CITY OF SACRAMENTO WATER SHORTAGE CONTINGENCY PLAN

Strategic Planning and Response Procedures for Water Supply Shortages

Background

This describes the City of Sacramento's (City) strategic planning process to prepare for and respond to water shortages. Chapter 6 of the 2025 Urban Water Management Plan (UWMP) summarizes and accompanies this plan. The description includes assessment of water shortage conditions and shortage response actions that will be implemented in the event of a water supply shortage, the City's ordinance prohibiting water waste, and the emergency preparedness and plans for catastrophic events. The City does not have a separate Water Shortage Contingency Plan (WSCP) specific to its wholesale customers. Each of the City's wholesale customers maintain their own WSCPs which will be reported in their respective Urban Water Management Plans (UWMPs). The City's Wholesale agreements address the individual availability of wholesale water to each customer based on restrictions to the City's American River water rights.

Purpose

The WSCP applies to both foreseeable and unforeseeable water supply shortage conditions. It also includes actions to be taken during natural disasters or catastrophic reductions in water supplies as well as conservation measures and actions (prohibitions, restrictions, and penalties). The City's objective of a WSCP is to protect public health, safety, and welfare, and to minimize the impacts of water supply shortages. This is done by rapidly and accurately determining the type, magnitude, and potential duration of the water system emergency, directing staff and users to the appropriate response, and monitoring demand and supply until the supply returns to normal. This WSCP, if implemented, would be enforced within the City of Sacramento's utility service area.

Compliance

The Urban Water Management Planning Act (UWMPA) requires that an UWMP include a WSCP that addresses specified issues. The Act mandates six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events. Shortage response actions must align with the defined shortage levels and include locally appropriate supply augmentation actions, demand reduction actions, operational

changes, and additional mandatory prohibitions against specific water use practices. The California Water Code requires that the City develop mandatory provisions and a draft water shortage contingency resolution as part of the UWMP to reduce water use, including prohibitions against specific wasteful practices, such as gutter flooding. The City Council would need to act on this resolution when a water shortage emergency is declared. The City Code (Chapter 13.04) includes language authorizing the City Council to declare the existence of a water shortage by resolution and impose revised and/or additional limitations and time restrictions on outdoor water use while the water shortage remains in effect.

Water Shortage Task Force Teams

In efforts to prepare for and respond to water shortage needs, two separate Water Shortage Task Force Teams were created: A Department of Utilities (DOU) Task Force Team and a Citywide Task Force Team.

The DOU Water Shortage Task Force Team will first meet when a water shortage is pending and then continue to meet every one or two weeks, until the situation has been resolved. The DOU Water Shortage Task Force Team consists of the DOU Sustainability Manager (Task Force Team Leader), Water Conservation Coordinator, DOU Senior Engineer (Long Range Water Resource Planner), DOU Water Division Manager and Water Superintendents, DOU Customer Service Manager, DOU Assistant Director, DOU Media & Communications Specialist, DOU City Attorney, and ad hoc members including DOU Director and Division Managers.

The Citywide Water Shortage Task Force Team will first meet when a water shortage is anticipated to be announced and then continue to meet at least once a month, until the situation has been resolved. The Citywide team includes all DOU Task Force members plus City Manager's Office Representative, 311 Manager, CDD Code Compliance Division Manager, Parks Operations Services Manager, Public Works Maintenance Services Urban Forestry Supervisor, Public Works Administration & Advanced Planning Program Specialist (Streetscapes), and other City Departments/Divisions as needed.

Water Shortage Task Force Roles & Responsibilities

The roles and responsibilities of the members of the task force teams are clearly defined to ensure effective coordination and response.

Task Force Team Leader (DOU Sustainability Manager)

Responsible for leadership, management, coordination, information gathering and dissemination, key support staff assignments, role clarification, and communication with a broad array of interested parties, and schedules the team meetings.

DOU Water Conservation Coordinator

Responsible for supporting the DOU Sustainability Manager with water use reduction measures, management, cost estimates to achieve demand reductions, and liaison with internal large water users (residential and commercial, industrial, etc.).

DOU Senior Engineer (Long Range Water Resource Planner)

Responsible for configuring and analyzing internal and external water usage data to assist the team with configuring the best course of action to take when comparing supply vs demand during the water shortage event, serves as liaison with adjacent Water Purveyors, and is responsible for estimating and managing long-term water supplies.

DOU Water Division Task Force Team Members

Water Division Manager & Water Superintendents are responsible for overall guidance on drinking water quality and operations, issues related to potential alternative supplies, opportunities for use of non-potable water, and overseeing frequency and intensity of leakage management, system water loss audits, and meter accuracy testing.

DOU Customer Service Manager

Responsible for customer contact, current information about the state of the program, and increasing frequency of customer meter reading.

DOU Assistant Director

Responsible for messaging and coordination with Internal City Departments.

DOU Media & Communications Specialist

Responsible for messaging, customer relations, media relations, press releases, and coordination with wholesale customers.

DOU City Attorney

Addresses any legal aspects of meetings and advises on the direction taken by team, reviews legality of program, rate changes, interagency agreements, and contracts.

Other Task Force Team Members

Have ad hoc involvement as it pertains to their Department or Division's capability to help focus in on and improve the situation at hand.

Task Force Team Focus

The Task Force teams should focus on problem assessment, mitigation strategies, and coordinating and communicating with stakeholders as needed. An incident response plan for

any water shortage condition follows a three-step process. Step 1 involves Problem Assessment including the Annual Water Supply and Demand Assessment, with Demand Analysis, Supply Analysis, and Supply and Demand Comparison. Step 2 involves Decision Making, including Review of Utility Policies, Review and Evaluate Mitigation Strategies, and Select Course of Action. Step 3 involves Plan Implementation, including Implementation Schedule and Monitoring Program.

The problem assessment includes the annual water supply and demand assessment described in Section 6. The Task Force teams should consider a wide range of shortage response actions appropriate for the water shortage condition. Shortage response actions may include demand reduction, supply augmentation, and operational modification.

The City may take operational modification actions in response to a water shortage condition. Internal operational actions may include Irrigation Restrictions (ask Parks, Streetscapes, and other City Departments to reduce their irrigation and water use to help meet reduction percentage goals), Preventative Maintenance Restrictions (ask Departments to reduce flushing and street sweeping), and Non-Essential Water Use Reduction (evaluate non-essential activities that use water and ask for reductions of use).

Responses should be appropriate and consistent. Because every situation is different, the teams should adjust their shortage response actions as the situation evolves, conditions change, and new information becomes available. In the event of a water shortage, the City must inform their customers, the general public, and interested parties, and local, regional, and state entities. In either foreseeable or unforeseeable events, timely and effective communication must occur for appropriate response to the event.

Normal City (Day to Day) Water Use Guidelines

The City Code provides the following water use guidelines during normal conditions. The City's water conservation efforts follow these guidelines. Water shall not be wasted due to leaky or faulty water fixtures (§13.04.840). Water shall not be allowed to become water waste runoff and to flow away over the surface of the ground (§13.04.850). No person shall use water for the purpose of washing down sidewalks, driveways, or parking areas except to alleviate immediate fire or sanitation hazards (§13.04.870). Washing vehicle without a shut-off nozzle is prohibited (§13.04.870). Between March 1 and November 1, residential and commercial locations bearing a street address ending in an odd number shall be permitted to irrigate only on Tuesday, and Saturday and locations bearing a street address in an even number shall be permitted to irrigate only on Wednesday, and Sunday. There shall be no water irrigation on Mondays, Thursdays or Fridays (§13.04.860). Watering is limited to just one day per week between November 1 and March 1 on either Saturday or Sunday. No watering within 48 hours of measurable rainfall (1/8") (§13.04.870).

Annual Water Supply and Demand Assessment

Water shortages may occur due to a variety of factors, including climate variability, prolonged drought, regulatory constraints, and unforeseen emergency events. A water shortage condition

exists when available potable water supplies are insufficient to meet normal demands for human consumption, sanitation, fire protection, and other essential uses. While some shortages may be anticipated through planning and monitoring, others may arise suddenly and require immediate response.

The Annual Water Supply and Demand Assessment (AWSDA) is a key planning and compliance tool used by the City to evaluate current and projected water supply reliability relative to anticipated demands. The AWSDA supports proactive drought planning and informs implementation of appropriate response actions under this Water Shortage Contingency Plan.

In accordance with State requirements (Water Code Section 10632.1), the City prepares and submits an Annual Water Shortage Assessment Report to the California Department of Water Resources (DWR) by July 1 of each year. This annual assessment evaluates supply availability for the current and following year, considering hydrologic conditions, operational constraints, and demand projections.

The AWSDA provides the basis for determining whether a water shortage condition exists and, if so, the appropriate shortage level (stage) under the WSCP. The assessment informs decision-making regarding potential declaration of a water shortage emergency, activation of response stages, and implementation of demand reduction and supply management measures.

The AWSDA process also supports coordination among City departments and regional partners to identify potential supply and demand imbalances and to ensure timely and effective response actions. The procedures and timeline for preparation of the AWSDA and Annual Water Shortage Assessment Report are included in Appendix A.

Shortage Stages and Water Use Reduction Plan

For foreseeable events, the AWSDA described above will assist the City in determining its water supply condition for the current year. The preparation of AWSDA helps the City ascertain the need to declare a water shortage emergency and water shortage stage. For unforeseeable events, the City may need to declare a water shortage emergency due to unforeseen water supply interruptions. One of the key elements of the WSCP is a water use reduction plan for each water shortage stage. The City's WSCP includes six standardized water shortage levels (Levels 1 through 6), consistent with State requirements, with each level corresponding to a defined range of supply shortage and target demand reduction.

Each stage's water reduction plan includes specific demand reduction actions and use restrictions. Implementation of these shortage response actions is cumulative; meaning that implementation of a shortage response action at higher stage shall also include implementation of all shortage response actions implemented in previous stages. Shortage conditions associated with each stage are based on the gap between water supply and anticipated water demands. The stages are numbered so that they are consistent with the State's standard water shortage stages. Matching the State's six standard water shortage stages would assure consistent messaging and meet future State reporting requirements.

TABLE 1: SIX WATER SHORTAGE STAGES

Stage	Title	Water Shortage Levels	Required Water Use Reduction
1	Water Watch	Up to 10 percent shortage	5 to 10 percent reduction
2	Water Alert	Up to 20 percent shortage	20 percent reduction
3	Water Warning	Up to 30 percent shortage	30 percent reduction
4	Water Crisis	Up to 40 percent shortage	40 percent reduction
5	Water Emergency	Up to 50 percent shortage	50 percent reduction
6	Water Health & Safety Use Only	>50 percent shortage	>50 percent reduction

Key Elements for Stages of the Water Use Reduction Plan

Table 2 summarizes the key elements for each stage of the Water Use Reduction Plan and the requested actions. The Water Use Reduction Plan and resolution are designed to be flexible so that the City can respond to the specific situation occurring at a particular time. The actions included in each stage are cumulative, meaning that if Stage 1 of the WSCP is declared, all of the shortage response actions in Stage 1 shall be implemented. Likewise, if Stage 2-6 is declared, all of the shortage response actions in stages prior to the declared stage shall be implemented.

Stage 1 occurs when up to a 10 percent gap between supply and demand is anticipated. Under this stage, the City will restrict or cease internal city irrigation and require reduction of each City department's use of water. Stage 2 occurs when up to a 20 percent gap between supply and demand is anticipated. Under this stage, the City will require its customers to reduce water consumption by 10 to 20 percent and will enact specific water use restrictions.

Stage 3 occurs when up to a 30 percent gap between supply and demand is anticipated. Stage 4 occurs when up to a 40 percent gap between supply and demand is anticipated. Stage 5 occurs when up to a 50 percent gap between supply and demand is anticipated. Stage 6 occurs when greater than 50 percent gap between supply and demand is anticipated. The City may declare a water shortage emergency at any shortage level based on determination of the AWSDA, or during a natural disaster or when the health and safety of persons within the City's water service area are jeopardized.

TABLE 2: KEY ELEMENTS OF WATER SHORTAGE STAGES

Stage	Water Conservation Savings Goal	City Actions Required	Internal/External Customer Actions
Stage 1 (Up to 10%)	Up to 10% reduction in water use	• Restrict/cease internal city irrigation • Preventative maintenance restrictions • Cease non-essential water usage	• Reduce departmental water use
Stage 2 (Up to 20%)	10-20% reduction in water use	• Public information campaign • Water waste patrols • Customer watering restrictions	• Reduce consumption by 10-20% • Comply with watering restrictions
Stage 3 (Up to 30%)	Up to 30% reduction in water use	• Intensify public education • Consider drought surcharge • Further limit watering hours	• Further reduce outdoor watering • Adhere to limited watering hours
Stage 4 (Up to 40%)	Up to 40% reduction in water use	• Vigorous public information campaign • Limit outdoor irrigation to 1 day/week	• Manual application only • 1 day per week outdoor watering
Stage 5 (Up to 50%)	Up to 50% reduction in water use	• Eliminate turf watering • Eliminate median strip watering	• No turf or median watering • Significant water use reduction
Stage 6 (>50%)	Greater than 50% reduction in water use	• Restrict water use to health and safety purposes only	• Water use for health/safety only • Maximum conservation measures

Water Shortage Emergency Planning Actions

In addition to responding to drought conditions, the City's WSCP can be used to respond to a range of emergency conditions that may interrupt or degrade water supplies and system operations. Unforeseen interruptions to water supplies may result from events such as water contamination (source, water treatment plant, or system), treatment plant shutdown, major transmission pipeline break, regional power outage, chemical supply shortage, staffing shortages, cybersecurity incidents affecting industrial control systems, or a natural disaster such as an earthquake or flood.

The City is included in Sacramento County's Emergency Operations Plan (EOP), as periodically updated, with a stated purpose to provide the basis for a coordinated response before, during, and after a disaster incident affecting the County of Sacramento. The operational priorities are stated in this order: save lives, protect health and safety, protect property, and preserve the environment. The plan contains sections on Purpose, Scope, Situation and Assumptions; Concept of Operations; Organization and Assignment of Responsibilities; Direction, Control and Coordination; Information Collection and Dissemination; Communications; Administration, Finance and Logistics; and Preparedness, Training and Exercises.

The City's Office of Emergency Services (OES) coordinates the planning, preparedness, communication, response, and recovery during man-made or natural disasters. The City's Emergency Operations Plan, as updated, discusses the effects of many disasters, such as floods, earthquakes, power outages, fires, severe heat, and severe cold on the City's water resources and infrastructure.

The City maintains backup power resources to support continuity of critical operations during emergencies. The document states that the City maintains over 120 generators ranging from 9 kW to 3,250 kW. Portable generators may be deployed at some of the City's water supply facilities in order to maintain a minimum level of water service during the emergency. Both of the City's water treatment plants and all select critical sites of the pump stations have backup generators. While groundwater wells are not permanently equipped with backup power, most active wells are fitted with generator connection capability to allow temporary power supply during outages.

These emergency planning actions support the City’s ability to maintain essential water service, protect public health and safety, and implement appropriate response actions in coordination with the WSCP during emergency conditions.

No Water Available from the American River

In the event that the American River supply becomes contaminated (i.e., due to a chemical spill or other environmental incident) or the E.A. Fairbairn Water Treatment Plant (FWTP) is shutdown (i.e., due to a treatment process or mechanical failure), it may be possible that no water would be available from the American River for a period of time. In such a case, the City would need to rely on the Sacramento River supply source (using the Sacramento River Water Treatment Plant (SRWTP)) and the groundwater supply to meet demands. The City also maintains non-firm (i.e., the adjacent agency has no mandatory requirement to perform) mutual aid access to groundwater supplies from adjacent water agencies and could inquire about available capacity. If the Sacramento River supply source (SRWTP), ground water supply, and emergency supply from neighboring agencies were for some reason unable to meet City water supply demands, the City may need to implement one or more stages of the WSCP to notify customers of the need to reduce water until supplies are restored.

No Water Available from the Sacramento River

In the event that the Sacramento River supply becomes contaminated (i.e., due to a chemical spill or other environmental incident) or the SRWTP is shutdown (i.e., due to a treatment process

or mechanical failure), it may be possible that no water would be available from the Sacramento River for a period of time. In such a case, the City would need to rely on the American River supply source (using the FWTP) and the groundwater supply to meet demands. The City also maintains non-firm (i.e., the adjacent agency has no mandatory requirement to perform) mutual aid access to groundwater supplies from adjacent water agencies and could inquire about available capacity. If the American River supply source (FWTP), ground water supply, and emergency supply from neighboring agencies were for some reason unable to meet City water supply demands, the City may need to implement one or more stages of the WSCP to notify customers of the need to reduce water until supplies are restored.

Electrical Power Outage (Localized, Regional, Or Multi-State)

If a localized or regional electrical power outage were to occur, impacting the City's water service area, the City is prepared to meet near-term water demands through the use of diesel generators located at both the Sacramento River and Fairbairn Water Treatment Plants.

Earthquake

Water system infrastructure, including treatment plants, pump stations, storage tanks, and pipelines, can be damaged during a strong earthquake. The City's facilities have been constructed in accordance with the applicable building codes to minimize potential damage during an earthquake. However, some facilities could be damaged as the result of a strong earthquake. The City has planned for this potential outage scenario by constructing system redundancy into its water system. The City has two surface water treatment plants, multiple permitted groundwater wells, multiple storage facilities and looped distribution pipelines, to allow potentially damaged portions of the City's system to be quickly isolated and repaired.

Flood

The City of Sacramento is potentially at risk of flooding as a result of severe storms, large quantities of runoff from the Sierra Nevada, and/or failure of levees which protect the City from major flooding events. The Sacramento Area Flood Control Agency (SAFCA) was created in 1989 to address the Sacramento area's vulnerability to catastrophic flooding. Members of SAFCA include the City of Sacramento, the County of Sacramento, the County of Sutter, the American River Flood Control District and Reclamation District 1000. SAFCA's mission is to provide the Sacramento region with increased flood protection along the American and Sacramento Rivers, with at least a 100-year level of flood protection as quickly as possible, while seeking a 200-year or greater level of protection also as soon as possible. A number of flood protection projects have already been completed, including construction of new levees, repairs to existing levees, and bank protection and stabilization. Even though the City's water system is vulnerable to the risk of flooding, the redundancy it has with two separate water treatment plants diverting water from two different water supply sources (the Sacramento and American Rivers), plus access to groundwater resources, helps alleviate some of this risk. Currently, if the SRWTP is out of service due to flooding, the FWTP may be available to meet City demands, and vice versa. It is possible that a single flooding event could impact both of the City's water treatment plants and other water system facilities; however, in such an instance, the City will respond as quickly as possible to restore water service for the City's residents.

Mandatory Prohibitions and Restrictions

The Sacramento City Code contains a section on water conservation (Title 13 Public Services, Chapter 13.04 Water Service System, Article XI Water Conservation), which outlines the mandatory prohibitions and restrictions that are in place under normal water supply conditions in the City. These measures include the following:

- Water shall not be wasted due to leaky or faulty water fixtures (§13.04.840).
- Water shall not be allowed to become water waste runoff and to flow away over the surface of the ground (§13.04.850).
- No person shall use water for the purpose of washing down sidewalks, driveways, or parking areas except to alleviate immediate fire or sanitation hazards (§13.04.860).
- Landscape irrigation shall be prohibited between the hours of 10:00 a.m. and 7:00 pm between March I to the October 31 (§13.04.860).
- Between March 1 and October 31, residential and commercial locations bearing a street address ending in an odd number shall be permitted to irrigate only on Tuesdays, and Saturdays and locations bearing a street address in an even number shall be permitted to irrigate only on Wednesdays, and Sundays. There shall be no water irrigation on Mondays, Thursdays or Fridays (§13.04.860).
- Between November 1 and February 28/29, watering is limited to just one day per week, either on Saturday or Sunday based on street address numbers (odd or even).

As discussed above, the Key Elements Table lists the additional conservation measures associated with each conservation stage, which would further restrict the allowable water uses and landscape irrigation practices.

Water Rates and Penalties for Excessive Use

Most of the City's residential and non-residential customers are currently metered and billed for their water use; all customer connections are now metered as a result of the City's completed meter retrofit program. Metered billing allows the City to track water use across all customer classes and identify excessive or inefficient water use.

SCC §13.04.890 supports the compliance and enforcement of the City's water shortage actions. In addition, pursuant to California law, including Senate Bill 394, the City has authority to enforce penalties for unauthorized use of water from the municipal system, including illegal diversion from fire hydrants. These enforcement provisions complement the City's water shortage response actions by addressing water theft and protecting limited supplies during shortage conditions. The City may impose the following penalties for customers violating water waste probation in SCC Chapter 13.04, Article XI, or City Council approved water use restrictions in response to a declared water shortage condition.

For the first violation within a rolling twelve-month period, the person who committed the violation shall be issued a written notice stating the type of violation. Per City Code, no financial penalty is issued for a first violation even during a declared water shortage.

For the second violation within a rolling twelve-month period, the person who committed the violation shall be issued another written notice stating the type of violation, and the property owner, if different than the person who committed the violation, shall be issued a written notice and fined $50. Customers can attend a class or participate in either a turf conversion rebate, an irrigation upgrade rebate or have a water wise house call conducted in order to waive the second violation.

For the third violation within a rolling twelve-month period, the fine shall be $200 and the person who committed the violation and the property owner, if different than the person who committed the violation, shall be issued a written notice.

For the fourth and subsequent violations within a rolling twelve-month period, the fine shall be $1000 and the person who committed the violation and the property owner, if different than the person who committed the violation, shall be issued a written notice.

The aforementioned penalties, per City Code, represent double the normal amount that would otherwise be levied absent a declared Water Shortage Emergency.

The Director of the City's Department of Utilities (Director) may waive penalties if the owner of the premises participates in one or more of the City's water conservation programs to remove turf grass, upgrade irrigation systems, or install smart irrigation controllers within 120 days after the date of the penalty notice.

In accordance with SCC §13.04.900, the customer may appeal a notice of violation by filing a written notice to the Director within thirty days and specify the grounds for the appeal. Upon review, the City may dismiss the violation, or find sufficient basis for the notice of violation. The customer may request an informal hearing with the Director. The Director may uphold, modify, or rescind the notice of violation, including the penalty imposed by the notice of violation, after hearing relevant evidence.

The City's metering, billing, and enforcement framework supports effective implementation of the WSCP by enabling consistent monitoring of water use, identification of violations, and equitable enforcement of water use restrictions during all shortage levels.

Revenue and Expenditure Analysis

The City's water revenue may be reduced during a shortage condition, as customers are required to utilize less water. In this case, the City would need to reprioritize spending priorities, consider reserves to compensate for decreased revenue, and consider rate increases or a drought surcharge during the water shortage. The City may, in the future, consider merits of conducting a drought surcharge study to evaluate impacts of revenue and costs associated with compliance actions.

Monitoring Actual Water Use Compliance and Reductions

The City's aggregate water supply and system demands are accurately monitored and tracked at the City's two surface water treatment plants and its groundwater facilities. This systemwide

metering provides an overview of water supply and demands, allowing the City to continuously assess system performance and progress toward water shortage response objectives. All customers are now metered and billed based on actual water use, and detailed records are available for individual customer use.

The City incorporated advanced metering infrastructure (AMI) in its meter installation program. AMI provides real-time water use information to both the City and customers. These meters may be used as monitoring tools for compliance and reporting purposes. The City regularly records its water meter readings, along with enforcement actions.

During a water shortage stage, monthly actual water demands may be compared to average year water demands for that same period to determine if the City is achieving its water use reduction goals. The City may adjust its water shortage stage accordingly to meet its water use objectives. At the time of preparation of this WSCP, the State Water Board is preparing regulation for monthly reporting of water production and water uses, along with associated enforcement metrics. The City will evaluate its monitoring processes and assess conformance to the State's monitoring and reporting requirements.

The WSCP is intended to be a dynamic tool to assure that shortage response actions are effective and produce the desired results. This WSCP has been prepared and implemented as an adaptive management plan. The City will use the results of its monitoring and reporting to evaluate the need for, and if needed, revise its WSCP.

Draft Water Shortage Emergency Resolution

A copy of a draft water shortage contingency resolution is provided in Appendix B. The draft resolution provides model language for enacting one or more stages of the City's WSCP. Implementation of the resolution also may require amendments to the Sacramento City Code. When a water shortage emergency condition exists, the City shall declare a water shortage emergency in accordance with California Water Code Chapter 3 Division 1. Water Code Section Division 1, Section 350 states that the governing body of a distributor of a public water supply shall declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

Appendix A: Annual Water Supply and Demand Assessment Procedure

This Appendix addresses the requirement of California Water Code Section 10632. Since July 1, 2022, urban water suppliers have been required under California Water Code (CWC) §10632.1 to annually prepare and submit an Annual Water Supply and Demand Assessment (AWSDA). Water suppliers are also required to submit an Annual Water Shortage Assessment Report to the DWR by July 1 of each year. This WSCP provides the procedures for the City to conduct its Annual Water Supply and Demand Assessment. The findings from that assessment for the basis of the City's Annual Water Shortage Assessment Report.

The procedures provided in this section are intended to assist the City in planning for potential, foreseeable shortage in water supplies. These procedures provide the steps the City needs to take that may lead to declaring a water shortage emergency and associated stage and implementation of water shortage response actions.

The City DOU Senior Engineer (Long Range Water Resource Planner) is primarily responsible for the preparation of the City's AWSDA and Annual Water Shortage Assessment Report, and submittal of the reports to DWR by July 1 of each year. Key Data Inputs are tracked on a continuous basis and will be considered in conducting the assessment. These inputs may include, but are not limited to, hydrologic conditions, reservoir storage, groundwater availability, regulatory constraints, water quality considerations, and projected customer demands. Coordination with other DOU Task Force members is expected. Under typical conditions, DOU will finalize the assessment in June and submit the report to DWR.

At any time that Key Inputs suggest a shortfall which could require enactment of the WSCP, the assessment will be performed. The City Council is responsible for receiving the AWSDA and adopting the findings of the assessment if it is necessary to enact the WSCP. Based on the findings of the assessment, the City Council is responsible for conducting a duly noticed Council meeting, determining if a water shortage condition exists and, if needed, declaring a water shortage emergency and water shortage stage and authorizing water shortage actions.

Sequence of Assessment and Decision-Making Activities

The City will follow a structured sequence of activities for conducting the assessment and decision-making process. Table 1 shows the Sequence of Assessment Activities and Table 2 shows the Sequence of Decision-Making Activities. Due to variations in climate and hydrologic conditions, the schedule for the finalization of the AWSDA and Annual Water Shortage Assessment Report may vary. The intent of the schedule is to allow shortage response actions to effectively address anticipated water shortage conditions in a timely manner, and to comply with the State's reporting requirements.

Table 1: Sequence of Assessment Activities

Step	Activities	Responsible Party
1	Convene Team	DOU Task Force Team Leader
2	Gather and Review Data	DOU Task Force Members
3	Conduct Analysis	DOU Task Force Senior Engineer
4	Prepare Preliminary AWSDA	DOU Task Force Senior Engineer
5	Review Preliminary AWSDA	DOU Task Force Members
6	Finalize AWSDA	DOU Task Force Senior Engineer
7	Prepare Annual Water Shortage Assessment Report	DOU Task Force Senior Engineer
8	Draft Annual Water Shortage Assessment Report for DWR submittal July 1st	DOU Task Force Senior Engineer

Table 2: Sequence of Decision-Making Activities

Step	Activities	Responsible Party
1	Receive preliminary AWSDA results	DOU Task Force
2	Review preliminary AWSDA findings	DOU Task Force Members
3	Conduct internal review and discussion	DOU Task Force Team Leader
4	Make recommendations for shortage level	DOU Task Force Senior Engineer
5	Present findings to Department Director	DOU Task Force Team Leader
6	Department Director review and approval	Department of Utilities Director

Step	Activities	Responsible Party
7	Present recommendations to City Manager	Department of Utilities Director
8	City Manager review and decision	City Manager
9	Implement approved shortage response actions	DOU Task Force
10	Submit AWSDA assessment and Annual Water Shortage Assessment Report to DWR	DOU Task Force Senior Engineer

Key Data Inputs and Assessment Methodology

The AWSDA requires the evaluation of supply and demands for the current year and one dry year that is assumed to follow the current year. Planned water supplies will be used as input to the AWSDA for the current year and the following one dry year. In planning for water supplies, the following factors are considered: Hydrological conditions, Reservoir Storage Conditions, Regulatory conditions, Entitlement/Contractual constraints, Surface water and groundwater quality conditions, Groundwater well production limitations, Infrastructure capacity constraints or changes, and Capital improvement project implementation.

Planned water supply sources and quantities will be described and be reasonably consistent with the supply projections in the City's last updated UWMP Chapter 6 (Water Supply Characterization). Should the supply sources and projections deviate significantly from projections, an explanation for the difference will be provided.

Planned unconstrained water demands will be used as input to the AWSDA for the current year and the following one dry year. Unconstrained water demands are customer demands where no water conservation measures are in effect beyond normal policy as described in City Code Title 13. In planning for water demands, the following factors are considered: Weather conditions, Water year type, Population changes (for example, due to development projects), Anticipated new demands (for example, changes to land use), Pending policy changes that may impact demands, and Infrastructure operations.

In preparing the AWSDA, the City uses a spreadsheet to plan for current year and future year demands. Planned supply and demand inputs will be entered in the spreadsheet in annual increments. Supply and demand will be compared to determine the reliability of the City's water supply in the current year and the following one dry year.

The City's water supply for the current year and the following dry year will be determined as reliable if water supply is sufficient to meet the planned water demands. If water supply is insufficient to meet planned water demands in the current year and/or the following dry year,

the extent of the water shortage condition will be determined, and the City will prepare response actions in accordance with this WSCP.

Appendix B: Sample Resolution

Resolution No. 20XX-XXX

Adopted by the Sacramento City Council [Date]

DECLARING WATER SHORTAGE EMERGENCY AND IMPLEMENTING STAGE [X] OF THE CITY OF SACRAMENTO WATER SHORTAGE CONTINGENCY PLAN.

BACKGROUND: The City of Sacramento has three water supply sources: American River water, Sacramento River water, and groundwater. Normally, the City's water supplies are adequate to meet the City's retail and wholesale water demands. [DESCRIBE CONDITION(S) TRIGGERING A WATER SHORTAGE]. Because of these on-going conditions the Sacramento City Council has determined that it is necessary to enact water conservation measures and water use restrictions, in addition to those already included in the City Code (Chapter 13.04 Water Service System, Article XI Water Conservation), to reduce water use within the City's water service area.

City Code section 13.04.910 authorizes the City Council, by Resolution, to declare the existence of a water shortage emergency and impose revised or additional limitations and restrictions on outdoor water use while the water shortage remains in effect. The City's 2020 Urban Water Management Plan, adopted by the City Council in June 2021, includes a Water Shortage Contingency Plan that sets forth six water conservation stages designed to reduce overall water usage. Each water conservation stage includes specific water conservation measures and water use restrictions designed to conserve water. Implementation of the water conservation stages is cumulative, meaning that implementation of a higher stage also includes implementation of all lower stages.

Water Code Section Division 1, Section 350 requires the governing body of a distributor of a public water supply to declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:

Section 1. Based on the on-going water supply conditions, the Sacramento City Council hereby declares that a water shortage emergency exists and that water use within the City should be reduced by at least [X] percent.

Section 2. The water use reduction described in Section 1 necessitates implementation of Stage [X] of the City's Water Shortage Contingency Plan. The water conservation measures, and water use restrictions for Stage [X], described below, are adopted. These are in addition to the existing provisions of Article XI of Chapter 13.04 of the City Code (Outdoor Water Conservation), and in the event of any conflict between any provision of Article XI and this Resolution, the provisions of this Resolution shall govern while this Resolution remains in effect.

Section 3. The City Manager is authorized and empowered to delegate his authority hereunder to such assistants, deputies, officers, employees, or agents of the City as he shall designate.

Section 4. No person shall use, or cause to be used, City water in violation of any of the provisions of this Resolution while the water shortage remains in effect.

Section 5. The penalties for violations specified in City Code § 13.04.890 shall be doubled while the water shortage remains in effect.

Section 6. This Resolution shall be effective upon its adoption and shall remain in effect until rescinded or otherwise modified by subsequent resolution of the City Council.

Section 7. This Resolution shall be published within ten days after its adoption, pursuant to California Water Code § 376(a).

Appendix C: Regional Water Authority Template

A list of contemplated actions by various regional water purveyors and the Regional Water Authority is included as Appendix C. The City may implement actions in the list as necessary to close the gap between supplies and demand during any water shortage conditions. The Regional Water Authority Template of Suggested Actions and Potential Water Savings provides detailed recommendations for each stage of water conservation, from Stage 1 (Up to 10% reduction) through Stage 6 (Greater than 50% reduction).

The template includes suggested actions, water savings estimate ranges, estimated savings sources, and DWR Demand Reduction Measures that match the required reporting table. Actions include fixing leaks promptly, restricting decorative water features, limiting landscape irrigation to specific times and days, prohibiting runoff from landscape irrigation, requiring shutoff nozzles on hoses, prohibiting washing of hard surfaces, maintaining commercial/industrial equipment, encouraging water conservation practices, and implementing drought rates and surcharges.

Additional activities not in the RWA template that may be in local agency plans include commercial kitchen pre-rinse spray valve requirements, decreasing line flushing, water efficiency program implementation, community outreach and messaging, drought rates and surcharges, improved customer billing, AMI customer leak reports with detection and repair assistance, increased water waste patrols, moratorium on new connections, water use surveys, pool and spa covers, expanded rebate programs for landscape irrigation efficiency, turf replacement, plumbing fixtures and devices, and real loss reduction through pressure management and aggressive leak detection and repair.

Regional Water Authority Template of Suggested Actions

Stage	Recommended Conservation	Suggested Actions	Water Savings Range	Estimated Source	DWR Measure
Stage 1	Up to 10%	Fix leaks promptly within regulatory timeframes	0-1%	Total Production	CII Leak Detection/Repair
Stage 1	Up to 10%	Restrict decorative water features to recirculating only	0-1%	Total Production	Other
Stage 1	Up to 10%	Limit landscape irrigation to 3 days per week	0-10%	Total Production	Limit Outdoor Irrigation
Stage 2	Up to 20%	Continue Stage 1 actions plus prohibit runoff from irrigation	0-5%	Total Production	Other

Stage	Recommended Conservation	Suggested Actions	Water Savings Range	Estimated Source	DWR Measure
Stage 2	Up to 20%	Require shutoff nozzles on hoses for all uses	0-1%	Total Production	Other
Stage 2	Up to 20%	Limit landscape irrigation to 2 days per week	0-15%	Total Production	Limit Outdoor Irrigation
Stage 3	Up to 30%	Continue Stage 2 actions plus prohibit washing hard surfaces	0-1%	Total Production	Other
Stage 3	Up to 30%	Maintain commercial/industrial equipment to eliminate leaks	0-5%	Total Production	CII Leak Detection/Repair
Stage 3	Up to 30%	Limit landscape irrigation to 1 day per week	0-20%	Total Production	Limit Outdoor Irrigation
Stage 4	Up to 40%	Continue Stage 3 actions plus implement drought rates	0-10%	Total Production	Other - Pricing
Stage 4	Up to 40%	Increase water conservation outreach and education	0-5%	Total Production	Public Outreach
Stage 4	Up to 40%	Prohibit landscape irrigation except hand watering	0-30%	Total Production	Prohibit Outdoor Irrigation
Stage 5	Up to 50%	Continue Stage 4 actions plus expand rebate programs	0-15%	Total Production	Other - Rebates
Stage 5	Up to 50%	Implement moratorium on new water connections	0-5%	Total Production	Other

Stage	Recommended Conservation	Suggested Actions	Water Savings Range	Estimated Source	DWR Measure
Stage 5	Up to 50%	Restrict all outdoor irrigation with limited exceptions	0-40%	Total Production	Prohibit Outdoor Irrigation
Stage 6	Greater than 50%	Continue Stage 5 actions plus mandatory water use surveys	0-10%	Total Production	Other
Stage 6	Greater than 50%	Implement aggressive leak detection and real loss reduction	0-20%	Total Production	Water Loss Control
Stage 6	Greater than 50%	Prohibit all non-essential outdoor water use	0-70%	Total Production	Prohibit Outdoor Irrigation