Final Water Shortage Contingency Plan

June 2021

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Executive Summary

This Water Shortage Contingency Plan (WSCP, Plan) is a detailed proposal for how the Santa Clarita Valley Water Agency (SCV Water) intends to act in the case of an actual water shortage condition. SCV Water's mission is to provide responsible water stewardship to ensure the Santa Clarita Valley (Valley) has reliable supplies of high-quality water at a reasonable cost. Reliable, high quality water service is critical to an economically and environmentally vibrant community. This plan is part of good management policy even if SCV Water's water supply appears to have a low probability of shortage conditions, as it improves preparedness for droughts and other impacts on water supplies. The WSCP anticipates a water supply shortage and provides pre-planned guidance for managing and mitigating a shortage. The WSCP allows real-time water supply availability assessment and structured steps designed to respond to actual conditions, to allow for efficient and effective management of any shortage with predictability and accountability.

Certain elements of the WSCP are required by California Water Code (Water Code), including five specific response actions that align with six standard water shortage levels based on SCV Water's water supply conditions and shortages resulting from catastrophic supply interruptions. The WSCP also contains SCV Water's procedures for conducting an annual water supply and demand assessment, which is the written decision-making process for determining supply reliability each year, along with the data and methods used to evaluate reliability.

As part of its Urban Water Management Plan (UWMP), Water Code Section 10632 requires Suppliers to prepare and adopt a WSCP that consists of each of the following elements, which comprise the sections in this plan document:

1. Water Supply Reliability Analysis
2. Annual Water Supply and Demand Assessment Procedures
3. Six Standard Water Shortage Stages
4. Shortage Response Actions
5. Communication Protocols
6. Compliance and Enforcement
7. Legal Authorities
8. Financial Consequences of WSCP
9. Monitoring and Reporting
10. WSCP Refinement Procedures
11. Special Water Feature Distinction
12. Plan Adoption, Submittal, and Availability

The WSCP is a stand-alone document created separately from the UWMP and can be amended, as needed, without amending the UWMP. This 2020 WSCP is included in SCV Water's 2020 UWMP submitted to the California Department of Water Resources (DWR) by July 1, 2021.

Section 1: Water Supply Reliability Analysis

This section summarizes (a) the findings related to water system reliability conducted pursuant to Water Code Section 10635, and (b) key issues that may create a shortage condition when looking at the SCV Water's water asset portfolio. Specifically, this section summarizes SCV Water's supply analysis and its water reliability findings in UWMP Section 7 (Reliability Planning and Drought Risk Assessment), recognizing that the WSCP can be a stand-alone document that will be submitted with the 2020 UWMP.

The UWMP Act requires urban water suppliers to assess water supply reliability that compares total projected water use with the expected water supply over the next twenty years in five-year increments. The Act also requires an assessment for a single dry year and multiple dry years. This section presents the reliability assessment for SCV Water's service area. SCV Water's goal is to deliver a reliable and high-quality water supply for their customers, even during dry periods.

Reliability of Water Supplies

Each water supply source has its own reliability characteristics. In any given year, the variability in weather patterns around the state may affect the availability of supplies to the Valley differently, depending on whether supplies are from local sources or are imported from other parts of the state. The Valley is typical in terms of water management in southern California; local groundwater supplies are used to a greater extent when imported supplies are less available due to dry conditions in the north, and larger amounts of imported water supplies are used during periods when northern California has wetter conditions. This pattern of "conjunctive use" has been in effect since State Water Project (SWP) supplies first came to the Valley in 1980. SWP and other imported water supplies have supplemented the overall supply of the Valley, which previously depended solely on local groundwater supplies.

To supplement these local groundwater supplies, SCV Water contracts with DWR for delivery of SWP water, providing an imported water supply to the Valley. However, the variability in SWP supplies affect the ability of SCV Water to meet the overall water demands for the service area. While each of the Valley's available supply sources has some variability, the variability in SWP supplies has the largest effect on overall supply reliability.

Groundwater

In accordance with the groundwater operating plan for the basin, groundwater supplies for all uses from the Alluvial Aquifer are planned to be in the range 30,000 to 40,000 AF. With long-term pumping for municipal purveyors estimated to be approximately 30,800 AFY at buildout during normal years and about 26,100 AFY during dry-years. Available supplies are substantially less in the near-term as supplies have been curtailed because of PFAS contamination and transfers of pumping associated with the Newhall Ranch development have not yet been fully realized. In 2021 SCV Water estimates 12,000 AF

of alluvial supplies will be available. Recovery of Alluvial supplies over the next decade is shown in Tables 4.8B and 4.8C (2020 UWMP Appendix E). The basin operating plan for the Saugus Aquifer provides for 7,500 AFY-15,000 AFY in normal years and up to 35,000 AFY during dry-years. In the near-term supplies are limited due to Perchlorate contamination and the need to construct additional dry-year well capacity. Currently, SCV Water estimates recovery capacity at about 15,000 AFY. Tables 4.9B and 4.9C (2020 UWMP Appendix E) indicate when additional yield can be accessed from the Saugus Aquifer.

Recycled Water

The existing and projected availability of recycled water supplies, including various factors having the potential to affect the amounts and availability of those supplies, are discussed in detail in the UWMP.

SCV Water has constructed Phase I of the Recycled Water Master Plan (RWMP, 2016), which can deliver up to 1,700 AFY of water to the Valencia service area. Deliveries of recycled water began in 2003 for irrigation water supply at a golf course and in roadway median strips, however demand from permitted customers have limited deliveries of recycled water. In 2015, recycled water deliveries were 450 AF.

Phase 2 is planned to expand recycled water use within Santa Clarita Valley and consists of four projects currently in various stages of design. The Draft RWMP Update projects providing up to 10,054 AFY of treated (tertiary) recycled water suitable for reuse on golf courses, landscaping and other non-potable uses in Santa Clarita Valley to the extent those supplies are available. Subsequent long-term estimates of available supplies based on recycled water being generated from new development estimate about 9,000 AFY new recycled water being available. All of the available recycled water in the peak summer months would be used to meet demands that include existing Phase 1 projects, Phase 2 expansions currently in design, planned developments (including Newhall Ranch and Vista Canyon) and future nearby customers served by extending off the Phase 2 system.

State Water Project Table A Supply

For this Plan, the availability of SWP supplies to SCV Water was based primarily on DWR's *Delivery Capability Report* (DCR). For the four hydrologic conditions evaluated here, the SWP deliveries to SCV Water were taken from DWR's analyses based on the following: average/normal year based on the average deliveries over the studies' 82-year historical hydrologic study period (1922-2003), single-dry year based on a repeat of the worst-case actual allocation of 2014, four year dry period based on a repeat of the historical drought of 1931-1934, and three-year dry period based on a repeat of the historical drought of 1990-1992.

While contractors may store their unused Table A supply as carryover, and additional types of water such as Article 21 water may periodically be available from the SWP, further the recent Water Management Tools amendment allows for single and multi-year water transfers among SWP Contractors, these are not included as supplies in Section 6 because of the uncertainty in their availability. However, to the extent SCV Water is able

to make use of these supplies when available, SCV Water may be able to improve the reliability of its SWP supplies beyond the values used in this section.

Flexible Storage Account

Under the Supply Contracts with DWR for SWP water, the contractors that share in the repayment of Castaic Lake may access a portion of the storage in that reservoir. This accessible storage is referred to as "flexible storage." The contractors may withdraw water from flexible storage, in addition to their allocated Table A supplies, on an as-needed basis. A contractor must replace any water it withdraws from this storage within five years of withdrawal. As one of the three contractors sharing in the repayment of Castaic Lake, SCV Water has access to this flexible storage. Its share of the total flexible storage is currently 4,684 AF.

Storage and Water Banking Program

SCV Water has invested in flexible supply programs that can be accessed to avoid water shortages and shortage costs to its customers in the Valley. Sometimes termed "water banking," these shortage mitigation investments allow water to be stored in a groundwater basin to be accessed when needed to avoid water shortages. These "smart" investments in storage programs improve the diversity of SCV Water's supply portfolio and cost-effectively improve water service reliability throughout our community. SCV Water currently has two banking programs. The Rosedale-Rio Bravo Bank can store up to 100,000 AF and can currently recover 10,000 AFY. The Semitropic Bank can store 35,000 and recover 5,000 AFY.

Storage programs and supplies that were considered for supply evaluation are as follows.

- Rosedale-Rio Bravo Banking Program – increased take capacity: Under SCV Water 's existing contract with RRBWSD for this program, SCV Water has the right to develop four additional extraction wells, which would bring the firm recovery capacity under this program from 10,000 AFY to 20,000 AFY. This increase would provide additional dry year access to the water SCV Water stores in this existing program, which has a maximum storage capacity of 100,000 AF (and is currently full). This additional take capacity was included in the 2015 UWMP as a planned banking supply increase, assumed in that document to be available by 2030.
- Semitropic Banking Program – Newhall Land: Newhall Land participates in a groundwater banking program with Semitropic in which it has a pump-back capacity of 4,950 AFY and a storage capacity of 55,000 AF. Newhall Land entered into this banking program in anticipation of the development of Newhall Ranch. Under its agreement with Semitropic, Newhall Land may assign its rights to this program to SCV Water. However, the terms for such an assignment have yet to be determined. In the 2015 UWMP, it was assumed that Newhall Ranch would be developed and that Newhall Land's rights in this banking program would be transferred to SCV Water at the time of development, and that prior to that time the take capacity under this program would be available to SCV Water.

This program, including interim access to take capacity, was excluded from the initial assessment of Scenario C.

- New groundwater bank: In the 2015 UWMP, additional groundwater banking programs with a take capacity of 5,000 AFY were assumed to be developed, with supplies assumed to be available after 2045. No specific programs were identified in the UWMP, although a number of groundwater banking programs in various stages of planning and development, or new programs yet to be defined, could provide this supply.
- Willow Springs Water Bank, Antelope Valley: This project is located in eastern Kern County, in the northern portion of the Antelope Valley. It is adjacent to both the East Branch of the California Aqueduct and the Los Angeles Aqueduct. This program is active and is seeking participants.
- Antelope Valley-East Kern Water Agency High Desert Water Bank: This is a project proposed by the Antelope Valley-East Kern Water Agency (AVEK), a SWP wholesaler located in the Antelope Valley area of southeastern Kern County and northern Los Angeles County. The proposed groundwater banking project would be developed and operated by AVEK, and would be located adjacent to the East Branch of the California Aqueduct. As proposed, the project would have a total storage capacity of 280,000 AF, with recharge and recovery capacities of 70,000 AFY. AVEK is currently conducting pilot testing, and the environmental analysis for the proposed project is in process. AVEK is actively seeking banking partners.
- Palmdale Regional Groundwater Recharge and Recovery Project: The Palmdale Water District (PWD), a SWP wholesaler, is implementing a large-scale groundwater recharge and recovery project located adjacent to the East Branch of the California Aqueduct. The project will obtain water for recharge from the SWP and also from recycled water produced by the Los Angeles County Sanitation District Palmdale Water Reclamation Plant. SCV Water could be a potential partner in the project by banking excess supply in wet years and recovering that supply in dry years.
- Saugus Formation Aquifer Storage and Recovery (ASR) Program: The feasibility of implementing an ASR program in the Saugus Formation has been evaluated through field testing and groundwater modeling simulations. Reconnaissance-level analysis indicates that such a program is feasible. In addition to water reliability benefits, a Saugus ASR program could provide other operational benefits (e.g., higher groundwater levels) and local storage.
- Groundwater Replenishment with Recycled Water: The feasibility of using recycled water for a groundwater recharge program in the eastern portion of the Alluvium has been evaluated in the Water Supply Measures Reconnaissance Study and further refined in the draft RWMP. A recycled water recharge project could provide operational benefits (e.g., higher groundwater levels in the Alluvium), increased recycled water usage and greater water recovery from the Alluvium in eastern parts of the groundwater basin. Conceptual design for the

project is an extension of the proposed Phase 2A recycled water pipeline, with approximately 5,000 AFY of recycled water from the Valencia WRP discharged to a recharge basin adjacent to the Santa Clara River, and average recovery of 3,500 AFY from downstream Alluvial wells.

Supply and Demand Comparisons

The available supplies and water demand for SCV Water's service area was analyzed to assess the region's ability to satisfy demands during four scenarios: a normal water year, a single-dry year, and two multiple-dry year periods in the 2015 UWMP.

PFAS

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals, which includes PFOA, PFOS and GenX. For more than 70 years, PFAS have been manufactured and used in a variety of industries worldwide. According to the Environmental Protection Agency, exposure to certain PFAS can lead to adverse health effects in humans. (Source: https://yourscvwater.com/pfas/).

SCV Water quickly responds to changing guidelines and regulations from the State Water Resources Control Board – Division of Drinking Water. Under the current response levels, last lowered in February 2020, 17 of the 42 active agency wells have been removed from service. This accounts for approximately 45 percent of the Agency's groundwater supply. In 2019, groundwater accounted for 28% of the total water used in the SCV Water service area. SCV Water will continue to rely on its diverse water supply portfolio, including imported and banked water, to minimize supply impacts to customers. SCV Water's first PFAS treatment facility opened in fall of 2020, restoring about one-third of the impacted groundwater, with others to follow by summer 2021. (Source: https://yourscvwater.com/pfas/).

Perchlorate

SCV Water prioritizes the delivery of clean water that meets all state and federal health standards. Long-term work toward the remediation of perchlorate contamination, first discovered in 1997 in several Saugus wells, continues at the present time. The objective of the perchlorate restoration and containment plan has been to stop the migration of the contaminant plume and restore the lost well capacity through a pump and treat method. SCV Water's Saugus Perchlorate Treatment Facility (SPTF) has been online since 2011, and a second Perchlorate Treatment Facility came online in 2017, and together these facilities have now treated a combined amount of almost 32,000 AF. The ability to pump the Saugus Formation at dry year levels has been historically impaired due to perchlorate contamination issues and resultant reduced production capacity. Both issues are expected to be resolved through installation of treatment and achieving containment. (Source: Adapted from 2019 Santa Clarita Valley Water Report, July 2020).

Section 2: Annual Water Supply and Demand Assessment Procedures

Beginning by July 1, 2022, SCV Water is required to prepare and submit its annual water supply and demand assessment (referred "Annual Assessment"). The Annual Assessment will be due by July 1 of every year, as required by Water Code Section 10632.1. The Annual Assessment and associated reporting are to be conducted based on the SCV Water procedures detailed in this section of the WSCP. As required by Water Code Section 10623(a), the WSCP shall include its specific procedures, akin to its instruction manual, that describe annual steps and timing to complete the Annual Assessment, such that it can be consistently followed year-after-year, regardless of changing staff undertaking the steps:

- Decision making process
- Data and methodologies
    1. Evaluation criteria
    2. Water supply
    3. Unconstrained customer demand
    4. Planned water use for current year considering dry subsequent year
    5. Infrastructure considerations
    6. Other factors

Decision making process

This section describes the decision-making process, including functional steps, to formally approve the Annual Assessment determination of water supply reliability each year.

September

- Prepare SWP water order for upcoming year.
- Continue to track monthly water demands in service area.
- Monitor San Luis Reservoir Storage Levels including carryover storage levels for Agency and other State Water Contractors (SWC).
- Monitor NOAA precipitation forecasts.

October

- Continue to track monthly water demands in service area.
- Monitor San Luis Reservoir Storage Levels including carryover storage levels for Agency and other SWC.
- Monitor NOAA precipitation forecasts.

November

- Continue to track monthly water demands in service area.
- Monitor San Luis Reservoir Storage Levels including carryover storage levels for Agency and other SWC.
- Monitor NOAA precipitation forecasts.

- Consider early implementation of water recovery from banking and exchange programs when early water year precipitation is low and low levels of carryover water exist.
- Review DWR outage schedules for upcoming year.

December

- Continue to track monthly water demands in service area.
- Monitor San Luis Reservoir Storage Levels including carryover storage levels for Agency and other SWC.
- Monitor NOAA precipitation forecasts. Receive initial SWP allocation.
- Review DWR positional analysis (from SWC Water Operations Committee)
- Prepare alternative operating plans.
- Consider early implementation of water recovery from banking and exchange programs when early water year precipitation is low and low levels of carryover water exist or limitations of local groundwater supplies are anticipated to exist in the upcoming calendar year.

January

- Review DWR positional analysis (from SWC Water Operations Committee)
- Update alternative operating plans.
- Consider early implementation of water recovery from banking and exchange programs and investigate water purchases (transfers) when early water year precipitation is low and low levels of carryover water exist or limitations of local groundwater supplies are anticipated to exist in the calendar year.

February

- Review DWR positional analysis (from SWC Water Operations Committee)
- Update alternative operating plans.
- Consider implementation of water recovery from banking and exchange programs and water transfers when early water year precipitation is low and low levels of carryover water exist or limitations of local groundwater supplies are anticipated to exist in the calendar year.

March

- Review DWR positional analysis (from SWC Water Operations Committee)
- Update alternative operating plans.
- Consider implementation of water recovery from banking and exchange programs and water transfers when early water year precipitation is low and low levels of carryover water exist or limitations of local groundwater supplies are anticipated to exist in the calendar year.
- Seek approval of dry-year water transfers if any.

April

- Review DWR positional analysis (from SWC Water Operations Committee).
- Update alternative operating plans. Consider implementation of water recovery from banking and exchange programs when early water year precipitation is low and low levels of carryover water exist or limitations of local groundwater supplies are anticipated to exist in the upcoming calendar year.
- Seek approval of dry-year water transfers in any.

January/June

- Report to the SCV Water - Water Resources and Watershed Committee (WR Committee) and Board Status of Water Supplies (update the WR Committee monthly to bimonthly, starting in January, depending on conditions).

July/August

- Submit Annual Water Supply and Demand Assessment, July 1 each year.

Data and methodologies

This section includes the description of key data inputs and Annual Assessment methodologies used to evaluate the water system reliability for the coming year. In general, SCV Water follows the state DWR determination of "dry" years, as this is directly related to SWP Table A supply availability. Figure 2 illustrates this Shortage Evaluation Process.

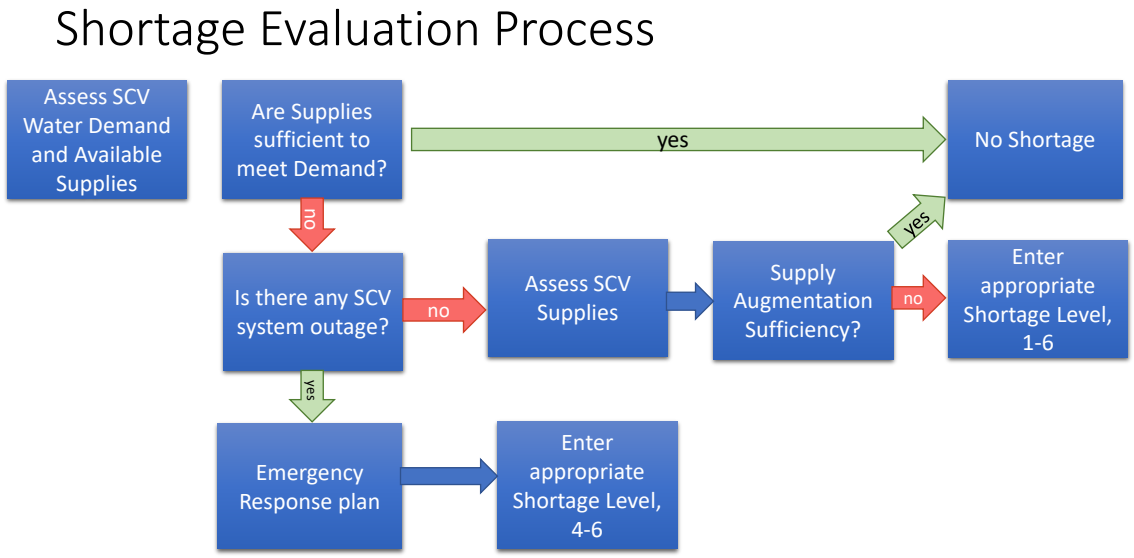

Figure 1: Shortage Evaluation Process

1. Evaluation criteria

The following local and statewide documents and data sources form the evaluation criteria that SCV Water will use for each Annual Assessment:

- SCV Water demand forecast

- Local and imported operations constraints, local groundwater/import demands from each system (collected in September for following calendar year estimates)
- DWR monthly operations report documents (includes snowpack data, DWR positional analysis (allocation forecasts), San Luis Reservoir storage forecasts, streamflow forecasts, and weather updates (Nov-June)
- State Water Table A Allocation ("Notice to Contractors")
- Banking program balances
- Exchange program balances
- SCV precipitation

2. Water supply

The following summarizes the portfolio of water supplies SCV Water relies on to provide reliable service.

Alluvial Groundwater – Use the quantification numbers referenced in the UWMP tables chapter 3 for total amount available with and without PFAS wells each year moving forward (not completed yet). Operations provides an estimate of alluvial groundwater production on a monthly basis for each year. This estimated information is provided in September before the annual assessment year. This information is based on historical monthly demands from each area and includes any operations outages anticipated for the year.

Saugus Groundwater – Use the quantification numbers referenced in the UWMP tables chapter 3 for total amount available each year (not completed yet). Operations provides an estimate of Saugus groundwater production on a monthly basis for each year. This estimated information is provided in September before the annual assessment year. LAWWD 36 also provides an estimate of their monthly Saugus production demands annually. This information is based on historical monthly demands from each area and includes any operations outages anticipated for the year.

Recycled Water – Use the urban plan tables for recycled water estimates and double check with operations to verify amount each year as this production ramps up into the future.

State Water Table A allocation – Range is 0-100%, total Table A supply is 95,200 AF and based on % allocation issued by state throughout the year. This allocation is issued around November prior to the year of the Water Supply Assessment (starts low and ramps up or down depending on winter conditions). In October prior to the Water Supply Assessment year, SCV Water provides DWR with a range of scenarios for our imported water needs based on different allocations (100%, 60%, 50%, 30%, 15%). SCV Water monitors the change in allocation through to the final allocation which could be issued anytime between April and June depending on conditions. Low allocations indicate use of Dry Year Water supplies. Higher allocations could indicate potential surplus conditions which lead to other potential water management options like increased storage at banking programs, increased carryover storage at San Luis Reservoir, transfer of

excess SWP or BVRRB water supplies, and deliveries to water exchange programs with other contractors.

Buena Vista Rosedale-Rio Bravo Water Supply – This water source provides 11,000 AFY. This is a firm water supply that does not change from year to year. Delivery based on the agreement for this water supply is 1,100 AF each month March-December. In the water supply assessment, we would utilize this water locally in dry conditions, and as describe above, look at selling this supply to other Agencies in wet conditions.

Article 56c Water Supply – This water supply is extremely variable from year to year. In dry years it can be a critical source of water to supplement low imported Table A supplies. In wet years, this water is generally not used, or available. This water is utilized within the Water Supply Assessment in the first few months (Jan-April) to help meet imported water demands if available. It is also conserved as needed in anticipation of consecutive dry year scenarios.

Rosedale-Rio Bravo Water Storage District Banking Program – This water supply is classified as a Dry Year water supply and is used to supplement imported water needs in dry years. Annual recovery capacity for this supply is 10,000 AFY, dependent on available water storage balances for the SCV Water program. The water can be delivered throughout the year as requested, with monthly recovery capacity limitations dependent on operations at the RRB Facility. More water is generally available in the Spring, Fall and Winter months. SCV Water makes decisions to use this water based on early dry Winter conditions, dry water operations forecasts from DWR, potential low SWP Table A allocation, reduced local groundwater supply conditions, and or increased imported demands. Preliminary order for this water supply must be submitted to RRB by Feb. 15th and final request by May 1 each year.

Semitropic Stored Water Recovery Unit Banking Program – This water supply is classified as a Dry Year water supply and is used to supplement imported water needs in dry years. Annual recovery capacity for this supply is 5,000 AFY, dependent on available water storage balances for the SCV Water program. The water can be delivered throughout the year as requested with monthly recovery capacity limitations dependent on operations at the Semitropic Facility. Minimal water deliveries are available through the summer months, with greater deliveries available in the Fall and Winter months. SCV Water makes decisions to use this water based on early dry Winter conditions, dry water operations forecasts from DWR, potential low SWP Table A allocation, reduced local groundwater supply conditions, and or increased imported demands. Recovery request are due May 1st each year, and storage requests are due by April 15th.

Yuba Accord Water – This water supply is utilized in dry years to supplement lack of SWP Table A supplies. It is based on an agreement that allows the Agency to purchase transferable and exportable surface water. This water is only available in dry years when there is transfer capacity through the Delta available. The total amount of water supply is variable each year. Reports on Yuba supply availability are provided at the DWR

Operations monthly meetings starting in March. Through 2025, average supply available to SCV Water is about 1,000 AF in dry years.

State Water Contractors Dry Year Water Transfer Program – This is an opt in program available for SCV Water if they are in need of supplemental dry year water supplies. This water is only available in dry years when there is transfer capacity through the Delta available. The total amount of water supply is variable each year. Negotiations for this water supply start in January, and deliveries occur in late summer-fall. Delivery amounts for the Agency depend on cost per acre-foot, participation from other agencies and need.

Water Exchange Programs – These programs provide additional imported water supplies, used in below normal or normal years. The water is not generally available in dry years to supplement lack of water supplies. Deliveries of this water can occur when requested throughout the year if the exchange partner is in agreeance. Current exchange program water is available with a SWP Table A allocation of 30% or higher.

Flexible Storage Account – This is an emergency supply of water for the Agency which is stored in Castaic Lake. The total available water is 6,060 AFY through 2025 and 4,680 AFY thereafter. This water can be used as needed but must be returned within 5 years of use. SCV Water can use any amount at any time, there are no limitations on this.

Nickel Water – This water supply is owned by Five Point (also known as Newhall Land) and is available for purchase in dry years with agreement from Five Point. The amount available each year is 1,607 AFY.

Newhall Land Semitropic Water Storage District Banking Program – This water supply is based on Newhall Land's contract rights to store and recover water from this program. The amount available each year is up to 4,950 AFY. This water supply is available for purchase in dry years with agreement from Five Point.

3. Unconstrained customer demand

SCV Water uses the Decision Support System (DSS) model to estimate unconstrained customer water demand based on sociodemographic and land use data. Unconstrained demand is the Agency's expected water needs for the coming year and may include real-time adjustments to account for factors including weather, prior-year conditions, additional demand estimates, or other factors regarding land use and customer water use patterns known by the Agency.

4. Planned water use for current year considering dry subsequent year

As SCV Water plans for the current year, it evaluates several different scenarios for the current year, ranging from a 100% SWP Table A allocation down to a 5% SWP Table A allocation. In the lower allocation scenarios, the different supplies sources are distributed throughout the operating plan to preserve sufficient supplies for the following year, assuming the worst-case scenario, "Single Dry Year" with a 5% State Water Project Table A allocation. First, it evaluates local groundwater supplies to evaluate available groundwater and adjust imported water needs appropriately (source UWMP tables for

different dry year scenarios for Alluvial and Saugus groundwater supplies in Chapter 3). Specifically, it would modify the use of our Article 56c supplies, banking program supplies, and its Flexible Storage account to make sure it has adequate supplies available for a consecutive Single Dry Year.

5. Infrastructure considerations

In September, Operations provide estimates of imported and groundwater demands to Water Resources for the upcoming water supply assessment. Infrastructure capability considerations are included in this analysis. For example, operations will take into account the schedule for PFAS well recovery in addition to any known outages. Infrastructure capabilities are constantly monitored by operations and water resources staff and communicated if adjustments in water supplies needed are required throughout the year. When there are unexpected infrastructure complications, operations, water resources, engineering and management meet regularly to monitor and manage water supplies decisions as needed.

6. Other factors

The following are locally applicable factors that can influence or disrupt supplies, along with other unique local considerations that are considered as part of the Annual Assessment:

- Construction projects
- DWR planned outages and maintenance at Castaic Lake and other reaches of the CA Aqueduct
- Permitting request delays to get wells back online
- Dry conditions locally can reduce alluvial groundwater supplies
- Agreement coordination delays can influence imported water deliveries
- Demand fluctuations with weather changes
- Fires, earthquakes
- Electrical outages
- Water quality, locally or imported
- Equipment failures

Section 3: Six Standard Water Shortage Levels

SCV Water has developed response action **stages** that correspond to the DWR defined six standard water shortage **levels** (up to 10-, 20-, 30-, 40-, 50-percent, and greater than 50-percent shortage compared to the normal reliability condition). SCV Water's response actions are divided by stages in the WSCP ordinance to meet the severity of the impending shortage level.

The six standard water shortage levels correspond to progressively increasing estimated shortage conditions (up to 10-, 20-, 30-, 40-, 50-percent, and greater than 50-percent shortage compared to the normal reliability condition) and align with the response actions SCV Water will implement to meet the severity of the impending shortages.

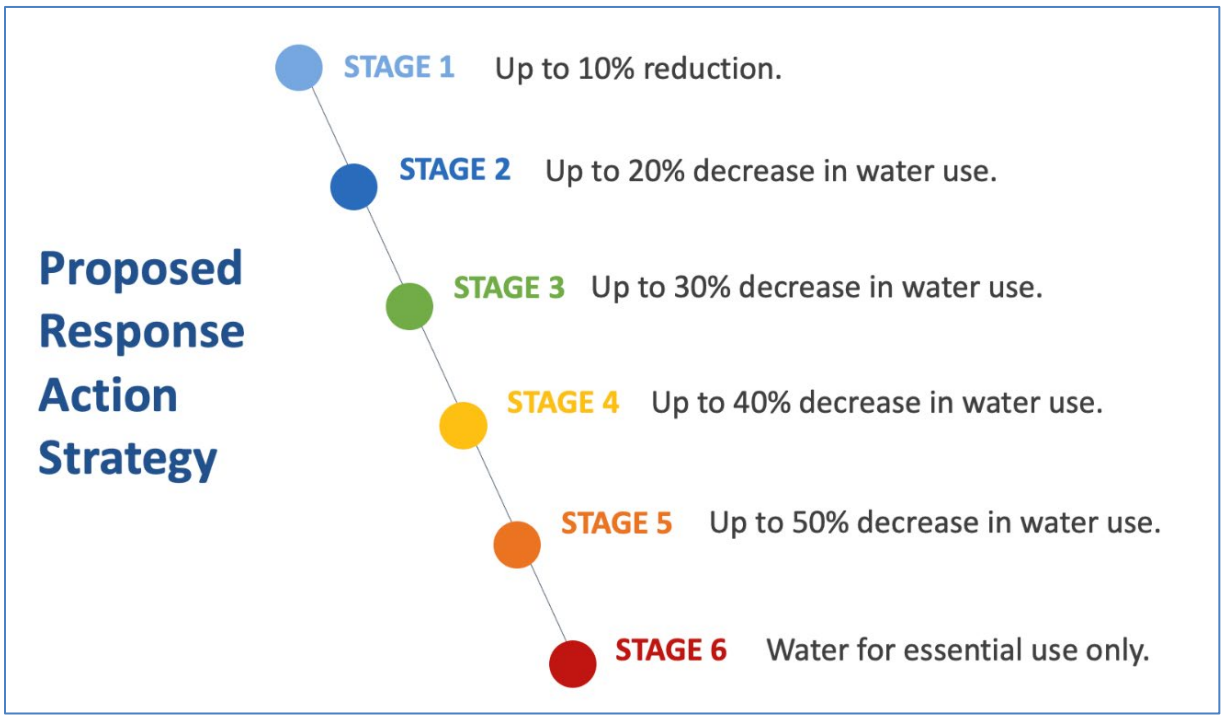

Figure 2: Proposed Response Action Strategy

SCV Water will take an adaptive performance-based approach to its response at all of the water shortage levels. If performance monitoring detects a lack of equilibrium between available supply and expected customer demand, the agency will adapt its approach. To illustrate, SCV Water can adaptively increase activity in public education and awareness to mitigate demand load. SCV Water builds credibility with its customer base through targeted messaging and collaboration. These approaches have been successful in large drought periods in the past without the use of fines, which can be reserved for extreme cases. All of the indicators will be closely monitored and responses will be assessed based on real-time conditions.

Timing of demand response actions will be a key consideration, given different lags between initiated actions and the customer response time. Close monitoring will allow SCV Water to have the lead time to implement response actions in time for needed demand adjustments. Demand response actions can take several weeks to several months to get traction and to move the behavior of a community.

Timing of supply response actions is not as uncertain, given there is not the need to motivate customer behavior, yet it requires careful sequencing and planning to achieve reliability given the various local and imported supply, storage, and transmission infrastructure. SCV Water will closely monitor production numbers and monthly billing as indicators providing visibility into current conditions. In summary, SCV Water will utilize lots of tracking to see what response is needed and adapt in the moment.

The **monitoring framework** provides the tools and process to determine the existence and severity of a drought or water shortage. This framework will rely on SCV Water regularly monitoring numerous data sources, interpretation of real-time conditions and prediction of future supply.

There are five primary components to the monitoring framework.

- Hydrologic conditions
- Imported water availability
- Local groundwater levels
- Banking and transfer availability
- Local demands

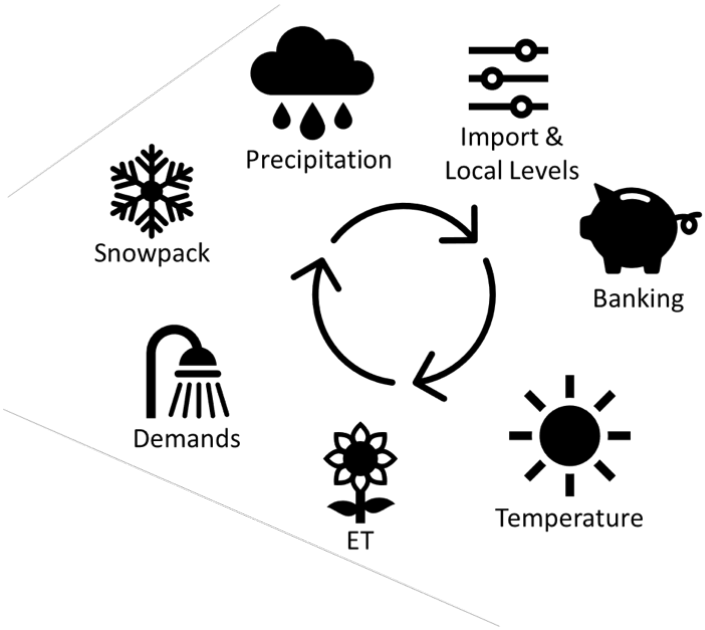

Figure 3: Monitoring Framework

The assessment looks at current and future projected water supplies as compared to current and projected water demand. Should there be a downward shift in available water supplies or an increase in customer demand, SCV Water will determine the severity of the change, the categorized stage level, and then determine the required response.

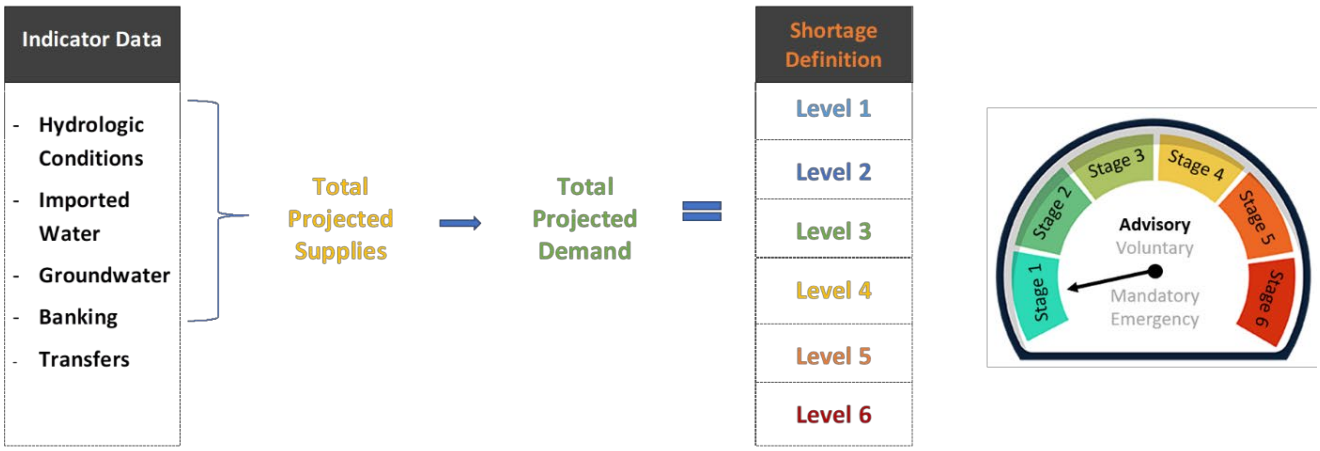

Figure 4: Indicator Data and Shortage Stages

Stages will be defined based on the calculated supply-demand ratios for the service area. The water shortage stages and descriptions are shown in Figure 4 and Table 1 below. These stages will be used to help the Water Shortage Taskforce identify the most appropriate responses for the anticipated shortages. The stages are in compliance with the 2018 state legislation (SB 606 and AB 1668), which now requires water shortage plans to be standardized and include six stages of water shortage severity.

Table 1: Drought Stages

Shortage Stage:	Stage Descriptions:	Triggers:
Stage 0	Normal Conditions	No water shortages anticipated.
Stage 1	Water Shortage	Voluntary up to 10% decrease in water use.
Stage 2	Moderate Shortage	Voluntary up to 20% decrease in water use.
Stage 3	Significant Shortage	Voluntary up to 30% decrease in water use.
Stage 4	Critical Shortage	Mandatory up to 40% decrease in water use.
Stage 5	Emergency Shortage	Mandatory up to 50% decrease in water use.
Stage 6	Catastrophic Shortage	Water for essential use only.

Section 4: Shortage Response Actions

This section presents SCV Water's locally appropriate "shortage response actions" as required by Water Code Section 10632 (a)(4). These include a broad range of supply augmentation responses, customer-class or water use-specific demand reduction initiatives, system infrastructure and operations responses, and increasingly stringent water use prohibitions. We align response actions to the six shortage levels in the Response Plan outlined below.

The overall response strategy SCV Water uses during shortage periods follows the same logical extension of normal operations which balances supply augmentation strategies with conservation progress and demand management. Priority dispatch is designed into SCV Water shortage response actions. Priority dispatch is a well-known principle in networked utilities industry. Lowest cost resource alternatives are base loaded and more expensive flexible resources are dispatched later on an as-needed basis. These principles apply to prioritize the Shortage Response Actions.

What are the characteristics of Shortage Response Actions that would determine an early or late dispatch priority on an action in response to a shortage? The first characteristic is cost: lower-cost actions should be selected for dispatch first. Another important characteristic might be the certainty of result: actions that generate more certain results should be prioritized over actions that were more speculative. Another characteristic would be operational feasibility: actions that can be implemented quickly need to be.

As a result, supply augmentation is the first shortage response action. Implemented prior to calls for demand reduction: shortage response actions involving customer demand reduction impose shortage costs on SCV Water customers. These customer shortage costs, though they do not appear as direct financial costs to SCV Water, do appear as very real costs to SCV Water customers. The purpose of the plan is to minimize the effect of a shortage of water for customers in the Valley. Though described as customer shortage costs, the impact on customers can equally be described as the avoided benefits from having water available.

Motivated by the need to minimize customer shortage costs, a priority for protecting customer end uses of water emerges as shown in Table 2.

Table 2: Order of Prioritization of Water Uses

Prioritized Water Uses
1. Health and Safety – interior residential and firefighting
2. Commercial, Industrial, and Institutional – maintain economic base, protect jobs
3. Permanent Crops – takes 5 to 10 years to replace
4. Annual Crops – protect jobs
5. Landscaping – direct water to trees and shrubs
6. New Demand – beyond construction projects already approved

4.1. Supply Augmentation

This section specifies SCV Water's locally appropriate supply augmentation actions, as required by Water Code Section 10632 (a)(4)(A). As described in Section 1 Supply Reliability Analysis, SCV Water has invested in creating a diversified portfolio of water supply assets that include flexible supply options for dry years. The current dry year supplies potentially available for supply augmentation to mitigate shortage are outlined in Table 3.

Table 3: Supply Augmentation

Dry Year Supplies	Amounts Available	Comments
Article 56C (Carryover Supplies SWP)	varies each year	Used before other programs, but portions saved in case of consecutive dry years
Existing Banked Programs	0-15,000 AFY	RRB - 10,000 AFY, Semitropic SWRU 5,000 AFY
Saugus Groundwater	amounts vary	Pump more water locally if available
Yuba Water Accord Agreement	0-1,000 AFY	Water Purchase in Dry Years only
State Water Contractors Dry Year Transfer Program	0-3,000 AFY	Water Purchase in Dry Years. Not guaranteed amounts
Nickel Water	0-1,607 AFY	Water Purchase with agreement
Newhall Land Banking	0-4,950 AFY	Water Purchase with agreement
Flex Storage	0-6,060 AFY	Emergency Storage in Castaic Lake, available amount of 4,680 AFY beginning in 2025

The selection of flexible (dry year) supplies will be determined on a real-time, case by case basis depending on the circumstances discerned by SCV Water's supply and demand assessment and the drought monitoring process.

4.2. Demand Reduction

With growing populations and the inevitability of future drought cycles, SCV Water's overarching goal is to create a water efficient region that can successfully withstand future water shortages without hardship.

SCV Water has been arduously working to re-shape customers' attitudes about water sustainability and their personal role in achieving water shortage resiliency. Through education, messaging, and programs, SCV Water has been driving change, however, customers still have a way to go to fully make the transition. A significant percentage of customers have made significant equipment and lifestyle changes at their properties, but

though significant water conservation and efficiency opportunities persist. Regional water sustainability can be achieved only when:

1. Customers understand the value of water & the unique conditions of the Santa Clarita Valley.
2. Customers have shortage-sustainable properties prior to emergency conditions.
3. Customers experience no water deprivation hardship during a drought cycle or water shortage due to the sustainable landscape design of their properties and their water-consuming equipment.

While striving for full water efficiency as the goal, SCV Water understands challenges persist. With this knowledge, SCV Water recognizes that water savings, during droughts or other water shortages, will need to be driven through an escalation in marketing, increased programming, and enhanced incentives that rise as water shortage stages advance.

The goals of the Response Plan are to:

- Increase the speed that response actions can be rolled out by pre-planning.
- Reduce workload by providing a blueprint for deployment of strategic actions as water shortage stages are declared.
- Provide recommendations on the optimal measures, activity levels, incentives, and services that will drive water savings according to need.
- Act as a starting point for creating a final plan of action during a water shortage event. The finalized plan will include adjustments from customer input, new technologies, grants, or other circumstances.

The plan is devised to balance *customer incentives and programs* with *prohibitions and penalties*. This balance between "carrot and stick" will give SCV Water the flexibility to achieve optimal conservation through engagement and education while enticing customers to move to long-term market transformation through program participation. Enforcement would then serve as a "backstop" the agency could implement when conservation performance fails to achieve the respective water shortage level targets.

Types of Response Actions

There are many response actions available to SCV Water. These include supply augmentation, escalation of customer messaging content and frequency, expanded outreach channels, enhanced water efficiency incentives and programs, and as necessary, water usage restrictions.

- **Supply Augmentation**
  Water supply augmentation includes water storage programs, where water supplies are stored in groundwater basins in wet years and removed in years of need, and water transfers (bulk purchases of water).

- **Expanded Outreach**
  Customer attitudes and expectations have changed dramatically over the past decade, driven by consumers who have higher demands for expanded outreach vehicles. It is a customer-centric world and water agencies are competing for attention. This requires a modern approach to outreach including social media and influencer marketing.

- **Programs**
  Water efficiency programs provide customers with the means and guidance to lower their properties' water usage. Customer-friendly programs, substantial incentives, direct installation options and strong support services drive stronger response rates. The higher the services and incentives; the higher the customer response.

- **Restrictions**
  Watering restrictions further reduce water usage while reinforcing the message of community importance and "doing your part". If the reasoning is well communicated, this message can be highly effective in securing additional water savings and constitutes a powerful tool for agencies.

Response Action Process

Once the monitoring framework indicates that the region has reached a specific stage of water shortage condition, several actions will occur.

First, the Response Taskforce will assemble.

The Response Taskforce is the organizational group empowered to:

1. Create the Response Plan blueprint.
2. During water shortage stages, finalize strategic response actions.
3. Manage the implementation of response actions, according to plan.
4. Monitor supply and demand performance.
5. Adapt response plan and activity accordingly.

The taskforce is comprised of representatives from SCV Water management, conservation team, public affairs, and other public entities in the Valley.

The taskforce will make recommendations about the level of program and services, restrictions, and messaging to customers. These recommendations will be brought to management for approval.

The group will review the proposed actions set forth in the existing plan and make modifications as necessary. The plan was intended to be flexible and changeable. Modifications to the plan might include a change in incentive levels or program delivery mechanisms. There may also be a new water-saving technology that should be offered to

customers. The taskforce might be able to secure additional grant funding, as well. Once the action plan is finalized and approved, the taskforce will advise the agency and SCV Water will manage the implementation of the programs, penalties, and communications plan.

An overview of the response process is below:

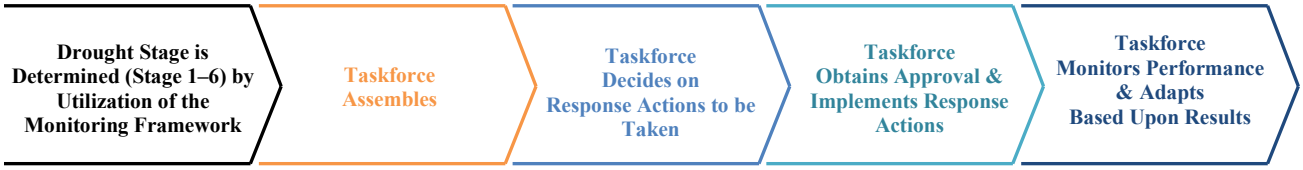

Figure 5: Response Action Process

Response Action Objectives & Strategy

The objectives of the Response Plan are to integrate the response actions into a cohesive whole that improves the effectiveness of each component. The plan's objectives are to:

- Outline programs that are highly appealing to customers.
- Provide targeted marketing and communications for programs and restrictions.
- Guide escalation of response actions as water shortage stages increase.
- Allow for a consistent regional rollout that reduces customer confusion, raises response, and increases savings per household.
- Ensure communication, marketing, programs, and restrictions are interconnected and support each other in achieving water savings goals.

SCV Water's overall strategy is straightforward, ***prioritize water waste and high-savings opportunities.***

Figure 6: Response Plan

Interconnectivity of Response Actions

The Plan's strategy and tactics are devised to effectively communicate, motivate, and gain participation from customers in ever-increasing stages. There is an interactivity between these strategic components that, when performed effectively, creates synergy and heightened response. This happens when multiple, successful marketing initiatives combine to create an effect greater than the sum of the individual parts.

Quality targeting drives better outreach, which in turn creates a larger community of people. These people become influencers and they help agencies to "sell" the programs, services, and messages to others in the community. When rebates and direct installation is added, response increases even further. And lastly, increased restriction and penalties will ultimately drive savings up. When the Plan functions in this synergistic fashion, full goal attainment is achievable.

Figure 7: Interconnectivity of Response Actions

Table 4 aligns the shortage response actions to each shortage stage. Note that the Ordinance Sections 3 and 4 contain recommendations and restrictions that are in place even when there is no shortage, and what is described below is in addition.

Table 4: Water Shortage Contingency Plan Stages

Water Shortage Contingency Plan Stages		
Water Shortage Stage	**SCV Water Response Actions**	**Customer Actions**
Water Shortage Stage 1: (Voluntary - up to 10% reduction)	Groundwater/Banking/Transfers	Practice Voluntary Conservation
	Program: Lawn Replacement Rebates	Consider Participation
	Program: Smart Controller and Irrigation Rebates--Online Store	Consider Participation
	Program: Home Surveys	Consider Participation
	Program: Irrigation Tune-up and Leak Detection Device Incentives	Consider Participation
	Messaging importance of water efficient property to prepare for future shortages	Practice Voluntary Conservation
	Outreach to increase Lawn Replacement Program and Smart Irrigation	Consider Participation
	Watering restrictions in Section 4 of the Ordinance become mandatory; continue general (non-shortage) Section 3 recommendations in the Ordinance	Comply with SCV Water Waste Provisions
Water Shortage Stage 2: Moderate Shortage (Voluntary - up to 20% decrease in water use)	Groundwater/Banking/Transfers	Practice Voluntary Conservation
	Programs remain the same	Consider Participation
	Messaging Watch Condition "Moderate Shortage"	Practice Voluntary Conservation
	Begin profiling, targeting, messaging high potential customers	Practice Voluntary Conservation
	Escalate efforts at compliance with general recommendations in Section 3 and restrictions (Mandatory >=Stage 1) listed in the Ordinance.	Comply with SCV Water Waste Policy
	Communicate, ask “everyone to do their part to save”	Practice Voluntary Conservation
Water Shortage Stage 3: Significant Shortage (Voluntary - up to 30% decrease in water use)	Groundwater/Banking/Transfers	Practice Voluntary Conservation
	Programs with rebates remain the same	Consider Participation
	Program: Virtual irrigation controller programming assist.	Consider Participation
	Program: Direct installation of smart irrigation controllers and nozzles	Consider Participation
	Program: Increase Home Surveys	Consider Participation
	Messaging Watch Condition "Significant Shortage"	Practice Voluntary Conservation
	Continue profiling, targeting, messaging high potential customers	Engage

Water Shortage Contingency Plan Stages		
	Introduce influencer marketing (role models, respected community members, active HOAs)	
	Continue escalated efforts at compliance with general recommendations in Section 3 and restrictions (mandatory >=Stage 1) listed in the Ordinance.	Comply with SCV Water Waste Policy
Water Shortage Stage 4: Severe Shortage (Mandatory - up to 40% decrease in water use)	Groundwater/Banking/Transfers	Practice Mandatory Conservation
	Programs: Continue and increase incentives for nozzles and controllers	Consider Participation
	Program: Continue virtual irrigation controller assist	Consider Participation
	Messaging Watch Condition "Emergency, Significant Shortage"	Practice Mandatory Conservation
	Expand targeting to include mid- and high-water customers	Respond to Targeted Outreach
	Ramp up influencer marketing	Engage
	Additional staff for expanded communication and enforcement	Comply with SCV Water Waste Policy
Water Shortage Stage 5: Critical Shortage (Mandatory – up to 50% decrease in water use)	Groundwater/Banking/Transfers	Practice Mandatory Conservation
	Program: Continue virtual irrigation controller assistance	Consider Participation
	Program: Increase incentives and direct installation	Consider Participation
	Suspend Lawn Replacement Program promotions	Consider Independent Action
	Messaging "Critical Condition" and “Urgency”	Practice Mandatory Conservation
	Restrictions: implement emergency alerts and media coverage	Comply with SCV Water Waste Policy
Water Shortage Stage 6: Super Critical Shortage (Mandatory – greater than 50% decrease in use and water for essential use only)	Groundwater/Banking/Transfers	Practice Mandatory Conservation
	Programs: Only offer leak detection and repair programs	Consider Participation
	Suspend all landscape & irrigation programs	Consider Independent Action
	Messaging "Super Critical Shortage"	Practice Mandatory Conservation
	Crisis messaging; Announce Water for Essential Use Only	Practice Mandatory Conservation
	Restrictions: implement emergency alerts and media coverage	Comply with SCV Water Waste Policy

Strategy per Water Shortage Level

Tactics for shortage stages will expand as drought levels escalate. SCV Water will increase staffing capability, add more customer support, and provide a higher level of program incentives and services as increased water shortage stages are declared.

At **Level Zero**, a non-shortage level, programs and incentives will continue to be offered to customers at current levels. During this time, the goal will be to encourage and incentivize customers to create drought sustainable properties in advance of an emergency. The focus will be on turf replacement programs and customer education offerings.

Once a water shortage enters a specific Level, the taskforce will assemble to finalize the Response Plan for that Level and begin the implementation process for customer targeting and increased outreach.

For all shortage levels, SCV Water's priority is to leverage existing storage and water banking investments to result in supply augmentation.

- At **Level 1,** the goal is up to a 10% water use reduction. The proposed plan is to target high use potential customers, customers that are using water inefficiently. The proposed programs would likely stay the same. The outreach will enforce the importance of water efficiency as a preparedness for heightened shortages and continue voluntary restrictions.

- The goal for **Level 2**, or a moderate shortage is up to 20% reduction in water use. The proposed focus for Level 2 is to expand activity for irrigation equipment direct installation programs and ramp up outreach providing customers with understanding of a Moderate Shortage is and asking everyone to do their part.

- The goal for **Level 3**, or a significant shortage, is to achieve up to a 30% decrease in water use. Tactics for Level 3 may require incentive increases for landscape and irrigation rebates and direct installation programs, expansion in outreach to customers so there's an understanding of what a significant shortage is as well as escalation of water waste prohibition and enforcement.

- The goal for **Level 4**, or a critical shortage, is up to mandatory 40% decrease in water use. The Level 4 proposal is for SCV Water to increase incentives for measures like sprinkler nozzles and smart controllers, expand targeting to included mid-range water users, expand outreach so the community knows there is a critical shortage condition and expand water waste enforcement.

- The goal for **Level 5**, or an emergency condition, is a mandatory 50% reduction in water use. Level 5 may require SCV Water to heighten the message of urgency and put forth a community call to action. Additionally, there will be an increase in

implementation of emergency alerts and expanded news and social media outreach notifying customers of up to a 50% decrease in water use.

- During **Level 6,** or a catastrophic shortage, includes mandatory reductions greater than 50%. In this event, it's likely only indoor plumbing and property leak detection programs will be offered. It is proposed that all landscape & irrigation programs be suspended and SCV Water would implement messaging, announcing water for essential use only. SCV Water would conduct strict enforcement of water waste restrictions.

On the following pages are snapshots of the programs, messaging, and activities for each drought stage:

Level 1 Strategy

Goal: Up to voluntary 10% reduction. Customers create drought sustainable properties prior to emergency conditions. Consider increasing incentives if activity does not increase.
Supply Augmentation: SCV Water deploys groundwater/banking/transfers as deemed appropriate to reduce customer shortage request.
Programs:

- Lawn Replacement Rebates
- Smart Controller and Irrigation Rebates – Consider Online store
- Home Surveys
- Consider Irrigation Tune-up Program and Leak Detection Device Incentive

Work to increase response for the Lawn Replacement Program and smart irrigation incentives through increased outreach and a higher level of linkage to support services.
Messaging: & Outreach: Reinforce the importance of creating/maintaining a water efficient property as preparedness for future water shortages.
Restrictions: Continue with current restrictions.

Level 2 Strategy

Goal: Up to a voluntary 20% decrease in water use.
Supply Augmentation: SCV Water deploys groundwater/banking/transfers as deemed appropriate to reduce customer shortage request.
Programs: Programs remain the same.
Messaging & Outreach: Define Watch (Moderate Shortage) Condition and utilize in general customer messaging.
Begin profiling customers and micro-target high potential customers, utilizing messaging that will best resonate with those customers.
Restrictions: Consider escalation of local water waste prohibitions.
At this level, SCV Water will communicate to customers that there's a need to increase water efficiency levels and will ask everyone to do their part to save.

Level 3 Strategy

Goal: Voluntary/Mandatory 30% decrease in water use.[1]
Supply Augmentation: SCV Water deploys groundwater/banking/transfers as deemed appropriate to reduce customer shortage request.
Programs:

- Rebate programs remain the same.
- Provide virtual irrigation controller programming assistance.
- Consider direct smart irrigation installation programs (controllers and nozzles).
- Increase the volume of Home Surveys performed.

Messaging & Outreach: Define Warning (Significant Shortage) Condition to use in general customer messaging.
SCV Water continues profiling and micro-targeting of high potential customers. Introduce influencer marketing (role models, respected community members and active HOAs).
Restrictions: Escalation of water waste prohibitions and enforcement. Increase regional outreach regarding prohibitions.

Level 4 Strategy

Goal: Up to a Mandatory 40% decrease in water use.
Supply Augmentation: SCV Water deploys groundwater/banking/transfers as available to reduce customer shortage costs.
Supply Augmentation: SCV Water deploys groundwater/banking/transfers as deemed appropriate to reduce customer shortage request.
Programs:

- Continue base programs and increase incentive amounts for high efficiency nozzles and smart controllers.
- Continue virtual irrigation controller programming assistance and smart irrigation direct installation programs.

Messaging & Outreach: Define Emergency (Severe Shortage) Condition and utilize as general customer messaging.
SCV Water expands profiling and micro-targeting to include mid-range water users as well as high-water use customers. Ramp up influencer marketing.
Restrictions: Hire additional local staff and set up operations for expanded customer communication and enforcement administration.

[1] Note that the Water Shortage Task Force would be responsible for recommending voluntary or mandatory status to SCV Water management which would then seek Board approval to implement mandatory actions and advise when voluntary.

Level 5 Strategy

Goal: Up to a Mandatory 50% decrease in water use.
Supply Augmentation: SCV Water deploys groundwater/banking/transfers as available to reduce customer shortage costs.
Programs:

- Continue virtual irrigation controller programming, increased incentives, and smart irrigation direct installation.
- Suspend Lawn Replacement Program promotions.

Messaging & Outreach: Define Critical Condition and use as general customer messaging.
SCV Water strengthens the message of urgency and the community call to action.
Restrictions: Increase penalties, implement emergency alerts and new media coverage.

Level 6 Strategy

Goal: Mandatory 51+% decrease in water use.
Supply Augmentation: SCV Water deploys groundwater/banking/transfers as available to reduce customer shortage costs.
Programs:

- Only offer leak detection and repairs programs.
- Suspend all landscape & irrigation programs.

Messaging & Outreach: Define Catastrophic (Super Critical Shortage) Condition and utilize as general customer messaging.
Implement crisis messaging, announcing essential use only.
Restrictions: Conduct stringent enforcement of restrictions.

Table 5 summarizes the Water Shortage Contingency Plan Strategy per Shortage Stage/Level.

Table 5: Summary of Water Shortage Contingency Plan Strategy per Shortage Stage/Level

Shortage Stage	Goal	Demand Reduction Actions		
		Potential Programs	**Outreach**	**Restrictions***
No Shortage	Create Resilient Properties Prior to Shortage	Current Programs Lawn Replacement Irrigation Rebates Support & Education Services	Educate Importance of Efficiency as Preparedness for Shortages	Voluntary & General Water Use Efficiency Recommendations,
STAGE 1	up to 10% Reduction	Programs Remain the Same	Increase Outreach Reinforce Importance of Efficiency Target inefficient and high use	Continue with Voluntary General Water Use Efficiency Recommendations, Prohibited Water Waste Measures
STAGE 2	up to 20% Reduction	Consider Addition of Sprinkler System Tune-up and Leak Detection Programs	Educate about ***Moderate Shortage*** Request Everyone to do Their Part	Applicable General Water Use Efficiency Measures, Prohibited Water Waste Measures, Additional Measures (3 Days per Week Watering, 10 Minutes per Watering Station, Time of Day Restrictions)
STAGE 3	up to 30% Reduction	Add Virtual Sprinkler Timer Adjustment Assistance	Educate about ***Significant Shortage***	Applicable General Water Use Efficiency Measures, Prohibited Water Waste Measures, Additional Measures (Irrigation limited to 3 Days per Week April – October, 2 Days per Week November – March, 10 Minutes per Watering Station, Time of Day Restrictions)
		Consider Direct Installation of Irrigation Devices	Increase Outreach	

			Add Mid-range Users at Target	
STAGE 4	up to 40% Reduction	Increase Incentive Amounts for Sprinkler Nozzles & Smart Timers	Educate about ***Critical Shortage***	Applicable General Water Use Efficiency Measures, Prohibited Water Waste Measures, Additional Measures (Irrigation limited to 2 Days per Week, 10 Minutes per Watering Station, Time of Day Restrictions)
			Increase Outreach	
STAGE 5	50% Reduction	Suspend Lawn Replacement Program	Educate about ***Emergency Shortage***	Increase Penalties & Enforcement, Applicable General Water Use Efficiency Measures, Prohibited Water Waste Measures, Additional Measures (Irrigation limited to 1 Day per Week, 10 Minutes per Watering Station, Time of Day Restrictions, No Potable Water for New Turfgrass Installations, Pool and Spa Fill Restrictions, No New Potable Water Service, No Potable Water Use for Grading, Potable Water May Not Be Used to Wash Vehicles, Except at Commercial Facilities that Recycled Water)
		Continue Installation & Support Programs	Strengthen Urgency Message	
			Send Emergency Alerts	
Stage 6	50+% Reduction	Suspend All Programs Except Leak Detection & Repairs	Educate about ***Catastrophic Shortage***	Conduct Strict Enforcement, Applicable General Water Use Efficiency Measures, Additional Measures (No Irrigation Watering)
			Announce Water for Essential Use Only	

***Note:** Restrictions are summarized in Table 5 and are subject to change. Actual provisions are listed and updated in the Water Conservation and Water Shortage Ordinance.

4.3. Operational Changes

A number of operational changes may be utilized at various shortage levels, and SCV Water utilizes a flexible approach whereby it looks for opportunities that meet supply needs at a given period of time. The following are examples:

- Advanced Metering Infrastructure (AMI) Customer Portals can be utilized to convey water shortage messaging, water use within billing cycles, and potential alerts.
- Clusters of intermittent use can be identified and coordinated to maintain optimal supply management (e.g., turnout constraints and rapid response customers).
- Well off-line periods can be reduced by fast tracking maintenance, or otherwise coordinating services.

4.4. Additional Mandatory Restrictions

SCV Water will consider mandatory restrictions if needed in addition to demand response actions mentioned above. These will be flexibly deployed for each on an as-needed basis. Table 6 provides a ranking of each water waste prohibition by stage. Note these are only the water waste measures, and they do not include other activities regulated in the ordinance (number of watering days, time restrictions, etc.).

Table 6: Water Waste Prohibitions--Ranking by Stage

			Stages						
			V = Voluntary M = Mandatory						
Water Waste Measures	**Outdoor/ Commercial**	**Savings Estimates**	**1**	**2**	**3**	**4**	**5**	**6**	**Notes**
Allowing runoff onto non-irrigating areas when irrigating with potable water.	Outdoor	Up to 50%	M	M	M	M	M	M	Irrigation runoff is a significant contributor to water waste in scv. With mostly clay soils in the valley, which absorb water at .2 inches/hour, and with average sprinklers applying ~3 inches/hour, watering times should be limited to no more than 3-5 minutes. However, this can be increased to 30 minutes when using High Efficiency Nozzles 20 minutes for drip.
Using hoses with no shutoff nozzles to wash cars.	Outdoor & Commercial	100-250 gallons per event	M	M	M	M	M	M	SCV Water provides free Water Efficiency Kits to customers upon request which include HE Showerheads, Hose Nozzles, HE Kitchen and Bathroom Aerators, Toilet Leak Detection Dye Tablets, Drip Gauges, and Flow Rate Bags to measure volumes. Consider working with carwashes that recycle water to promote additionally efficiency opportunities during a shortage.
Using potable water to wash sidewalks, driveways, and hardscapes	Outdoor & Commercial	100-250 gallons per event	M	M	M	M	M	M	SCV Water can provide brooms as part of its Drought Residential Check-Up service. Historically, customers have provided feedback on issues like washing dog feces, house cleaning and etc.
Using potable water in decorative water features that do not recirculate water	Outdoor	~80% of annual ET X surface area	M	M	M	M	M	M	Utilizing recirculating pumps on fountains is a smart feature and improves efficiency by eliminating single-pass use.

Irrigating Outdoors during and within 48 hours following measurable precipitation (quarter-inch or more)	Outdoor	500+ gallons per event	M	M	M	M	M	M	There are 3 weather stations in the Valley and these should be used in the agency's measurement. If all three stations report >.25 inches, the agency would enforce Stages 1-6.
Irrigation with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development, including the Model Water Efficient Landscape Ordinance updated by the State as required by AB 1881 and Executive Order B-29-15 issued by Governor Brown on April 1, 2015.	Outdoor	26% over MWELO design standards	M	M	M	M	M	M	SCV Water could monitor irrigation meters and applicable water efficiency targets.
The irrigation with potable water of ornamental turf on public street medians.	Outdoor	~40 gallons per sq. ft. per year	M	M	M	M	M	M	Most, if not all, medians were converted during the last drought. The use of potable water for turfgrass on medians provides no functional purpose.
The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased.	Commercial	4-8 gallons per load + water and ice per glass	V	V	V	V	M	M	SCV Water starts with engagement and education, increased to enforcement at higher stages.
Hotels and motels must offer their guests the option to not have their linens and towels laundered daily, and prominently display this option in each guest room.	Commercial	% of total laundry load	V	V	V	V	M	M	SCV Water starts with engagement and education, increased to enforcement at higher stages.

4.5. Emergency Response Plan

SCV Water periodically updates its Emergency Response Plan (ERP) to ensure restoration of water service for essential use in the Valley if a catastrophic supply interruption (e.g., power outage, earthquake, or other non-dry period related emergency), were to temporarily interrupt water supply. This plan is not publicly available but identifies actions to be taken if there is a catastrophic supply interruption. SCV Water staff responsible for water transportation, treatment, and distribution have established the ERP to guide assessment, prioritization, and repair of SCV Water facilities potentially damaged during such a disaster.

Catastrophic supply interruptions enter into the SCV Water determination of water supply shortages. Specific water shortage levels are not directly tied to supply interruptions as the nature of the interruption and the availability of alternative supplies can mitigate any shortage level experienced by SCV Water customers. To the extent that supply interruptions contribute toward the total SCV Water system shortage, the response actions associated with the determined water shortage level from this WSCP will apply.

4.6. Seismic Risk Assessment and Mitigation Plan

For its own facilities, SCV Water is completing a Seismic Risk Evaluation and Mitigation report that will appear as Appendix C when available. SCV Water has also contributed toward seismic mitigation on the State Water Project (SWP).

SWP Seismic Improvements
DWR's recent SWP seismic resiliency efforts have focused heavily on SWP Dam Safety. The most prominent is the joint United States Bureau of Reclamation (USBR) and DWR corrective action study of Sisk Dam which will result in a massive seismic stability alteration project, which is expected to begin construction in 2021.Similarly, Perris Dam had a major foundation modification and stability berm added to the downstream face which has resulted in the removal of the DSOD imposed storage restriction. Several analyses have been conducted on SWP dam outlet towers/access bridges which has resulted in seismic upgrades (some including the Castaic outlet tower described below are on-going). Dam seismic safety evaluations are being performed on the Oroville Dam embankment and the radial gate control structure on the flood control spillway.

At Castaic Lake DWR is undertaking a project to retrofit the bridge that provides access to the outlet tower. As part of a statewide effort to reduce seismic and hydrologic risk to SWP facilities, DWR's Castaic Dam Modernization Program begin in the fall of 2020. In its most recent inspection, the California Division of Safety of Dams (DSOD) rated Castaic Dam as fair – meaning there are no existing dam safety deficiencies that will impact the dam's functions under normal conditions. However, improvements can be made to prevent serious impacts after either an extreme weather or earthquake event. Studies indicate that the outlet structures (the large towers that allow DWR to release water from the reservoir) are vulnerable to collapse in a major earthquake. While this

would not cause the dam to fail, it would significantly reduce DWR's ability to release water reliably therefore slowing the delivery of water to customers.

Although not directly an impact on SCV Water, seismic retrofits have also been completed on 23 SWP bridges located in four Field Divisions with additional retrofits in various development stages. DWR has also updated the earthquake notification procedures and has replaced and expanded instrumentation for the SWP's seismic network.

Emergency Freshwater Pathway Description (Sacramento-San Joaquin Delta)
It has been estimated by DWR that in the event of a major earthquake in or near the Delta, water supplies could be interrupted for up to three years, posing a significant and unacceptable risk to the California business economy. A post-event strategy would provide necessary water supply protections to avert this catastrophe. Such a plan has been coordinated through DWR, Corps of Engineers (Corps), Bureau of Reclamation (Reclamation), California Office of Emergency Services (Cal OES), the Metropolitan Water District of Southern California and the State Water Contractors.

DWR Delta Flood Emergency Management Plan
The Delta Flood Emergency Management Plan (DWR, 2018) provides strategies for response to Delta levee failures, up to and including earthquake-induced multiple island failures during dry conditions when the volume of flooded islands and saltwater intrusion are large, resulting in curtailment of export operations. Under these severe conditions, the plan includes a strategy to establish an emergency freshwater pathway from the central Delta along Middle River and Victoria Canal to the export pumps in the south Delta. The plan includes the prepositioning of emergency construction materials at existing and new stockpile and warehouse sites in the Delta, and development of tactical modeling tools (DWR Emergency Response Tool) to predict levee repair logistics, timelines of levee repair and suitable water quality to restore exports. The Delta Flood Emergency Management Plan has been extensively coordinated with state, federal and local emergency response agencies. DWR, in conjunction with local agencies, the Corps and Cal OES, conduct tabletop and field exercises to test and revise the plan under real time conditions.

DWR and the Corps provide vital Delta region response to flood and earthquake emergencies, complementary to Cal OES operations. These agencies perform under a unified command structure and response and recovery framework. The Northern California Catastrophic Flood Response Plan (Cal OES, 2018) incorporates the DWR Delta Flood Emergency Management Plan. The Delta Emergency Operations Integration Plan (DWR and USACE, 2019) integrates personnel and resources during emergency operations.

Pathway Implementation Timeline
The Delta Flood Emergency Management Plan has found that using pre-positioned stockpiles of rock, sheet pile and other materials, multiple earthquake-generated levee breaches and levee slumping along the freshwater pathway can be repaired in less than

six months. A supplemental report (Levee Repair, Channel Barrier and Transfer Facility Concept Analyses to Support Emergency Preparedness Planning, M&N, August 2007) evaluated among other options, the placement of sheet pile to close levee breaches, as a redundant method if availability of rock is limited by possible competing uses. The stockpiling of sheet pile is vital should more extreme emergencies warrant parallel and multiple repair techniques for deep levee breaches. Stockpiles of sheet pile and rock to repair deep breaches and an array of levee slumping restoration materials are stored at DWR and Corps stockpile sites and warehouses in the Delta.

Emergency Stockpile Sites and Materials
DWR has acquired lands at Rio Vista and Stockton as major emergency stockpile sites, which are located and designed for rapid response to levee emergencies. The sites provide large loading facilities, open storage areas and new and existing warehousing for emergency flood fight materials, which augment existing warehousing facilities throughout the Delta. The Corps maintains large warehousing facilities in the Delta to store materials for levee freeboard restoration, which can be augmented upon request of other stockpiles in the United States. Pre-positioned rock and sheet pile are used for closure of deep levee breaches. Warehoused materials for rapid restoration of slumped levees include muscle (k-rail) walls, super sacks, caged rock containers, sandbags, stakes and plastic tarp. Stockpiles will be augmented as materials are used.

Emergency Response Drills
Earthquake-initiated multiple island failures will mobilize DWR and Corps resources to perform Delta region flood fight activities within an overall Cal OES framework. In these events, DWR and the Corps integrate personnel and resources to execute flood fight plans through the Delta Emergency Operations Integration Plan (DWR and USACE, 2019). DWR, the Corps and local agencies perform emergency exercises focusing on communication readiness and the testing of mobile apps for information collection and dissemination. The exercises train personnel and test the readiness of emergency preparedness and response capabilities under unified command and provide information to help to revise and improve plans.

Levee Improvements and Prioritization
The DWR Delta Levees Subventions and Special Projects Programs have prioritized, funded and implemented levee improvements along the emergency freshwater pathway and other water supply corridors in the central and south Delta. These efforts are complementary to the Delta Flood Emergency Management Plan, which along with pre-positioned emergency flood fight materials, ensures reasonable seismic performance of levees and timely pathway restoration after a severe earthquake. These programs have been successful in implementing a coordinated strategy of emergency preparedness to the benefit of SWP and CVP export systems.

Significant improvements to the central and south Delta levees systems along Old and Middle Rivers began in 2010 and are continuing to the present time. This complements substantially improved levees at Mandeville and McDonald Islands and portions of Victoria and Union Islands. Levee improvements along the Middle River emergency

freshwater pathway and Old River consist of crest raising, crest widening, landside slope fill and toe berms, which improve seismic stability, reduce levee slumping and create a more robust flood-fighting platform. Urban agencies, including Metropolitan, Contra Costa Water District, East Bay Municipal Utility District, and others have participated in levee improvement projects along or near the Old and Middle River corridors.

4.7. Shortage Response Action Effectiveness

The overall effect of water shortage response actions is to start with the expected unconstrained demand, apply supply augmentations and demand responses, and thereby demonstrate the level of service reliability. Table 7 provides estimates of demand response action effectiveness for each shortage stage.

Table 7: Demand Reduction Action Effectiveness

Shortage Stage	Demand Response Actions	How much is this going to reduce the shortage gap?
No Shortage	Create Resilient Properties Prior to Shortage	No Gap
Water Shortage Level 1: (Voluntary - up to 10% reduction)	Education	up to 5%
	Increased Cons. Program marketing	up to 3%
	Targeted Engagement	up to 1%
	Mandatory Prohibition	up to 1%
Water Shortage Stage 2: Moderate Shortage (Voluntary - up to 20% decrease in water use)	Education	5%
	Increased Cons. Program marketing	up to 3.5%
	Targeted Engagement	up to 10%
	Mandatory Prohibition	up to 3%
Water Shortage Stage 3: Significant Shortage (Voluntary - up to 30% decrease in water use)	Education--about Significant Shortage	5%
	Increased Cons. Program marketing--Consider Direct Installation	up to 5%
	Targeted Engagement -- Add Mid-range users	up to 15%
	Mandatory Prohibition	up to 5%
Water Shortage Stage 4: Severe Shortage (Mandatory - up to 40% decrease in water use)	Education--about Severe Shortage	up to 10%

Shortage Stage	Demand Response Actions	How much is this going to reduce the shortage gap?
	Increased Cons. Program Incentives	up to 6%
	Targeted Engagement -- Broaden	up to 15%
	Mandatory Prohibition	up to 5%
Water Shortage Stage 5: Critical Shortage (Mandatory - 50% decrease in water use)	Education--about Critical Shortage	up to 10%
	Suspend Lawn Replacement Programs, Continue Installation and Support Programs	up to 6%
	Targeted Engagement -- Broaden	up to 15%
	Mandatory Prohibition	up to 25%
Water Shortage Stage 6: Super Critical Shortage (Water for essential use only)	Educate about Catastrophic Shortage	up to 10%
	Conservation: Suspend All Programs Except Leak Detection & Repairs	less than 1%
	Announce Water for Essential Use Only	up to 15%
	Mandatory Prohibition	up to 25%

Table 8 provides estimates for how much emergency restrictions of all outdoor uses would reduce 2020 demand using estimates from SCV Water's DSS model.

Table 8: Estimated Demand Reduction from Restricting all Outdoor Water Uses

Estimated Demand Reduction from Restricting all Outdoor Water Uses					
Reduction in Outdoor Water Use	**Total Demand, Predicted 2020 (AF)**	**Estimated Indoor Use (AF)**	**Estimated Outdoor Use (AF)**	**Reduced Demand (AF)**	**Estimated Reduction in Total Demand (%)**
Base	68,900	26,182	42,718	0	0
25%	58,221	26,182	32,039	10,680	15.5%
50%	47,451	26,182	21,359	21,359	31.0%
75%	36,862	26,182	10,680	32,039	46.5%
100%	26,182	26,182	0	42,718	62.0%
Source: SCV Water DSS model predicted demand and estimated indoor/outdoor for 2020					

Section 5: Communication Protocols

Following the record-breaking drought of 2012-2016, SCV Water's legacy agencies prioritized expansion of their water conservation and education outreach programs to emphasize water efficiency as a sustainable way of life, rather than solely a response to dry conditions or drought. Messaging has encouraged behavioral changes that can be sustained regardless of weather and uses tools and technology that can be implemented to permanently save water in homes and businesses, particularly outdoors where up to 70% of total water use occurs.

These efforts have helped solidify a conservation ethic across Southern California, supporting investments in conservation, recycling, and groundwater recovery since 1990. When combined with additional investments in storage, local supply development, and programs to increase water storage reserves in wet years, the region is better prepared to withstand future droughts. Still, in response to the challenges of climate change and other abnormal supply conditions, increased water efficiency will still be necessary. As those conditions become more prevalent, effective communication strategies and a common understanding of necessary actions between water agencies, the public, elected officials, and other key stakeholders become even more important should the district need to activate the WSCP. These relationships and communication tools must be well-established to be successful. To that end, water providers should aim to communicate to customers in the following areas:

Communication Plan Purpose
This section of the WSCP describes the basic communications strategies needed to help SCV Water effectively communicate vital information for each of the six standard water shortage levels that represent changes from normal reliability.

The six standard water shortage levels depicted in this communications plan correspond to progressively increasing estimated shortage conditions up to 10%, 20%, 30%, 40%, 50%, and greater than 50% shortage compared to the normal reliability conditions.

Key Audiences
Communicating to various stakeholders is essential during normal supply periods and becomes increasingly more involved during water shortages. Communicating to these audiences requires varying levels of involvement depending on the status of supply conditions. Feedback, research, and leveraging existing relationships are central to an effective communications plan. Staff will continue to coordinate closely with member agencies, stakeholders, and governing agencies on an ongoing basis to ensure appropriate messaging is culturally competent and provided in multiple languages to reflect the region's demographics.

Residents
- Single family homeowners
- Multi-family tenants

- Multi-family property owners

Businesses

- Commercial/Industrial/Institutional
- Homeowner Associations
- Building Industry Association and Developers
- Media Networks
- Rapid Response Network (from SCV Water's Demand Management Program)
- SCV Chamber of Commerce
- Valley Industry Association (VIA)
- Vendors/Contractors/Consultants doing business with SCV Water

Public/Community Agencies

- Educational Institutions
- Elected Officials and Community Leaders
- Community-based Organizations (CBOs): Non-profits, service clubs and fraternal organizations
- State and Federal Representatives and Staff
- City of Santa Clarita
- Los Angeles County
- Public Safety Agencies (Fire Department and Law Enforcement)
- Sanitation Districts of Los Angeles County
- School districts/educators/students
- Community Councils (Canyon Country Advisory Council; unincorporated areas – Castaic, Acton and Agua Dulce)
- Area Public Information Officers Coalition
- Environmental Groups (Sierra Club; SCV Hiking Club)
- Watershed Interests

Partnerships

- Water Industry – Association of California Water Agencies (state and federal); Southern California Water Committee; National Water Resources Association; Association of Water Agencies; Ventura County; neighboring water agency partners (i.e., Palmdale)
- Regulatory Agencies (California Department of Water Resources; State Water Resources Control Board; Regional Water Quality Board; etc.)
- Environmental Agencies (state and federal Fish and Wildlife)
- California Water Efficiency Partnership (CalWEP)
- Alliance for Water Efficiency (AWE)
- EPA WaterSense

Media

- Local media outlets (Signal, KHTS, SCVTV, etc.)
- Regional media (TV, newspaper, etc.)

Internal

- Agency staff
  - Office staff
  - Field staff
  - Customer service
  - Management
- Retail Divisions
- Board of Directors

Goals and Objectives
SCV Water's communications goals are rooted in the following guiding principles:

- Motivate key audiences to:
  - Increase conservation
  - Follow voluntary or mandatory water use guidelines
  - Participate in water-saving incentive programs
  - Encourage family, friends, neighbors, and colleagues to do all of the above

- Raise awareness about:
  - Water shortage and/or drought conditions
  - Water sources, supplies and reserves
  - Local, regional and state regulations

- Educate key audiences about:
  - Water supply reliability
  - Water infrastructure and delivery
  - Water quality

- Prepare the region for:
  - Varying water supply conditions
  - Escalating supply shortage levels

Customer Outreach and Engagement Tools
Conservation as a way of life remains central to messaging during normal supply conditions. Regional rebate programs, indoor and outdoor water use efficiency, investments to maintain infrastructure, emergency preparedness, local supply programs, water quality, and regional supply reliability are among some of the themes that make up a normal supply period's communications mix to encourage ongoing conservation actions. Below is a snapshot of the various strategies involved:

Education

- Website
- Social media (boosted/promoted posts – Facebook, Twitter, Instagram, YouTube, LinkedIn, NextDoor)
- Emails to customers (Constant Contact)

- Emails to local elected officials
- eNewsletters
- Media Relations (Press releases, advisories, interview, op-eds)
- FAQ sheet/Fact sheets
- ROBO Calls (all customers)
- Digital, print, and other paid media marketing
- Direct mail (bill messages/inserts, postcards, targeted letters)
- Community Events
- User class outreach
- Education outreach (school programs and gardening classes)
- Resources (conservation "how to" videos, irrigation guide)

Action

- Conservation Rebate Programs

Regulatory

- SCV Water Board Approved Ordinances
- Local/state prohibited actions (State Water Resources Control Board)

Customer Engagement Strategy / Key Communication Strategies
Our customer engagement strategy focuses on prioritizing water savings opportunities, which follows the steps/flow listed in the response plan below:

Figure 8: Response Plan

Water Shortage Communication Response Action Strategy

Water Shortage Level 1 Communications – up to 10% Reduction

This section addresses communications strategies SCV Water uses during periods of 10% water shortage conditions. In addition to the Agency's ongoing communications efforts, a 10% shortage would require the following elements:

Outreach Goal (level 1)
• Increase Outreach • Reinforce importance of efficiency

• Target inefficient and high-water use

Outreach Response:	
Protocols for customers, general public and interested parties	**Protocols for local, regional, and state government entities**
• E.g., social media posts, bill stuffers or newsletters, press releases, radio spots, television coverage, and blog posts	• E.g., formal notifications, emergency communications

Water Shortage Level 2 Communications – up to 20% Reduction

In a more severe supply shortage or demand management period, SCV Water will continue actions outlined in Level 1 communications strategies, and add the following efforts, which are designed to address a 20% percent mandatory conservation under the WSCP:

Outreach Goal (level 2)
• Educate about Moderate Shortage • Request everyone do their part • Option for customized water use reports

Outreach Response:	
Protocols for customers, general public and interested parties	**Protocols for local, regional, and state government entities**
• E.g., social media posts, bill stuffers or newsletters, press releases, radio spots, television coverage, blog posts, and customized water reports.	• E.g., formal notifications, emergency communications

Water Shortage Level 3 and 4 Communications – up to 30% or 40% Reduction

In addition to Level 2 communications strategies, the following efforts will address an even more severe shortage of 30%-40% mandatory conservation under the WSCP:

Outreach Goal (level 3)	**Outreach Goal** (level 4)
• Educate about significant shortage • Increase outreach • Add Mid-range users at target	• Educate about critical shortage • Increase outreach

Outreach Response:	
Protocols for customers, general public and interested parties	**Protocols for local, regional, and state government entities**

• E.g., social media posts, bill stuffers or newsletters, press releases, radio spots, television coverage, blog posts, and customized water reports.	• E.g., formal notifications, emergency communications

Water Shortage Level 5 – 6 Communications – 50% reduction or more

The severity of this level of the WSCP calls for immediate, extreme conservation measures and a focus on water use for health and safety only. As with previous levels, communications strategies at this level of the WSCP incorporate and build upon ongoing efforts.

Outreach Goal (level 5)	**Outreach Goal** (level 6)
• Educate about emergency shortage • Strengthen urgency message • Send emergency alerts	• Educate about Catastrophic shortage • Announce water for essential use only

Outreach Response:	
Protocols for customers, general public and interested parties	**Protocols for local, regional, and state government entities**
• E.g., social media posts, bill stuffers or newsletters, press releases, radio spots, television coverage, blog posts, and customized water reports.	• E.g., formal notifications, emergency communications

Crisis Communications – Catastrophic Shortage

In the event of a catastrophic shortage due to an infrastructure failure and/or natural disaster, SCV Water will enact its crisis communications as part of our Agency's Emergency Response Plan. The Emergency Response Plan was developed in accordance with local, regional, state and federal emergency response guidelines to ensure a coordinated effort and effective response.

Response Action Process

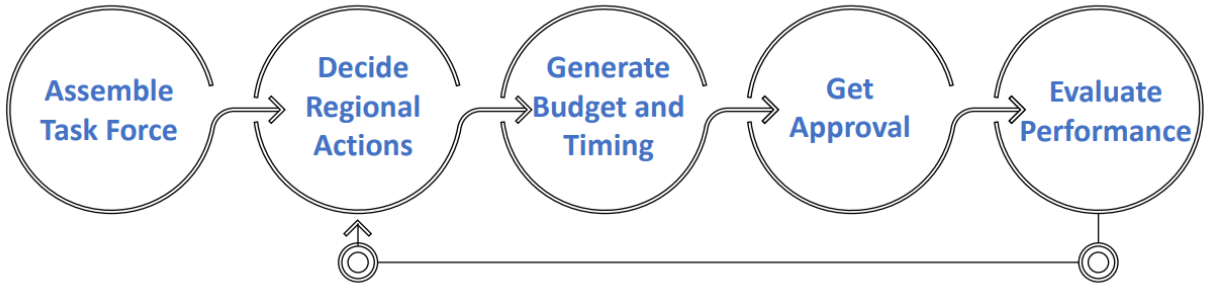

Figure 9: Response Action Process

Section 6: Compliance and Enforcement

Compliance and enforcement will be assured with the following methods:

- Letters of Noncompliance can be distributed with monthly bills to indicate water use above a designated level.
- Monthly efficiency goals can be communicated on bills (e.g., 55 gpd x 4 people + Landscape ETo).
- Water shortage service area inspections (patrols).
- Sending a general letter stating the rules for drought restrictions, with notification that patrols will drive through your area on a particular week. This way compliance is encouraged prioritizing education and engagement.
- SCV Water does not intend to utilize drought rates as a first response. Rather, financial impacts will be mitigated by planned use of reserve funds.

According to Section 11 of the Ordinance, "The General Manager and other authorized Agency representatives have the duty to enforce the provisions of the Ordinance consistent with this Section. The Agency's intent and goal in implementing the contents of this Section is to conserve water resources and generate the greatest benefit for the Agency customers during times of drought and water shortages. The Agency is committed to verifying complaints of excessive water use prior to deeming a customer is in violation and prior to taking enforcement actions. The Agency is focused on communication, education, and enforcement as necessary." Section 11 contains scaled levels of actions it can take for the first, second, third, and greater violations that start with written notices and range to escalating fines and, ultimately, flow restriction. Appeals and Waivers (Section 12) are also included.

Section 7: Legal Authorities

The Agency has the legal authority to implement and enforce its water shortage contingency plan. California Constitution article X, section 2 and California Water Code section 100 provide that water must be put to beneficial use, the waste or unreasonable use or unreasonable method of use of water shall be prevented, and the conservation of water is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and the public welfare. In addition, Water Code Section 375 provides the Agency with the statutory authority to adopt and enforce water conservation restrictions, and Water Code Section 350 et seq. authorizes the Agency to declare a water shortage emergency and impose water conservation measures when it determines that the Agency may not be able to satisfy ordinary demands without depleting supplies to an insufficient level. Lastly, the Agency is a Special Act Agency and has the authority to impose water conservation restrictions through Section 17 of the Santa Clarita Valley Water Agency Act, (SB 634, Chapter 833, 2017).

Pursuant to these authorities, the Agency is adopting the Water Conservation and Water Shortage Ordinance (WCWSO)in 2021, which prohibits the waste of water and imposes water conservation requirements on customers (see Appendix A). The WCWSO contains six stages of water shortage conditions with escalating water conservation requirements at each stage. These stages are consistent with the requirements of Water Code Section 10632(a)(3) and include the declaration of a water shortage emergency by the Agency Board of Directors depending on conditions at the appropriate stages. Such declarations will be made in accordance with Water Code Section 350. The WCWSO also provides for the enforcement of all requirements and restrictions, and has a process for appeals.

Section 8: Financial Consequences of WSCP

Implementing the WSCP will produce financial consequences to SCV Water that can be anticipated, including potential reductions in revenue and increased expenses associated with implementation of shortage response actions. Likewise, SCV Water can implement actions to mitigate these financial impacts.

Water Rate Structure

SCV Water has a uniform commodity rate within each division and a fixed monthly charge.

Use of Financial Reserves

SCV Water has two types of cash reserves, Restricted and Unrestricted. Restricted reserves are established and utilized for narrowly defined purposes as specified by legal restrictions, bond covenants, and other regulations or ordinances. The SCV Water can have restricted cash reserves for:

- Unspent Bond Proceeds
- Bond Redemption
- Water Conservation
- Grants

The utilization of unrestricted reserves is guided by the Unrestricted Reserve Fund Policy (Dec. 2020). This policy was developed to maintain prudent management of the Agency water system and to integrate the unrestricted cash reserves of the four divisions of the Agency: Regional (formerly wholesale), Newhall Water Division (NWD), Santa Clarita Water Division (SCWD) and Valencia Water Division (VWD). The policy identifies the sources of funding for such reserves, and target amounts for each reserve. The policy established reserve funds applicable to water shortage events:

Water Supply Reliability Reserve – This reserve is maintained to provide a source of funding for the extraction of water from groundwater banking programs or acquisition of other necessary water supply during dry years that will help to further mitigate rate increases.

Revenue Rate Stabilization Reserve – This reserve is maintained to provide the Agency with the ability and flexibility to avoid sharp increases in customers' rates.

Emergency Reserves – This reserve is established to provide additional liquidity in the event of a natural disaster, financial crisis, various economic uncertainties or financial hardships, loss of significant revenue sources, local disasters or capital obligations, cash flow requirements, unfunded mandates including costly regulatory

requirements and other such needs. These amounts should supplement monies received from insurance policies and by state and federal programs.

Use of these reserve funds is based on the recommendation of the General Manager and approval of the Board.

Should revenue shortfalls due to drought or shortage occur, SCV Water could consider the options of drawing from the appropriate reserve fund balances, deferring operation and maintenance and capital projects, or using water stored for emergencies. Multiple year water shortages may require consideration of additional changes to SCV Water's rate structure to maintain financial capacity to deliver reliable water supply to water customers and communities in the Santa Clarita Valley.

Potential Revenue Reductions and Expenses Associated with Activated Shortage

Potential revenue reductions and expenses caused by WSCP deployment will vary depending on shortage response actions. Customer reductions in water consumption will result in decreased revenue in shortage events. Some short run operating costs may be lower, but operations expenditures for customer outreach and shortage mitigation will be significantly higher, depending on the shortage level.

Potential Consequences of Limiting Excessive Water Use

SCV Water's Water Conservation and Water Supply Shortage Ordinance identifies specific water waste measures and includes an escalating framework aimed at greatly reducing wasteful and excessive uses of water. Should the Agency declare a water shortage stage, specific water waste activities would be prohibited. Additionally, since discouraging excessive use is a standard part of SCV Water's everyday practice, the financial consequences of prohibiting excessive use would be minimal.

Section 9: Monitoring and Reporting

SCV Water monitors and reports water supply and demand monthly, including forecasts of supply availability and weather/drought tracking. Water supply volumes from all supply sources and customer billing records are generated monthly. If the monthly goals of balancing supply and demand under shortage conditions are not being met, SCV Water can implement shortage response actions, including both supply augmentation and demand response. Baseline and demand reduction targets can utilize unconstrained demands, demand target as a percent, and weighted by month to determine success.

Section 10: WSCP Refinement Procedures

WSCP refinement procedures are used to ensure shortage risk tolerance is appropriate and that water shortage mitigation tactics are implemented when required. SCV Water plans to refine the WSCP at least every five years in conjunction with the UWMP updates, unless a shorter time frame is deemed appropriate by SCV Water.

Evaluation tracking will be implemented with each future WSCP deployment to evaluate the effectiveness of the water shortage response actions on demand levels. The evaluation logic model will document SCV Water programmatic shortage response and compare the expected percent demand reduction against actual reductions; by this means, the shortage response actions in the WSCP will be revised using the evaluation generated evidence. The success of customer outreach and communications will also be assessed to inform the next WSCP revision. The WSCP development will be considered a life cycle with the following steps:

1. Implementation
2. Monitoring
3. Performance Indicators
4. Assessment and Evaluation
5. Process to Refine and Improve the Plan
6. Adoption by the Board

Section 11: Special Water Feature Distinction

The Water Code requires us to analyze water features that are not pools or spas separately from pools and spas in the WSCP. Non-pool or non-spa water features may use or be able to use recycled water, whereas pools and spas must use potable water for health and safety considerations.

An additional difference between types of water features that is of particular consequence to SCV Water is that some water features are used as firefighting water supplies.

Thus, the Response Actions in this WSCP reflect the following considerations:

- For pools and spas, and any other water features with direct human contact, potable water is needed for health and safety considerations. And thus, restrictions on these water features are consistent with and complement restrictions on other potable water end uses.

- For water features that use recycled water, restrictions on these water features are consistent with, and complement, restrictions on other water features that use recycled water. For example, recycled water is used for golf courses and median strips in the SCV Water service area. To the extent recycled water can be used to replace scarce potable water supplies, this is incorporated in the plan.

- For water features that are part of the emergency supply for firefighting purposes, water restrictions should avoid impacting the availability of this supply. For example, lakes in the SCV Water service area that are used for fighting purposes are not subject to water use restrictions even in the highest Shortage Levels.

Section 12: Plan Adoption, Submittal and Availability

1. Staff Analysis
2. Management Review and Revise
3. Committee Review, Revise, and Approval
4. Board Adoption
5. Submit to DWR
6. Implement
7. Amend WSCP Outside UWMP Cycle

Resources and References

"2018 Santa Clarita Valley Water Report," prepared for: Santa Clarita Valley Water Agency and Los Angeles County Waterworks District 36, May 2019.

"Urban Water Management Plan Guidebook 2020," DRAFT August 2020, State of California, Natural Resources Agency Department of Water Resources, DRAFT August 2020.

"Jumpstart Water Shortage Toolkit - Tool #1: Model Water Shortage Contingency Plans," 2021 Update.
http://toolbox.calwep.org/wiki/Model_Water_Shortage_Contingency_Plans

"2015 Urban Water Management Plan for Santa Clarita Valley," Prepared for Castaic Lake Water Agency (CLWA), CLWA Santa Clarita Water Division, Newhall County Water District, Valencia Water Company, and Los Angeles County Waterworks District No. 36/Cooperating Agency. July 1, 2016, including June 6, 2017 Update.

"2017 Water Supply Reliability Plan Update," Prepared for Castaic Lake Water Agency, Final Report, 1 November 2017.

"2019 Santa Clarita Valley Water Agency, 5-Year Strategic Plan,"
https://yourscvwater.com/wp-content/uploads/2019/07/SCV-Water-2019-5-Year-Strategic-Plan.pdf

"Upper Santa Clara River Integrated Regional Water Management Plan," February 2014.
https://yourscvwater.com/wp-content/uploads/2018/03/Integrated-Regional-Water-Management-Plan_February-2014.pdf

Urban Water Management Planning, California Water Code Sections 10610-10656,
http://leginfo.legislature.ca.gov/faces/codes_displayexpandedbranch.xhtml?tocCode=WAT&division=6.&title=&part=2.6.&chapter=&article=

California's Most Significant Droughts: Comparing Historical and Recent Conditions (DWR, 2019) https://water.ca.gov/drought/

National Drought Mitigation Center – U.S. Drought Monitor https://drought.unl.edu/

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