SITES RESERVOIR

June 2023

Frequently Asked Questions:
Water Right Permit & Water Availability Analysis

1. **When did the Sites Project Authority submit its water right application to the State Water Resources Control Board (State Water Board) for review and consideration?**

   The Authority completed the application and submitted it to the State Water Board on May 11, 2022.

2. **Was the application accepted? Can an application be accepted yet ask for additional information?**

   Yes, and yes. On August 26, 2022, the State Water Board indicated that it had accepted the application and determined the application needed additional information prior to noticing. It is important to remember that the process for receiving a water right permit requires careful analysis and deliberate consideration. There are a number of steps in the process, all of which are appropriately open and transparent to the public.

3. **Is it common for the State Board to request additional information when reviewing project applications?**

   Yes. It is not unusual for the State Water Board to request additional information about a water right application. In fact, we're not aware of any application for a major water supply project where the State Water Board deemed the application complete on the first submittal. Some applications take years to be found complete.

4. **What additional information did the State Water Board request?**

   The State Water Board asked the Authority to demonstrate that the full amount of the water right requested (1.5 million acre-feet) would be available for the Sites Reservoir Project, after accounting for the demand associated with all existing senior water rights and environmental needs. The State Water Board specifically asked that the Authority demonstrate water availability for the Project during an unimpaired flow scenario where 55% of the water is left in rivers and creeks for the environment, and 45% is allocated to all other water users.

5. **Is the Sites Water Right Application now complete?**

   Yes. On May 5, 2023, the State Water Board deemed the Authority's application substantially complete. The Project is now proceeding through the permitting process.

6. **Was the Authority able to demonstrate that there is unappropriated water in the Sacramento River that can and will be available to divert and store in Sites Reservoir?**

   Yes. In response to the request from the State Water Board, the Authority completed additional analyses to add to its already robust suite of water availability analyses under a variety of water supply scenarios. The combined analyses the Authority conducted constitute the most extensive water availability analysis ever conducted in California history.

   Our team of experts looked at six water supply scenarios to determine how much water would be available to divert to storage in Sites Reservoir under a variety of conditions. These scenarios ranged from historical conditions to climate change projections as far out as 2070. In addition to the scenarios developed by the Authority's team, the specific unimpaired flow scenario requested by the State Water Board was also run.

7. What scenarios did you analyze?

The scenarios in the Authority's analysis are summarized in the following table. The additional scenario run at the request of the State Water Board is described below.

Approach	Time Period	Supply	Demand
Historical	Daily data from January 2000 – September 2021	Historical flow data from 5 gages on Sacramento River from Red Bluff to Freeport	Face value of all water rights in Sacramento River reach and Delta Conditions
CalSim II			
Historical hydrology	Monthly analysis for water years 1922–2003	Historical hydrology	2030 planning level demands
Climate change – 2035 Central Tendency	Monthly analysis for water years 1922–2003	2035 central tendency	2030 planning level demands
Climate change – 2070 Central Tendency	Monthly analysis for water years 1922–2003	2070 central tendency developed for WSIP projects	2030 planning level demands
Unimpaired Flow – Based on Reclamation's Alternative 4 in its 2019 Reconsultation EIS	Monthly analysis for water years 1922–2003	Historical hydrology with modifications to account for a 55% unimpaired inflow requirement	2030 planning level demands
Face Value	Analyzed on a seasonal basis for water years 1922–2014	Monthly unimpaired flow data from DWR Natural Flow report	Water right face value throughout Sacramento Watershed (~8,500 water rights)

8. How much water did the water availability analysis show could be available for Sites?

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.

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.

9. Will there be water left for the environment and other users if Sites is built?

Yes. 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. A Sites Reservoir water right leaves ample water in the system for other current and future uses. In fact, these are conservative estimates—two of the analyses assume that senior water right holders are using the maximum amount of water allowed every single year.

As a real-world example and using the Authority's protective diversion criteria in its water right application, the Authority would have been able to capture over 700,000 acre-feet of stormwater for Sites Reservoir, from January to June 14, 2023.

10. Did you analyze any scenarios with the State Water Board staff's proposal of 55% unimpaired flows bypassed to Delta outflow for the Sacramento River and Delta watersheds?

Yes. In addition to the six scenarios conducted by the Authority, the State Water Board requested the Authority complete an analysis of water availability using a tool the Board developed. This tool evaluates the entire Delta watershed (Sacramento, San Joaquin and Delta proper) and assumes implementation of a 55% unimpaired flow requirement in the Sacramento Valley and Delta – meaning, the first 55% of water is allocated to the environment with the remaining 45% allocated to water right holders. This analysis also assumed that every water right holder would utilize their entire right every year, including the assumption that reservoirs are empty and need to fill each year – an extremely conservative approach.

Under this analysis, 141,000 acre-feet of water was available for the Project on an average annual basis. The exceptionally conservative approach to this analysis, expectedly, results in less water available for the Project compared to the other analyses. But the exceptionally conservative approach, while important for a theoretical worst-case bookend, does not reflect how our water system actually operates. The Authority believes that its analyses presented above, represent conservative but also more realistic approaches to analyzing water availability.

11. How are we able to divert more water from the Sacramento River which is inflow to the Delta without hurting the salmon?

A key component of the Project is to provide surface water storage north of the Delta to improve ecosystems by providing improvements in water supply reliability for fish protection, habitat management, and other environmental water needs. To do this, the Project has been working with state and federal fisheries agencies to establish flow protections at certain points along the Sacramento River. These flow measures, commonly called "diversion criteria," protect migrating fish throughout the river and are required to be met prior to commencement of Project diversions. The Project also helps maintain suitable water temperatures for salmon by coordinating operations with Shasta Lake to preserve the cold water stored within Shasta Lake so that it can then be released into the river in late summer and fall when river temperatures become lethal for young salmon.

12. Shouldn't we wait to authorize water to Sites until we complete an updated Bay Delta Water Plan?

California water policy and regulations have historically changed at glacial speed. Large changes have taken years, if not decades to complete. And not surprisingly, climate change hasn't waited for water policy and projects in our state to catch up. We are woefully behind in preparing for our future. While requiring careful consideration and extensive coordination, we can make multiple changes in California water policy and projects at the same or similar times. It requires more discussion and coordination, but it's necessary for us to move forward as a State if our families, cities, and rural communities are going to continue to prosper and if we want to maintain and improve our amazing natural environment.

In addition, three items are critical here. First, the Authority has completed two analyses of water available for the Project in light of an updated Bay Delta Water Plan – one is the Authority's water availability analysis and a second analysis uses the State Water Board's tool. Next, the Authority is currently working on a quantitative analysis of how the Project's diversions would affect Delta outflow under the Voluntary Agreements. This analysis will be submitted on June 16, 2023, and made available for public review at that time. And lastly, the State Water Board always reserves jurisdiction to modify the Authority's water right in the future to implement an updated Bay Delta Water Plan. The State Water Board uses a standard water right permit term to this effect (called Term 96) and the Authority is comfortable with this term being included in its water right permit.

13. How does the Sites Project protect the senior water rights of the Central Valley Project (CVP) and State Water Project (SWP)?

The Authority has worked hard to protect senior water right holders, those water right holders with a priority date prior to the Project's date. First and foremost, under California water law, all senior water right holders are just that – senior to the ability of the Project to divert water. These senior water right holders are afforded the protections given to them in California water law to be senior to, or higher in priority, for diversions than the Sites Project. The CVP and SWP water rights held by the Bureau of Reclamation (Reclamation) and the California Department of Water Resources (DWR), respectively are senior in priority to the Sites Project water right.

Operations of the CVP and SWP are intricate, far-reaching and can change rapidly based on the natural environment such as changes in runoff from our watersheds and tidal influence in the Delta. In the limited times when transiting from "excess" to "balanced" conditions[1] in the Delta, it's not always immediately clear if diversions by the Sites Project would impact the CVP and SWP. For this reason, the Authority has worked with Reclamation and DWR to develop a "special term" that would be included in the Authority's water right to protect the CVP and SWP. This "CVP and SWP Term" reads as follows:

> *No diversion is authorized that would adversely affect the operation of the Central Valley Project or State Water Project under the Projects' existing water rights in effect on the date of this Order and as such existing water rights may be modified. An adverse effect shall be deemed to result from permittee's diversion at any time the Bureau of Reclamation and the Department of Water Resources have declared the Delta to be in balanced water conditions under the Coordinated Operation Agreement, unless otherwise agreed by the Bureau of Reclamation and the Department of Water Resources. An adverse effect shall also include any time that such diversion would directly or indirectly require the Central Valley Project or the State Water Project to release water from storage or to reduce their diversion or rediversion of water from the Delta to provide or assure flow in the Delta required to meet any applicable provision of state or federal law. All Sites Project diversions shall comply with the provisions of any operations agreement among the Department of Water Resources of the State of California, the Bureau of Reclamation, and the Sites Reservoir Joint Powers Authority, as may be amended from time to time.*

14. How does the Sites Project protect other senior water right holders?

As mentioned above, senior water right holders are afforded the protections given to them in California water law to be senior to, or higher in priority for, diversions than the Sites Project. There are a number of senior water right holders downstream of the Project's diversion locations. The Authority's water availability analysis considered all of these senior water holders and still found water available for the Project. In addition, the Project includes a series of protective diversion criteria, with the three most applicable in this case being the following:

1. The Project would only divert water when Reclamation and DWR have determined that Delta is not in a "balanced" condition as defined in the Cooperating Operations Agreement between these two agencies.
2. The Project would cease diversions based on specific criteria to protect pulse flows in the Sacramento River.
3. The Project would only divert after a minimum flow is present and continues to be present in the Sacramento River of at least 5,000 cfs in September and at least 10,700 cfs from October through June 14. The Project is not seeking to divert from June 15 to end of August.

Although the above diversion criteria were developed for environmental protection, they require significant flow in the system prior to any diversion under a water right permit issued to the Authority. These diversion criteria also provide a level of incidental protection to existing water right holders downstream of the points of diversion for Sites Reservoir. In addition to the specific diversion criteria, the Sites Authority has proposed standard and project-specific water right terms be included in a water right permit.

[1] "Excess" and "balanced" conditions are terms defined in the Coordinated Operation Agreement between the Bureau of Reclamation and the Department of Water Resources. Excess conditions are periods when it is agreed by Reclamation and DWR that releases from upstream reservoirs plus unregulated flow exceeds Sacramento Valley inbasin uses plus exports. Balanced water conditions are periods when it is agreed that releases from upstream reservoirs plus unregulated flow approximately equal the water supply needed to meet Sacramento Valley inbasin uses, plus exports.