SITES RESERVOIR

FREQUENTLY ASKED QUESTIONS: OPERATIONS

Why is Sites Reservoir needed?

Sites Reservoir is being built to increase the reliability and flexibility of California's water supply and ensure the state is more resilient to current and future droughts.

How does Sites Reservoir ensure California is more resilient and resistant to drought?

Sites Reservoir would provide California with additional water storage capacity as hotter and drier weather is predicted to diminish California's existing water supply up to 10 percent by 2040. As a rain-fed reservoir, Sites is purposely designed to adapt to California's changing climate conditions by capturing and storing water during extreme storm events for use during severe dry periods when it is needed the most.

How big is Sites Reservoir?

Sites would stretch 13 miles long from north to south and 4 miles wide from east to west. When full, the reservoir would be around 260 feet deep from surface to floor at its lowest point. The reservoir can hold up to 1.5 million acre-feet of water, enough to serve 7.5 million people with water for an entire year. Once constructed, it will be the 8th largest reservoir in California.

How would Sites Reservoir work with California's existing water storage and delivery system?

Sites Reservoir complements other major components of the state and federal water projects like Shasta Lake, Lake Oroville, and Folsom Lake by coordinating water releases from this existing network of reservoirs. Sites could extend the functions they serve by creating flexibility to adapt to changing conditions. For example, Sites can be operated in coordination with Shasta Lake to preserve and enhance cold water for endangered salmon in the Sacramento River. Or Sites could contribute to the increased fresh-water flow into the Delta during drier periods to assist with salinity management of this critical estuary. Sites would not compete for the water resources stored in these state and federal facilities, but would increase the total amount of managed water in storage.

How much water will be available to store in Sites?

Although the exact amount of available water will vary year to year, the water availability analyses conducted by the Sites Project Authority showed that an annual average of at least 658,000 acre-feet of water would be available to divert and store in Sites Reservoir and that there are years where the full capacity of Sites Reservoir, 1.5 million acre-feet, would be available for diversion.

Across the Authority's six analyses, the average annual estimated amount of available water exceeds the Authority's average annual modelled diversions by 2 to more than 5.5 times. This is based on highly conservative methodologies used to analyze the data AND considers the effects of a changing climate. The water availability analysis is significant because it demonstrates there is water for Sites Reservoir, the environment, and existing senior water right holders in the Sacramento River and Delta watersheds under a wide range of water supply scenarios, now and in the future.

As a real-world example, Sites Reservoir could have diverted and captured 1.5 million acre-feet of water from early 2023 through April 2024. Based on an analysis of 2023 flows and significant storms this year, it is estimated that Sites Reservoir would be at full capacity as of spring 2024.

How will Sites Reservoir use existing infrastructure and what does that mean for the project footprint?

Using existing local infrastructure, made possible by our local partners, has increased the efficiency of Sites Reservoir and reduced the project's overall footprint. The only new conveyance envisioned is the inlet/outlet works for the reservoir and the four miles of 10-foot diameter pipeline to convey water back to the Sacramento River between the Tehama-Colusa Canal and the Colusa Basin Drain. Extending the performance of existing infrastructure is good public policy, good business practice, and makes for a more sustainable footprint by reducing the environmental impact of the constructed work. The Project will utilize existing facilities and infrastructure to a great extent and the existing topography of the reservoir site itself is a natural bowl perfectly situated to accommodate a water reservoir. A significant portion of the more than 100 miles of conveyance (canals and pipelines) involved in the Project will be existing facilities.

Does Sites Reservoir need new Delta conveyance?

No. The project is not dependent on the construction of Delta tunnels. Sites Reservoir will function independently, with or without a new Delta conveyance system.

How will Sites Reservoir balance operations and environmental considerations?

The Authority is committed to minimizing our environmental footprint and supporting surrounding wildlife and communities.

Sites Reservoir is a 21st century water storage system designed with both environmental values and water supply needs in mind amid our changing climate. As an off-stream facility, it does not dam a major river system and does not threaten fish migration or spawning. Diversions would be conducted under highly protective operating and permit conditions while intakes used for diverting water will have state-of-the-art fish screens that are proven to be highly effective at protecting fish.

The Authority also completed an extensive environmental review for the project; operations were modified substantially through this process to be more protective of the environment, including specific mitigation measures to offset the project's impacts. The current operations strike the needed balance between environmental protections and affordability that must exist for the Project to proceed.

Will Sites Reservoir be operated sustainability?

Sites Reservoir will generate enough power to meet about half of its energy needs. The remaining energy will be produced through renewable sources. The Sites Project Authority has committed to a net zero greenhouse gas goal – working hard to avoid, reduce, and then offset emissions that contribute to our

changing climate. This is a high bar for any project and the Authority will take action to avoid and minimize emissions resulting from the project construction and operations, and when needed, to offset for actual emissions in excess of baseline conditions.

How long will it take to fill Sites Reservoir, based on recent estimates?

As part of the State Water Board permitting process, the Authority completed a robust suite of water availability analyses under a variety of water supply scenarios—ranging from historical conditions to climate change projections as far out as 2070. The combined analyses the Authority conducted constitute the most extensive water availability analysis ever conducted in California history.

Although the exact amount of available water will vary year to year, the scenarios analyzed show that an annual average of at least 658,000 acre-feet of water would be available to divert and store in Sites Reservoir and that there are years where the full capacity of Sites Reservoir, 1.5 million acre-feet, would be available for diversion.

As a real-world example, a recent analysis found that Sites Reservoir could have captured nearly 1.5 million acre-feet of water—its full capacity—following storms that occurred from early 2023 through April 2024.