

**Addendum to the  
State Water Project and  
Central Valley Project  
Drought Contingency Plan  
September 27, 2021**

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This Drought Contingency Plan (Drought Plan) Update (Update) has been prepared by the California Department of Water Resources (DWR), in coordination with the U.S. Bureau of Reclamation (Reclamation), to provide the latest information about the operations forecast and drought actions being taken. This Update is being submitted by DWR to CDFW in response to Condition 8.21 of the ITP.

This Update includes the SWP and CVP (collectively referred to as Projects) September operations forecast.

DWR and Reclamation continue to provide weekly condition and Project operations updates through WOMT. In addition, DWR and Reclamation coordinate with the existing Long-term Operation Agency working groups and Drought Relief Year (DRY) Team to develop a robust drought monitoring program with updates to WOMT and other forums as necessary.

State Water Project (SWP) and Central Valley Project (CVP) - Operations Update

The uncertainty surrounding inflows and depletions has diminished significantly from the beginning of the summer. Project operations are still tracking with the operations forecast included in the August Drought Plan Update. September has been fairly typical, with operations primarily controlled by system-wide depletions and Delta outflow and water quality.

Depletions decreased in August as the peak irrigation season tapered off. The Projects reduced releases at each of the upstream reservoirs as depletions decreased.

SWP and CVP Operations Forecasts

DWR and Reclamation have updated the attached operational forecasts through December 31, 2021. Although the final official Water Supply Index Bulletin 120 forecast was issued on May 1, 2021, the forecasts provided have been adjusted to account for observed conditions in June through September and incorporate very dry conditions through December.

Approximately 200 thousand acre-feet (TAF) of transfer water stored in Shasta was initially planned to be moved in October, but after meeting with the Upper Sacramento Scheduling Team (USST), a portion of the transfer water has been shifted into September. Reclamation continues to coordinate with the USST on the transfer release pattern through the fall. Additional information is provided below in the Shasta section.

### *Oroville*

In early August, the Hyatt Powerplant went offline for the first time in history due to low lake levels, and Oroville storage has fallen below the historic low of 882 TAF experienced in 1977. DWR is now using the River Valve Outlet System to release water from the base of Oroville Dam to maintain Feather River temperature requirements and meet minimum downstream flow requirements.

### *Shasta*

Consistent with the August Drought Plan Update, Reclamation is continuing to release 6,800 cfs from Keswick throughout the month of September and a portion of October. In late August and throughout September, Reclamation has been conferring with the USST regarding how to best schedule the 200 TAF of transfer water stored in Shasta while minimizing impacts to fisheries and, as a result, Reclamation modified its previous plan (to release this water in October) and has been holding releases at 6,800 since August 26. In addition, diversions from the Trinity River were reduced in August and early September due to temperature concerns. Since this reduction, the diversion from the Trinity is now a lower temperature than what is being released from Shasta, so there is now a temperature benefit. As a result, the Trinity diversions were increased in mid-September. The current forecast (as of September 20) is included in this plan update; however, this schedule will continue to be reviewed with the USST and may be modified while moving the transfer water stored in Shasta. Both of these changes have resulted in a forecasted end-of-September carryover target of 1.05 MAF.

### *Folsom*

Based on current projections, Reclamation will end water year 2021 with Folsom storage above 200 TAF, consistent with the goal set earlier in the year to protect municipal and industrial deliveries through a very dry fall. In addition, Reclamation is working with Placer County Water Agency to facilitate a transfer of 20 TAF released into Folsom Reservoir to be delivered south of the Delta in a manner that does not result in increased risk to Reclamation's operations needed to protect health and safety. Reclamation has evaluated exchanging this transfer water in Folsom Reservoir with water stored in New Melones Reservoir to benefit Folsom storage, and is awaiting approval from the State Water Resources Control Board to move forward on this action.

## Updates on 2021 Drought Actions

Drought actions have not changed substantially, but there are some updates as follows.

### *Sacramento River Temperature Management*

Reclamation performed a cold water power bypass test on August 29 to determine the feasibility of using the bypass to cool Sacramento River temperatures in the late summer and early fall. At the time of the test, results indicated that the temperature of the bypass was cooler than the release temperatures from the Temperature Control Device. Reclamation discussed potential bypass scenarios with the Sacramento River Temperature Task Group to determine the potential benefits and impacts of taking the action. As discussions were occurring the week following the test, the Shasta Lake temperature profile warmed up significantly to the point that the bypass water temperature was the same as TCD water temperature released through the

powerplant and therefore eliminated the potential benefits of a cold water bypass. Ultimately a power bypass was not recommended.

#### *Temporary Urgency Change Petition (TUCP)*

DWR and Reclamation are working toward submitting a Temporary Urgency Change Petition in December to address potential issues for calendar year 2022.

#### *Emergency Drought Salinity Barrier*

The rock-filled channel closure, across West False River (WFR) from Jersey Island to Bradford Island, has been in place since June 18, 2021. To mitigate the ongoing drought effect, DWR is seeking approval to delay the removal of the barrier from fall 2021 until a future date when it is determined that the barrier is no longer needed, possibly as late as fall 2022. Currently, DWR plans to cut a notch into the barrier (about 200 feet wide and ten feet deep) in January to allow boat passage.

#### *Water Use Efficiency and Conservation*

In response to the extreme dry conditions, State Water Contractor public water agencies are taking several actions including: implementing conservation and public outreach campaigns to reduce demands; requiring mandatory/voluntary conservation actions as part of early stages of the Water Shortage Contingency Plans; enhanced rebate programs for turf replacement and efficient appliances; maximizing recovery of banked water supplies as a means to preserve carryover water to the extent possible; pursuing water transfers; refurbishing wells/fast tracking of treatment on PFAS impacted groundwater wells/Drilling new wells for recovering additional groundwater supply; pump-in programs; attempting to overcome regulatory hurdles for serving additional recycled water; re-operating conveyance systems to use other water supply sources; enacting drought rates as needed; and planning for emergency pump-back projects.

Following are examples of measures being taken by CVP and SWP water contractors and agencies to reduce water use and provide additional flexibility for drought operations.

Sacramento Water Forum and the Regional Water Authority The Regional Water Authority (RWA) issued a regional call for 15% conservation among its member agencies. Many agencies have asked for more, including the cities of Roseville and Folsom as well as Fair Oaks Water District, which have requested 20% conservation from their customers. Water-wise rebate applications have soared at several agencies, including the cities of Sacramento and Roseville, and Placer County Water Agencies, in part due to increased rebates, some of which have doubled. Some entities, like Sacramento and Roseville, are limiting irrigation to two days per week. American River water purveyors are also undertaking actions to reduce surface water diversions by shifting diversions from the lower American River to the Sacramento River, and/or shifting from using surface water to groundwater as a supply source as part of the region's plan for sustainability. In addition, Roseville is expediting two Aquifer Storage and Recovery (ASR) groundwater well projects to bolster capacity. The Water Forum continues to provide scientific expertise (e.g., water temperature modeling, fisheries, and hydrology), and consensus-based recommendations to support State and Federal agency decision-making and to protect the environment of the lower American River.

In addition to the above actions, RWA has invested in a strong media campaign to increase conservation awareness through newspaper editorials and television messaging.

Contra Costa Water District After the 2014-2015 drought, Contra Costa Water District (CCWD) officially adopted many of the temporary drought restrictions as permanent prohibitions on water use for the purpose of conserving the available water supply and preventing waste and unreasonable use. CCWD partnered with seven other Bay Area agencies to develop the Bay Area Regional Reliability Drought Contingency Plan (BARR-DCP) – funded in part by Reclamation – to approach drought mitigation and response from a regional, integrated perspective. While many of the BARR-DCP drought mitigation measures are in various stages of planning, CCWD continues to invest in a robust water use efficiency program, providing tools and resources to our customers. During this drought emergency, CCWD has asked customers to further reduce their water use and follow the prohibitions, which could result in fines for wasteful uses of water.

Friant Water Authority Landowners in the Friant Division will fallow lands as a result of water shortages while working to increase the installation of drip systems and other water saving technologies. The Friant Water Authority (FWA) recently completed an upgrade of the Supervisory Control and Data Acquisition (SCADA) system to add more efficiency and precision to operation of the Friant-Kern Canal and is working to repair all reaches of the Friant-Kern Canal to maximize the use and flexibility of available water supplies. Additionally, FWA is conducting reverse flow operations in the Friant-Kern Canal to help contractors retrieve supplies banked in Kern County and facilitating a transfer program to allow farmers to pump water into the canal and deliver it to other contractors in need.

Grassland Water District Surface water transfers are not available for refuge water supply contractors this year. Grassland Water District plans to supplement surface water reductions by operating its newly built water recapture and recirculation facility, maximizing groundwater pumping, and taking advantage of recycled water from nearby communities. The District has conserved almost all of its reduced water supply for use in the fall and winter to support migratory birds. The delayed refuge water supply demand schedule assisted in addressing CVP operational constraints. The District has issued a strict per-acre water allocation to its landowners and is working diligently to maximize efficient water use.

Kern County Water Agency KCWA and many of the SWP agricultural contractors are working closely with DWR to facilitate operational exchanges to recover banked groundwater to meet critical deliveries this year. There are also several drought planning efforts that are underway or planned such as investments in groundwater banks, canal lining projects, and investments in efficient irrigation practices. Many growers are also implementing scheduling services and technologies to optimize irrigation, or redeveloping land by removing permanent crops from service or planting crops that require less water. However, even with all this past and current investment, that still hasn't shielded growers from having to fallow land.

Metropolitan Water District Metropolitan's regional communication effort is emphasizing the critical importance of water conservation to manage supply in this extremely dry year, while

preparing for a potential dry water year in 2022. Further, Metropolitan is taking significant new actions to preserve State Water Project supplies by constructing physical improvements in its distribution system, and also funding a cost offset program to shift delivery pathways and locations to its member agencies to allow greater use of Colorado River Aqueduct and regionally stored water supplies. As part of its ongoing commitment to conservation and local supply development, Metropolitan provided more than \$43 million in incentives in 2019-2020 to fund recycling, conservation, and groundwater recovery projects and programs, with accumulative investment of \$1.5 billion in those efforts since 1990.

Sacramento River Settlement Contractors Scheduled diversions and transfers to other Sacramento Valley Water Users for 2021 are 1,117,000 AF, an amount that is less than the volumes diverted and transferred in 2015. Sacramento River Settlement Contractors have reduced diversions by 170,000 AF to make water available for transfer to other areas of the State in critical need. SRSC are considering alternatives to rice decomposition water that will provide additional water savings. The Sacramento River Settlement Contractors are working to establish, in cooperation with Reclamation, an emergency groundwater pumping program of up to 60,000 AF to further reduce diversions and address the migratory needs of the Pacific Flyway. SRSC diversions and transfers are scheduled to be 64% of Settlement Contract totals, an additional 11% voluntary reduction from the 75% shortage provisions. Weekly coordination between CVO and the contractors on diversions maximizes efficiencies to retain as much water in Shasta as possible while meeting demands.

San Joaquin River Exchange Contractors Water Authority The member agencies of the San Joaquin River Exchange Contractors Water Authority are operating under their contractual shortage provision and are taking voluntary actions to further reduce demands during the critical summer period. Such actions include maximizing the use of groundwater wells owned by the member agencies, incentivizing landowners to use private well resources within the districts, and maximizing water conservation efforts. Through these efforts, the Exchange Contractors are able to voluntarily reduce demands by 25 TAF and are working to further conserve water over the summer months. Additionally, Exchange Contractors are reducing demands in order to make water available for transfer through groundwater substitution or fallowing to other south of Delta agencies who are in critical need of water supplies.

San Luis Water District By investing in real-time soil and evapotranspiration (ET) monitoring systems plus deficit irrigation, farmers in San Luis WD have been able to conserve approximately 14% more water than in 2014 and 2015. From water year 2020 to 2021, San Luis WD landowners rescheduled the maximum allowed in San Luis Reservoir to reduce demand in 2021. San Luis WD is developing partners to facilitate time-of-year swaps where Ag contractors borrow water from M&I contractors in the summer months and repay the borrowed water to the M&I contractors in the fall and winter months.

Tehama-Colusa Canal Authority The 17 water service/repayment CVP Water Districts/Contractors that make up the Tehama-Colusa Canal Authority (TCCA), a 150,000-acre service area spanning four counties along the westside of the Sacramento Valley, received an initial allocation of 5%, which was then reduced to zero. It is estimated that

approximately 50,000 acres of annual crops will be fallowed as a result of the drought conditions. Significant acreage throughout the service area planted to permanent crops will rely heavily on groundwater. Also, many of the TCCA districts are purchasing expensive alternative water supplies from senior water right holders via crop idle and groundwater substitution transfers to avoid crop failures and long term or permanent damage to their orchards. The TCCA and the Districts are managing all water supplies as tightly as possible under the dire circumstances.

Valley Water Valley Water is committed to increasing conservation and has over 20 conservation programs to reduce demand on existing water supplies. Valley Water has maintained a call for conservation since 2014, including asking municipalities to implement water waste restrictions. Since then, residents and businesses have reduced their average annual water use by 20% compared with 2013, reaching a peak of 28% compared with 2013 levels achieved in 2016. On June 9, 2021, the Valley Water Board of Directors declared a water shortage emergency condition and called for a 15% reduction in water use compared to 2019. Valley Water activated its Emergency Operations Center for drought on June 16<sup>th</sup>. Valley Water worked with the County of Santa Clara, local municipalities, and every water retailer within our service area to encourage them to take actions to help achieve the 15% reduction target. Since then, the County declared a local emergency relating to extreme drought conditions and most cities within Santa Clara County have taken action as well. These actions have ranged from adopting local emergency resolutions to advocating for voluntary water use reduction among constituents, as well as activating city-wide Water Shortage Contingency Plans to immediately implement mandatory water-use restrictions.

Public outreach emphasizes being drought-ready and promotes Valley Water's many conservation programs. The multilingual spring water conservation campaign includes digital ads, print advertorials, social media posts, and radio ads. A new summer campaign is utilizing focus groups and market research to encourage water conservation further.

Valley Water has committed to increasing program incentives and funding for the Landscape Rebate Program from \$1 to \$2 per square foot. Valley Water has expanded its partnership with Our City Forest, a local nonprofit organization, that helps residents convert their lawns into drought-tolerant landscapes as part of the Lawn Buster Program; a program designed for low-income community members, veterans, people with disabilities, and residents age 60 and over. Additionally, Valley Water doubled the maximum rebate amount for its Water-Efficient-Technologies Rebate Program to \$100,000 for implementing water conservation projects in commercial and institutional facilities. Valley Water continues to respond to water waste complaints and recently upgraded the reporting platform to make it easier and more efficient for constituents to report water waste.

Valley Water's newest program, the online Shopping Cart, is an incredibly popular tool that allows Santa Clara County homes and businesses to easily order free water-efficient tools like efficient showerheads and faucet aerators. In May, the Fixture Replacement Program launched, replacing 1.6 gallon per flush toilets and inefficient showerheads/faucet aerators with high-efficiency fixtures.

Water Forum The American River water purveyors are currently undertaking or considering actions, consistent with the Sacramento Water Forum Agreement, to reduce surface water diversions from the American River by shifting diversions from the lower American River to the Sacramento River, and/or by shifting from using surface water to groundwater as a supply source as part of the region's plan for sustainability. In addition, based on a resolution passed by the Regional Water Authority Board (adopted on May 13, 2021), water purveyors are requesting that customers voluntarily reduce water use by 10% in an effort to conserve water. The Water Forum will continue to provide scientific expertise (e.g., water temperature modeling, fisheries, and hydrology) and consensus-based recommendations to support State and Federal agency decision-making and to protect the environmental of the lower American River.

Westlands Water District This year Westlands Water District is implementing all Best Management Practices in the District's Water Management Plan, including drip irrigation, relying on conserved/stored water from last year through the peak irrigation season, and participating in programs to acquire water through groundwater substitution, land fallowing, and reservoir releases, from willing sellers. Westlands anticipates its farmers will fallow approximately 210,000 acres this year because of insufficient water supplies. Additionally, annual crops like tomatoes and permanent crops, like almonds, are being abandoned in the field and will not receive additional water or be harvested. Further, Westlands has prohibited all outdoor use of municipal and industrial water, including landscape watering, to protect health and safety and has requested all water users voluntarily reduce all indoor consumption by 25%. Westlands has also supported a delay in the delivery of water it purchased from willing sellers within the Sacramento Valley, so that water can remain in Shasta Reservoir to improve the cold-water pool and provide benefits in the late summer and fall to winter-run and fall run salmon.

### Next Steps

DWR and Reclamation continue to coordinate real-time and anticipated summer and fall operations with the SWRCB, CDFW, NMFS, USFWS, and other stakeholders through various weekly and monthly meetings.



## MODELED FORECAST RESULTS

### For the 2021 Drought Action Plan

#### Dry Hydrology

<b>END OF MONTH STORAGES (TAF)</b>				
RESERVOIRS	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Shasta	1,047	884	884	885
Folsom	227	202	181	172
Oroville	792	758	698	695
New Melones	853	807	804	803
<b>MONTHLY AVERAGE RELEASES (CFS)</b>				
RIVERS	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Sacramento	6,800	6,100	3,350	3,250
American	550	550	550	550
Feather	1,250	950	950	950
Stanislaus	300	577	200	200
<b>DELTA SUMMARY (CFS)</b>				
	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Sac River at Freeport	7,750	6,800	5,800	6,050
SJ River at Vernalis	400	700	350	400
Computed Outflow	3,300	3,600	4,000	4,000
Combined Project Pumping	2,800	2,950	1,900	2,300