 and continuing each year through January 1, 2032.

COMMENTS

One of DWR's many roles in water management is to collect information regarding precipitation and hydrologic conditions from across the state and to forecast water runoff from the state's major watersheds for the spring and summer months so that water managers and water users may plan accordingly. One of the principal publications DWR uses for this purpose is Bulletin 120. DWR issues Bulletin 120 four times a year, in the second weeks of February, March, April, and May, to summarize precipitation, snowpack conditions, reservoir storage, and runoff to date in various regions of the state. Bulletin 120 also forecasts water runoff from the state's major watersheds for the remainder of the year. Each edition of Bulletin 120 provides a median and 80% probability range of runoff from major watersheds that is based on observed hydrologic conditions to date and historical data.

DWR is also responsible for managing the State Water Project (SWP), "a multi-purpose water storage and delivery system that extends more than 705 miles" and encompasses a collection of canals, pipelines, reservoirs, and hydroelectric power facilities that delivers clean water to 27 million Californians, 750,000 acres of farmland, and businesses throughout California. SWP collects surface water from the northern part of the state in its largest reservoir, Lake Oroville, and transports that water south through rivers, the Sacramento-San Joaquin Delta, and the California Aqueduct to 29 cities, counties, and water districts that have contracts with SWP ("State Water Project Contractors"). DWR delivers a percentage of water to its contractors

depending on hydrologic conditions and forecasted runoff. The contractors request an amount of their contracted water on October 1st (the beginning of the "water year") and DWR issues an initial percentage allocation around the beginning of December indicating how much water DWR anticipates, based on hydrologic conditions, it will be able to deliver to contractors in the remainder of the year. This initial allocation is typically adjusted three to four times over the winter and early spring as the total precipitation for the year becomes clearer. As an example, for water year 2024, DWR announced an initial allocation of 10% due to low reservoir storage and relatively dry conditions through November of 2023. As conditions improved and precipitation was in the "normal" range through early 2024, DWR increased the allocation to 30% in March 2024 and then to 40% in April 2024, the final allocation for the 2024 water year.

By all accounts, Water Year 2021 was an extraordinarily challenging hydrologic year. It is California's second driest year on record and experts at the Public Policy Institute of California dubbed it the year that "broke" the California water system. For its part, DWR published a report on it dubbing 2021 an "extreme" year and discussed how climate change had invalidated historical precedents and assumptions regarding hydrologic projections. Because of dry conditions and high temperatures, runoff from snowpack was significantly lower than DWR forecasted; the snowpack had effectively sublimated and/or evaporated by May, much earlier than expected. Governor Newsom proclaimed a drought for Sonoma and Mendocino counties in April 2021, extended that emergency to the rest of Northern and Central California in May, and then to coastal California in July.

Due to DWR's missed forecast in Water Year 2021, the California State Auditor conducted an audit of the methodology DWR used to forecast runoff and manage SWP pursuant to a legislative request. The audit was completed in May 2023 and found problems with DWR's forecasting methodology and that DWR lacked documentation of its rationale for operational decisions. In its response to the audit, DWR acknowledges it made a forecasting error in 2021 yet disagrees with the audit's finding that DWR has been slow to incorporate climate change into its forecasting and operational decisions and lacks a comprehensive plan to respond to drought. DWR indicates it will implement other recommendations made in the audit (see below) and notes that "the shift at DWR is well underway to move from a statistical, record-based forecasting model to water supply forecasts that simulate the physics of interactions among the atmosphere, water as rain or snow, and the land surface...."

Below are the audit's principal recommendations, the State Auditor's assessment of the status of DWR's implementation of the audit finding, and a description of how, and if, this bill addresses each recommendation:

- 1) *Audit finding #1*: to ensure that its Bulletin 120 water supply forecasts are as accurate as possible, DWR should implement a forecast verification process by November 2023.
 - a) *Status of DWR implementation as of May 2024*: Fully implemented
 - b) This bill does not include provisions that address this audit finding.
- 2) *Audit finding #2*: to ensure that its water supply forecasts better account for the observed effects of climate change as soon as possible, DWR should continue to implement its plan to adopt an updated water supply forecasting model and updated procedures.
 - a) *Status of DWR implementation as of May 2024*: Partially implemented, estimated completion date in five to ten years due to budget constraints.

- b) This bill requires DWR to adopt a new water supply forecasting model and procedures that better address the effects of climate change by January 1, 2027.
- 3) *Audit finding #3:* to better prepare to effectively conduct SWP operations during future, possibly more extreme drought periods, DWR should, by May 2024, develop a long-term plan for proactively mitigating and responding to the impacts of drought on SWP.
 - a) *Status of DWR implementation as of May 2024:* Fully implemented.
 - b) This bill does not include provisions that address this audit finding.
- 4) *Audit finding #4:* to ensure that it can demonstrate effective oversight of SWP operations and efficient use of the project's water supply, DWR should, by May 2024, develop and implement a policy and set of procedures for documenting its operational decisions and rationale.
 - a) *Status of DWR implementation as of May 2024:* Partially implemented, the State Auditor indicates that DWR "did not substantiate its claim of full implementation."
 - b) This bill requires DWR to implement this recommendation by January 1, 2027.
- 5) *Audit finding #5:* to ensure that its operation of SWP reflects the possibility of more extreme climate conditions, DWR should, by May 2024, evaluate the data and information that it relies upon in its monthly and annual planning for its Lake Oroville reservoir operations, including the volumes of water that it will need to store to achieve its objectives. It should update the data and information as needed.
 - a) *Status of DWR implementation as of May 2024:* Fully implemented.
 - b) This bill does not include provisions that address this audit finding.
- 6) *Audit finding #6:* to ensure that it continually improves the effectiveness of its management of SWP, DWR should develop and implement a formal, written process for reviewing its planning and operations at least once annually.
 - a) *Status of DWR implementation as of May 2024:* Fully implemented.
 - b) This bill does not include provisions that address this audit finding.

According to the Author

"[This bill] requires the DWR to update its policies and procedures to better combat the impacts of climate change. The bill also requires the DWR to document and address the rationale behind its water operating decisions. [This bill] strengthens California's ability to manage its water resources efficiently, prevents unnecessary water loss, and enhances the state's resiliency to drought. Accurate water data modeling, planning, and accountability will ensure water stays a vital resource for California in the years ahead."

Arguments in Support

The Olivenhain Municipal Water District supports this bill and argues that it will improve DWR's management of SWP: "this bill would require DWR to document and address the rationale behind its water operating decisions, therefore strengthening California's ability to manage its water resources efficiently while preventing unnecessary water loss."

Arguments in Opposition

None on file.

FISCAL COMMENTS

According to the Assembly Appropriations Committee, this bill has the following fiscal impact:

DWR will incur ongoing General Fund costs, likely in the low hundreds of thousands of dollars annually, to update and implement its water supply forecasting models and procedures and develop the required reports.

For its part, DWR estimates General Fund costs of approximately \$119,000 annually in staff costs to fulfill the reporting requirements.

VOTES

SENATE FLOOR: 38-0-2

YES: Allen, Alvarado-Gil, Archuleta, Arreguín, Ashby, Becker, Blakespear, Cabaldon, Caballero, Cervantes, Choi, Cortese, Dahle, Durazo, Gonzalez, Grayson, Grove, Hurtado, Jones, Laird, Limón, McGuire, McNerney, Menjivar, Niello, Ochoa Bogh, Padilla, Pérez, Richardson, Rubio, Seyarto, Smallwood-Cuevas, Stern, Strickland, Umberg, Valladares, Weber Pierson, Wiener

ABS, ABST OR NV: Reyes, Wahab

ASM WATER, PARKS, AND WILDLIFE: 13-0-0

YES: Papan, Jeff Gonzalez, Alvarez, Ávila Farías, Bains, Bennett, Boerner, Caloza, Hart, Macedo, Celeste Rodriguez, Rogers, Tangipa

ASM APPROPRIATIONS: 15-0-0

YES: Wicks, Sanchez, Arambula, Calderon, Caloza, Dixon, Elhawary, Fong, Mark González, Ahrens, Pacheco, Pellerin, Solache, Ta, Tangipa

UPDATED

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