

CHAPTER 8 - WATER SHORTAGE CONTINGENCY PLAN

8.1. Introduction

CWC Section 10632.3

It is the intent of the Legislature that, upon proclamation by the Governor of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on drought conditions, the board defer to implementation of locally adopted water shortage contingency plans to the extent practicable.

This chapter describes the Water Shortage Contingency Plan (WSCP) developed for the GCSO as required by Section 10632.3 of the CWC. Water shortage contingency planning is a strategic planning process to prepare for and respond to water shortages. The WSCP includes the stages of response to a water shortage, such as a drought, that occur over a period of time, as well as catastrophic supply interruptions which occur suddenly. The primary objective of the WSCP is to ensure that the GCSO has in place the necessary resources and management responses needed to protect health and human safety, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions. This locally developed plan will be the first point of reference and implementation during (1) an Agency declared water shortage, (2) a City or County proclamation of a local water supply emergency, or (3) a declared statewide drought emergency.

In response to the severe drought of 2012 to 2016, new legislation in 2018 created a WSCP mandate replacing the water shortage contingency analysis under former law. While overlapping aspects of the prior law, the new requirements have several prescriptive elements an urban water supplier's WSCP must now include, such as:

- Key attributes of its Water Supply Reliability Analysis conducted pursuant to Water Code Section 10635.
- 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.
- Locally appropriate “shortage response actions” for each shortage level, with a corresponding estimate of the extent the action will address the gap between supplies and demands.
- Procedures for conducting an annual water supply and demand assessment with prescribed elements.
- Under Water Code Section 10632.1, urban water Suppliers are required to submit, by July 1 of each year, beginning in the year following adoption of the 2020 UWMP, an annual water shortage assessment report to the California Department of Water Resources (DWR).
- Communication protocols and procedures to inform customers, the public, and government entities of any current or predicted water shortages and associated response actions.
- Monitoring and reporting procedures to assure appropriate data is collected to monitor customer compliance and to respond to any state reporting requirements.
- A reevaluation and improvement process to assess the functionality of its WSCP and to make appropriate adjustments as may be warranted.

As part of the 2020 UWMP update, CWC Section 10632 requires urban water suppliers to prepare and adopt a WSCP that consist of the following elements:

- 8.1 Water Supply Reliability Analysis
- 8.2 Annual Water Supply and Demand Assessment Procedures
- 8.3 Six Standard Water Shortage Stages
- 8.4 Shortage Response Actions
- 8.5 Communication Protocols
- 8.6 Compliance and Enforcement
- 8.7 Legal Authorities
- 8.8 Financial Consequences of WSCP Activation
- 8.9 Monitoring and Reporting
- 8.10 WSCP Refinement Procedures
- 8.11 Special Water Feature Distinction
- 8.12 Plan Adoption, Submittal, and Availability

8.2. Water Supply Reliability Analysis

CWC Section 10632(a)(1)

The analysis of water supply reliability conducted pursuant to Section 10635.

On March 8, 2010, the GCSD Board of Directors adopted Ordinance 2-10 “Water” (Ordinance 2-10), which established the rules and regulations regarding the provision of water service within the boundaries of the GCSD’s service area. As of March 13, 2017, the GCSD Board of Directors adopted Ordinance No. 2-17 to replace Ordinance 2-10 in full. The Ordinance serves to modify and expand upon the rules and regulation of the water system, including water conservation regulations and water shortage contingency measures. Article XVII, “Drought Restriction,” sets forth water shortage emergency conditions that exist with the GCSD’s boundary as declared by resolution of the Board of Directors. A copy of the full Ordinance No. 2-17 is provided in Appendix I. The GCSD updated Article XVII in order to meet the new requirements DWR has established for this 2020 UWMP.

Article XVII outlines the phases of a water shortage emergency that are established upon the declaration of the Board of Directors that an emergency condition exists. The intent of Article XVII is to implement water conservation measures and progressive restrictions on water use in order to provide certainty to water customers and enable the GCSD to control water use, provide water supplies, and plan and implement water management measures in a fair and orderly manner for the benefit of the community.

Article XVII describes measures to be implemented during times of a water shortage emergency or upon the Board of Directors declaration that an emergency condition exists. As required by DWR, it establishes six phases (as referred to as stages) of specific water conservation actions and use restrictions designed to reduce water use. Implementation of each phase is cumulative; meaning that implementation of a

higher phase shall also include implementation of all previous phases. Shortage conditions for each phase are based on a percent reduction of water supply.

As previously states, the GCSD's sole water sources is supplied from the pristine Tuolumne River Watershed, which provides a high-quality surface water supply. Drought conditions can result in declines in surface water flows which can be detrimental to an areas water supply. However, the SFPUC plans water deliveries under the premise that a drought more severe than the worst drought on record may occur. Based on the supply and demand assessment conducted in Chapter 7 of this UWMP, the GCSD believes that its water supply source will continue to adequately meet the current and the foreseeable demand through 2045.

8.3. Annual Water Supply and Demand Assessment Procedures

CWC Section 10632(a)(2)

The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:

(A) The written decision-making process that an urban water supplier will use each year to determine its water supply reliability.

(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:

(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.

(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.

(iii) Existing infrastructure capabilities and plausible constraints.

(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.

(v) A description and quantification of each source of water supply.

CWC Section 10632.1.

An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before July 1 of each year, submit an annual water shortage assessment report to the department with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its annual water supply and demand assessment within 14 days of receiving its final allocations, or by July 1 of each year, whichever is later.

If the surface water supply provided by the SFPUC continues to meet the water demand of the GCSD's customers without supply shortages, there is no further action required. However, if in any given year, the typical customer demand appears to be great than available supply, the GCSD Board of Directors may enact any phase of the water shortage emergency as set forth in Article XVII of the Water Ordinance No.

2-17, by adopting a resolution in response to local or regional water supply conditions. Several data sources will be consulted, including but not limited to internal and external hydrologic data, as well as all customer consumption records. A water shortage emergency may be declared based on a number of conditions, including:

- An actual or potential local water supply restriction or emergency affecting the GCSD water system.
- A formal water supply shortage notification by the Governor.

A water conservation phase will normally be implemented in a progressive manner; however, it may be necessary for the GCSD to skip states in the use reduction plan in response to catastrophic supply reductions. In general, conservation/use reduction levels will be set according to the anticipated reduction in available water supplies. The GCSD may use one or more of the following measures to determine actual reductions in water consumption:

- Establish an average water use baseline.
- Review customer meter records on a more frequent basis.
- Perform leak detections and repair on more frequent basis.
- Perform meter checking and repair on more frequent basis.
- Perform periodic water system audit.

8.3.1. Decision Making Process

In accordance with CWC 10632 the GCSD will conduct an annual water supply and demand assessment, or annual assessment by July 1st of each year. The Annual Assessment team will consist of the General Manger, District Engineer, and Water Operations Manager. This team will draft and prepare a written report that discusses the results of the Annual Water Supply and Demand Assessment (Annual Assessment). This Annual Assessment will be presented to the Board of Directions annually during a regular Board of Directors meeting that is held during the May each year. This report will outline comprehensive hydrologic conditions for the historical period of record, as well as the current water year conditions based on the last snow surveys conducted by DWR staff. Consumption use will also be summarized in of this Annual Assessment for the Board of Directors to be fully informed as to whether any specific shortage response actions are necessary.

8.3.2. Data and Methodologies

The GCSD will enact water shortage response actions if the available water supply is less than the estimated demands. To determine the available water supply and demand, the following information will be evaluated in the Annual Assessment:

- Hydrologic conditions for the historical period of record and current year.
- Hydrologic data for the Hetch-Hetchy Reservoir.
- Annual volume of water purchased from the SFPUC.
- Annual customer water demand, by customer use type.
- Previous water year and to date water year supply availability.
- Condition of the conveyance, treatment, and distribution systems.
- Any other locally applicable factors.

The GCSD will begin to collect and evaluate the water supply availability in January of each year and will submit the Annual Assessment report to the DWR by July 1st of each year.

8.4. Six Standard Water Shortage Stages

CWC Section 10632(a)(3)

(A) 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.

(B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross-reference relating its existing categories to the six standard water shortage levels.

In accordance with CWC Section 10632(a)(3) and the 2020 UWMP Guidebook, all urban water supplier's WSCP must include at least six standard water shortage stages and cover a possible reduction in supply of more than 50 percent. The purpose of this new requirement of the CWC is to provide a consistent regional and statewide approach to measure water supply shortage conditions in the state.

The 2020 WSCP presented in this Chapter updates the GCSD's previous 2015 WSCP and Article XVII of Ordinance No. 2-17, which included only 4 stages of voluntary and mandatory water conservation measures. For the 2020 WSCP, each of the six water shortage stages represent an increasing gap between the GCSD's estimated water supplies and the unconstrained demand as determined in the Annual Assessment or the gap between supply and demand at any time due to an unforeseen event that interrupts water supplies. The six shortage stages correspond to 10, 20, 30, 40, 50 percent, and greater than 50 percent shortage compared to the normal reliability conditions.

As stated in CWC Section 10632(a)(3) and the 2020 UWMP Guidebook, an urban water supplier's existing WSCP that uses different water shortage levels may comply with these six levels by developing a cross-reference relating the existing categories to the six standard water shortage levels. Table 8-1 displays the GCSD existing water conservation phases and their relationship to the six standard water shortage states prescribed by the CWC and the 2020 UWMP Guidebook.

Table 8-1 Cross Reference for Mandated State and Existing GCSD Water Shortage Levels

Mandated State Standard Levels		Cross Walk	GCSD Corresponding Shortage Levels		
Shortage Level	Percent Shortage Range		GCSD Shortage Level	Percent Supply Reduction	Shortage Response Actions
1	Up to 10%	→	1	Up to 10%	Ongoing Conservation Measures
2	Up to 20%	→	2	Up to 10%	Voluntary Conservation Measures
3	Up to 30%	→	3	10% to 20%	Mandatory Conservation Measures
4	Up to 40%	→	4	20% to 50%	Mandatory Conservation Measures for Extreme Emergency
5	Up to 50%	→			
6	>50%	→			

8.5. Shortage Response Actions

CWC Section 10632 (a)(4)

Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

- (A) Locally appropriate supply augmentation actions.*
- (B) Locally appropriate demand reduction actions to adequately respond to shortages.*
- (C) Locally appropriate operational changes.*
- (D) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.*
- (E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action*

In accordance with CWC Section 10632(a)(4), this section describes the response action that may be implemented or considered for each water shortage level to minimize social and economic impacts to the community. The GCSD expects to mitigate supply shortages through a variety of response actions including demand reduction actions, conservation, operational changes, outreach, and mandatory prohibitions.

For this 2020 UWMP, this WSCP identifies various actions to be considered by the GCSD during water shortage conditions. In the event of a water shortage, the GCSD will evaluate the cause of the shortage to help inform which response actions should be implemented. Depending on the nature of the water shortage, the GCSD elect to implement a combination of response actions to mitigate the shortage and reduce gaps between supply and demand. It should be noted that implementation of each level is cumulative; meaning that implementation of a higher level shall also include implementation of all previous levels. If necessary, the GCSD may enact additional actions that are not listed in this WSCP. The stages determined by the percent water supply shortage are summarized in Table 8-2.

Table 8-2 Water Shortage Contingency Plan Levels (Submittal Table 8-1)			
Shortage Level	Percent Shortage Range	Severity	Shortage Response Actions
1	Up to 10%	Potential Shortage	Up to a 10% reduction in the GCSD's surface water supply due to any combinations of conditions.
2	Up to 20%	Minor Shortage	Between a 10% and 20% reduction in the GCSD's surface water supply due to any combinations of conditions.
3	Up to 30%	Moderate Shortage	Between a 20% and 30% reduction in the GCSD's surface water supply due to any combinations of conditions.
4	Up to 40%	Severe Shortage	Between a 30% and 40% reduction in the GCSD's surface water supply due to any combinations of conditions.
5	Up to 50%	Critical Shortage	Between a 40% and 50% reduction in the GCSD's surface water supply due to any combinations of conditions.
6	> 50%	Extreme Emergency Shortage	More than 50% reduction in the GCSD's surface water supply due to any combinations of conditions.

Depending on the stage of the water shortage, the GCSD may implement some combination of demand reduction, operational changes, and mandatory restrictions. Supply reductions required for each stage are included in Table 8-3 below.

Table 8-3 Water Usage Reduction by State		
Shortage Level	Mandatory or Voluntary Percent Demand Reduction	Severity
1	5%	Potential Shortage
2	10%	Minor Shortage
3	20%	Moderate Shortage
4	30%	Severe Shortage
5	50%	Critical Shortage
6	60%	Extreme Emergency Shortage

8.5.2. Demand Reductions

The narrative below describes the specific rationing measures associated with each WSCP stage reported in this 2020 UWMP. The specific rationing measures for the six stages are summarized in Table 8-4.

The GCSD’s water customers will be required to comply with the applicable water conservation measures of the stage in effect. Voluntary and mandatory conservation reported in Article XVII of existing Ordinance No. 2-17 was used as a reference; however, the six states described below have been modified and updated to meet the requirements of the CWC.

State 1 – Potential Shortage

Stage 1 will always be in place as a water waste prohibition to provide a conservation program framework for reducing GCSD demands by up to 10 percent. During Stage 1, there is up to a 10 percent water supply shortage and a 5 percent or greater voluntary reduction in demand is suggested. The following conservation measures will be implemented during this stage:

- Education programs
- Promotion of water-saving landscaping.
- Requirement of low-flow fixtures in new developments.
- Meter and/or flow control for all customer accounts and plant production activities.
- Maintain tiered water rates for treated water.
- Prohibit wasteful use of water.
- Review water measuring and/or metering devices for accuracy.

State 2 – Minor Shortage

During Stage 2 of a water supply shortage, there is between a 10 to 20 percent water supply shortage and a 10 percent or greater mandatory reduction in water usage is required for the GCSD to meet the immediate needs of its customers. Water alert conditions are declared, the water shortage situation is explained to the public, and consumers are asked for a 10 percent or greater mandatory water use reduction. In addition to Stage 1 conservation measures, the GCSD will implement the following conservation measures during State 2:

- Prohibit fire hydrant flow testing.
- Restaurants shall serve water only upon customer request.
- Hotels, motels, and lodges must offer guests the option of not having towels and linens laundered daily by displaying notices prominently in each guestroom.
- The GCSD will contact the highest water users to encourage use of water conservation methods.
- Watering of lawns, gardens, and other outdoor vegetation by use of irrigation systems, hoses, faucets or other outlets connected to the public water supply is limited to three days a week. Landscape watering may be restricted to outside of peak demand hours.
- The GCSD will evaluate its water use for main flushing to see if reductions are possible.

State 3 – Moderate Shortage

During Stage 3, the water supply shortage is between 20 and 30 percent. The GCSD aggressively continues its public information and education programs. Consumers are asked for a 20 percent or greater

mandatory water use reduction. All requirements of Stages 1 and 2 remain in effect. Additional requirements include the following:

- Watering of lawns, gardens, and other outdoor vegetation by use of irrigation systems, hoses, faucets, or other outlets connected to the public water supply is limited to two days per week and based on the following schedule:
 1. Properties with addresses ending in an even number may irrigate only on Tuesday and Thursday.
 2. Properties with addresses ending in an odd number may irrigate only on Wednesday and Friday.
 3. Irrigation may occur only between 7:00 p.m. and 9:00 a.m.
- Washing of sidewalks, walkways, driveways, patios, parking lots, graveled areas, tennis courts or other hard-surfaced areas, including residential and commercial establishments, by hose or by use of water from faucets or other outlets connected to the public water supply is prohibited.
- Irrigation which results in water running onto driveways, gutters, streets, adjoining property, and/or any other water runoff is prohibited.
- Main flushing is only done on a sand, odor, or taste complaint basis or due to contamination and public health reasons.
- Excessive water use, without reasonable cause as determined by the GCSO, is prohibited. Excessive water use is defined as monthly water use that exceeds a certain percentage of the prior year's usage for the same month. The percentage varies based on the reduction goal and is determined by the following chart:

Reduction Goal	Excessive Use Percentage
20%	90%
30%	80%
40%	70%
50%	50%
>50%	40%

State 4 – Severe Shortage

During Stage 4 of a water supply shortage, the shortage is between 30 and 40 percent and a 30 percent or greater reduction in water usage is required for the GCSO to meet the immediate needs of its customers. The GCSO aggressively continues its public information and education programs, and consumers are asked for a 30 percent or greater mandatory water use reduction. All requirements of Stages 1 through 3 remain in effect. Additional requirements include the following:

- Watering of lawns, gardens, and other outdoor vegetation by use of irrigation systems, hoses, faucets, or other outlets connected to the public water supply is limited to one day per week and based on the following schedule:
 1. Properties with addresses ending in an even number may irrigate only on Tuesday.
 2. Properties with addresses ending in an odd number may irrigate only on Friday.
 3. Irrigation may occur only between 7:00 p.m. and 9:00 a.m.

- New construction service applications shall be granted upon condition that water shall be used only for interior purposes and landscaping that does not require watering. Any landscaping requiring the use of water shall be delayed until repeal of Stage 4 restrictions.
- Use of water in decorative fountains, pools, recreational ponds, and the like shall be limited to the minimum necessary to preserve aquatic life if present.
- Filling of new or existing swimming pools, spas and recreation ponds is prohibited.
- Allowing any plumbing system leak to remain un-repaired, without reasonable cause as determined by the GCSD, for seven calendar days following written notification by the District is prohibited.

State 5 – Critical Shortage

During Stage 5, there is between a 40 to 50 percent water supply shortage and a 50 percent or greater reduction in water usage is required for the GCSD to meet the immediate needs of its customers. The GCSD aggressively continues its public information and education programs, and consumers are asked for a 50 percent or greater mandatory water use reduction. All requirements of Stages 1 through 4 remain in effect. Additional requirements include the following:

- Immediately notify appropriate media outlets, and post local road signage notifying the public of the current water use restrictions.
- Watering of lawns, gardens, and other outdoor vegetation by use of irrigation systems, hoses, faucets, or other outlets connected to the public water supply is strictly prohibited.
- Washing of cars, boats, trailers, equipment, or other vehicles by hose or by use of water directly from faucets or outlets connected to the public water supply is prohibited. Washing such vehicles may occur at a commercial washing facility approved by the GCSD that utilize water recycling capabilities.
- Use of water for dust control, earth compaction, and other outdoor construction activities is prohibited.
- Fire hydrants shall be used only for emergency purposes.

State 6 – Extreme Emergency Shortage

During Stage 6, the water supply shortage is over 50 percent and a 60 percent or greater reduction in water usage is required for the GCSD to meet the immediate needs of its customers. The GCSD continues its public information and education programs and asks customers for a 60 percent or greater mandatory water use reduction. All requirements of Stages 1 through 5 remain in effect. Additional requirements include the following:

- Increased mandatory water use reduction.
- Commercial kitchens are required to use pre-rinse spray valves.

Table 8-4 Demand Reduction Actions (Submittal Table 8-2)

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1	Expand Public Information Campaign	5%	Education programs, promotion of water-saving landscaping.	Yes
1	Reduce System Water Loss	5%	Meter and/or flow control for all customer accounts and plant production activities. Review water measuring and/or metering devices for accuracy.	Yes
1	Other	5%	Requirement of low-flow fixtures in new developments.	Yes
1	Improve Customer Billing	5%	Maintain tiered water rates for treated water.	Yes
1	Other	5%	Prohibit wasteful use of water.	Yes
2	Other	10%	Prohibit fire hydrant flow testing.	No
2	CII - Restaurants may only serve water upon request	10%	Restaurants shall serve water only upon customer request.	Yes
2	CII - Lodging establishment must offer opt out of linen service	10%	Hotels, motels, and lodges must offer guests the option of not having towels and linens laundered daily by displaying notices prominently in each guestroom.	Yes
2	Increase Water Waste Patrols	10%	The GCSD will contact the highest water users to encourage use of water conservation methods.	Yes
2	Landscape - Limit landscape irrigation to specific days	10%	Watering of lawns, gardens, and other outdoor vegetation by use of irrigation systems, hoses, faucets or other outlets connected to the public water supply is limited to three days a week.	Yes
2	Decrease Line Flushing	10%	The GCSD will evaluate its water use for main flushing to see if reductions are possible.	No
3	Landscape - Limit landscape irrigation to specific days	20%	Properties with addresses ending in an even number may irrigate only on Tuesday and Thursday, while properties with addresses ending in	Yes

Table 8-4 Demand Reduction Actions (Submittal Table 8-2)

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
			an odd number may irrigate only on Wednesday and Friday.	
3	Landscape - Limit landscape irrigation to specific times	20%	Irrigation may occur only between 7:00 p.m. and 9:00 a.m.	Yes
3	Other - Prohibit use of potable water for washing hard surfaces	20%	Washing of sidewalks, walkways, driveways, patios, parking lots, graveled areas, tennis courts or other hard-surfaced areas, including residential and commercial establishments, by hose or by use of water from faucets or other outlets connected to the public water supply is prohibited.	Yes
3	Landscape - Restrict or prohibit runoff from landscape irrigation	20%	Irrigation which results in water running onto driveways, gutters, streets, adjoining property, and/or any other water runoff is prohibited.	Yes
3	Decrease Line Flushing	20%	Main flushing is only done on a sand, odor, or taste complaint basis or due to contamination and public health reasons.	Yes
3	Other	20%	Excessive water use, without reasonable cause as determined by the GCS D, is prohibited.	Yes
4	Landscape - Limit landscape irrigation to specific days	30%	Properties with addresses ending in an even number may irrigate only on Tuesday, while properties with addresses ending in an odd number may irrigate only on Friday..	Yes

Table 8-4 Demand Reduction Actions (Submittal Table 8-2)

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
4	Other	30%	New construction service applications shall be granted upon condition that water shall be used only for interior purposes and landscaping that does not require watering.	Yes
4	Water Features - Restrict water use for decorative water features, such as fountains	30%	Use of water in decorative fountains, pools, recreational ponds, and the like shall be limited to the minimum necessary to preserve aquatic life if present.	Yes
4	Other water feature or swimming pool restriction	30%	Filling of new or existing swimming pools, spas and recreation ponds is prohibited.	Yes
4	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	30%	Allowing any plumbing system leak to remain un-repaired, without reasonable cause as determined by the GCS D, for seven calendar days following written notification by the District is prohibited.	Yes
5	Expand Public Information Campaign	50%	Immediately notify appropriate media outlets, and post local road signage notifying the public of the current water use restrictions.	Yes
5	Landscape - Prohibit all landscape irrigation	50%	Watering of lawns, gardens, and other outdoor vegetation by use of irrigation systems, hoses, faucets, or other outlets connected to the public water supply is strictly prohibited.	Yes
5	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	50%	Washing of cars, boats, trailers, equipment, or other vehicles by hose or by use of water directly from faucets or outlets connected to the public water supply is prohibited. Washing such vehicles may occur at a commercial washing facility approved by the GCS D that utilize water recycling capabilities.	Yes

Table 8-4 Demand Reduction Actions (Submittal Table 8-2)

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap?	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
5	Other - Prohibit use of potable water for construction and dust control	50%	Use of water for dust control, earth compaction, and other outdoor construction activities is prohibited.	Yes
5	Other	50%	Fire hydrants shall be used only for emergency purposes.	Yes
6	CII - Commercial kitchens required to use pre-rinse spray valves	60%	Commercial kitchens are required to use pre-rinse spray valves.	Yes

8.5.3. Supply Augmentation

Given that the SFPUC provides a sufficient surface water supply, the GCSD no immediate plan to augment supply in response to shortages.

8.5.4. Operational Changes

During shortage conditions, operations may be affected by demand reduction responses. Operational changes to address a short-term water shortage may be implemented based on the severity of the reduction goal. The GCSD will maximize its supply by implementing operational strategies and demand reduction measures.

As part of the Annual Assessment process, the GCSD will consider their operational procedures at the time of a shortage to identify changes that can be implemented to address water shortage on a short-term basis, including but not limited to:

- Expansion of public information campaign to educate and inform customers of the water shortage emergency and required water savings
- Decrease water main flushing to only on a compliant basis.
- Hydrant flushing will be suspending when Stage 2 or any subsequent state is declared.
- Review water metering devices for accuracy.
- Implement water waste patrols by recruiting staff from other departments, if necessary
- Implement or modify drought rate structure or surcharge or water emergency tiered pricing, pursuant to the requirements of Proposition 218 and in accordance with California Law
- Contact the highest water users to encourage use of water conservation methods.
- Monitor construction meters and fire hydrant meters for efficient water use in the event that a meter identified wastes water.

8.5.5. Emergency Response Plan

Water Code Section 10632(c) requires development of an Emergency Response Plan (ERP) documenting

actions to be undertaken by a water supplier to prepare for and implement during a catastrophic interruption of water supplies. A catastrophic event that constitutes a proclamation of a water shortage would be any event, either natural or manmade, that causes a severe shortage of water. Water shortages may result from variations in weather, natural disasters, or unanticipated situations (i.e. systems failures, acts of terror).

The GCSD has included emergency conditions as a triggering action for advancement to a subsequent shortage level. A catastrophic interruption could be considered an emergency condition. The GCSD has also prepared an ERP, which was last updated in April 2019. The ERP provides the GCSD with a standardized response and recovery protocol to prevent, minimize, and mitigate injury and damage resulting from emergencies or disasters of man-made or natural origin. The ERP also describes how the GCSD will respond to potential threats or actual terrorist scenarios identified in the vulnerability assessment, as well as additional emergency response situations. Specific action plans are included in Appendix A of the ERP, which detail how the GCSD will respond to emergency events and incidents.

8.5.6. Seismic Risk Assessment and Mitigation Plan

Section 10632.5.(a)

In addition to the requirements of paragraph (3) of subdivision (a) of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.

(b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.

(c) An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multihazard mitigation plan addresses seismic risk.

The GCSD's water system infrastructure, including treatment plants, pump stations, storage tanks, and pipelines, could be damaged during a strong earthquake. GCSD is located in USGS Earthquake Zone 3 = 0.30g. Although the GCSD is not located within a highly active seismic zone, some facilities could be damaged as the result of an earthquake up to a magnitude of 6.0 on the Richter scale. The GCSD has planned for this potential by constructing redundancy into its water system. GCSD has two existing permanent water treatment plants, a mobile Alternative Water Supply (AWS) microfiltration plant, multiple storage tanks, looped distribution pipelines, and isolation valves, to allow potentially damaged portions of GCSD's system to be isolated and repaired. Action Plan 8C included in Appendix A of the GCSD's ERP details how the GCSD will respond during an earthquake.

8.5.7. Shortage Response Action Effectiveness

The GCSD's water system currently has water meters on all water intake sources and customer connections. These meters record the amount of water consumed at each location. Customer consumption totals are tallied on a monthly basis for billing purposes. The GCSD's billing staff will inform the General Manager of any increase in water consumed or decrease in water supplies. The General Manager will then make recommendations to the Board of Directors on whether to change water shortage levels and will provide supporting reports of consumption or supply as required.

Under normal water supply conditions, water supply and consumption figures are reported, at minimum, on a monthly basis. From this information, month-to-month and year-to-year statistics can be calculated to track water use and subsequent increases or reductions in consumption levels. This data allows the GCSD to determine the effectiveness of the implemented shortage response actions. If reduction goals are not being met, the Board of Directors make the necessary decisions for corrective action to be taken.

During water shortages, savings are measured in comparison to what is considered to be normal year demand or in reference to a specific base year as may be dictated by Statewide requirements. Estimates of the effectiveness for actions has been included in Table 8-4. It is assumed that a given required shortage to be addressed in each stage can be met by quantifiable measures and the remainder of shortage can be addressed by unquantifiable measures or operational changes. It is expected that response action effectiveness is also a result of successful communication and outreach efforts made by the GCSD.

8.6. Communication Protocols

Section 10632 (a)(5)

Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:

(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.

(B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.

(C) Any other relevant communications

Communications regarding water shortage and conservation efforts will be sent to individual customers and will be available through media and GCSD's website. When conservation measures are needed, the GCSD will create a bill insert with conservation information, post additional conservation information on its website and host informational sessions to inform the public of water shortage and conservation efforts. The insert, online campaign, and informational sessions will focus on providing examples of ways consumers can reduce their water usage and optional programs they can take part in such as home reuse of greywater, maintenance of leaks, and high efficiency fixture installation. Additional information will be provided on water usage reduction and the water shortage surcharge that will be implemented.

When a shortage level is enacted or changed, a notice will be mailed to customers and posted on the GCSD's website. Based on the severity of the shortage, the GCSD may also advertise on the local radio, publish in special publications, hang door tags, or send additional mail notifications to all its customers.

8.7. Compliance and Enforcement

CWC Section 10632 (a)(6)

For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.

The GCSD existing Ordinance No. 217 establishes the following penalties for excessive water use violations:

1. First Violation: Customer will receive a written warning from GCSD that a further violation will result in water restrictions and penalties.
2. Second Violation: Payment of \$50 penalty.
3. Third Violation: Payment of a \$100 penalty and customer's service will be restricted by a flow restriction device for 30 days.
4. Fourth Violation: Payment of a \$500 penalty and customer's water service will be restricted (at the customer's cost) by a flow restriction device until GCSD repeals the state of emergency, threat of emergency or shortage.
5. Continued Violation: Payment of a \$500 penalty and continued water service restriction. GCSD may, in its discretion, pursue misdemeanor charges pursuant to Water Code Section 71644 which may result in imprisonment in the county jail for not more than 30 days, or by fine not exceeding \$600, or by both.

8.8. Legal Authorities

CWC Section 10632 (a)(7)

(A) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.

(B) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1. [see below]

(C) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.

Water Code Section Division 1, Section 350

Declaration of water shortage emergency condition. The governing body of a distributor of a public water supply, whether publicly or privately owned and including a mutual water company, 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.

Implementation of the WSCP and the articles set forth in Ordinance No. 2-17 shall be determined by the Board of Directors through the adoption of a Resolution. A water shortage emergency declaration shall be in effect upon proper findings made by the Board of Directors after a public hearing and shall remain in effect until the Board of Directors finds and declares by resolution that the water shortage emergency condition has abated, has changed in degree, or no longer exists.

Per Ordinance No. 2-17, the Board of Directors shall conduct duly noticed public hearings for the purpose of determining whether a water shortage emergency condition exists and, if so, the degree of the emergency and what regulations and restrictions should be enforced in response to the shortage. The Board of Directors shall adopt a resolution which declares that a water shortage emergency condition exists, the facts and conclusions which support such a declaration and that the ordinary water demands and requirements of water consumers within the District cannot be satisfied.

8.9. Financial Consequences of WSCP Activation

CWC Section 10632(a)(8)

A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:

(A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1. [retail urban suppliers only]

All of the GCS D's service connections are metered; therefore, the GCS D's water fund operating revenue will be closely tied to water use and significantly impacted by the water conservation measures in the WSCP. With the implementation of the WSCP, expenditures may increase due to an increase in the water consumption reduction methods described in this Chapter and revenue from water bills may decrease due to the reduction in water use encouraged in the WSCP's stages. To counteract the financial impact of conservation, the GCS D institute an increase in the rate structure so that lower projected water consumption would generate added revenue needed by the GCS D's water fund. Another option would be the use of reserve funds to minimize the need for additional rate increases. A full analysis of the water rates based on the financial conditions at the time water reduction would occur would be presented to the Board of Directors for their approval. Additionally, the GCS D' may consider temporarily increasing water rates or delaying capital improvements until the shortage has ended.

8.10. Monitoring and Reporting

CWC Section 10632(a)(9)

For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.

In accordance with CWC Section 10632(a)(9), this section describes the reporting requirements and monitoring procedures to implement the WSCP and track and evaluate the response actions effectiveness. As previously stated in Section 8.2, the GCS D intends to track its water supply purchased from the SFPUC and customers' demands on an annual basis, and if a supply shortage is projected, the GCS D will implement the appropriate stage of their WSCP, as declared by the Board of Directors. Monitoring customer water demands will be essential to ensure that the WSCP's response actions are adequately meeting reductions and decreasing the supply/demand gap. This will help to analyze the effectiveness of the WSCP or identify the need to activate additional response actions or implement a subsequent stage.

Water savings associated with the implementation of the WSCP will be determined based on customer's monthly water metered records which will be compared to meter records from prior months or the same period of the prior year. At first, the cumulative consumption of residential and commercial customers will be evaluated for reaching target demand reduction levels. If needed, individual customer accounts will be monitored. Weather and other possible influences may be accounted for in the evaluation.

The GCSD will report the impact of demand reductions actions to the Board of Directors and to the State, if required. The GCSD will also update its customers as to the impact of the actions taken as part of their customer outreach program.

8.11. WSCP Refinement Procedures

CWC Section 10632 (a)(10)

Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.

This WSCP is best prepared and implemented as an adaptive management plan. The GCSD will use results obtained from their Annual Assessment and monitoring and reporting program described above to evaluate any needs for revisions. The WSCP is used to provide guidance to the GCSD staff, Board of Directors, and the public by identifying response actions to allow for efficient management of any water shortage with predictability and accountability.

To maintain a useful and efficient standard of practice in water shortage conditions, the requirements, criteria, and response actions need to be continually evaluated and improved upon to ensure that its shortage risk tolerance is adequate, and the shortage response actions are effective and up-to-date based on lessons learned from implementing the WSCP's stages. Potential changes to the WSCP that would warrant an update include, but are not limited to, any changes to shortage level triggers, changes to the shortage level structure, and/or changes to the response actions. Any prospective changes to the WSCP would need to be presented at a public Board meeting, GCSD staff would obtain any comments from the public and the Board of Directors, and Board of Directors would formally approve the updated WSCP through the adoption of a Resolution.

8.12. Special Water Feature Distinction

CWC Section 10632 (b)

For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

CWC 10623 (b) now requires that suppliers analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code. 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, so limitations to pools and spas may require different considerations compared to non-pool or non-spa water features.

For the purposes of the WSCP, water features are not categorized under defined terminology. Pools, spas, recreational ponds, decorative fountains, and the like will all be called out specifically during each stage that requires their decrease or fully terminated use.

8.13. Plan Adoption, Submittal, and Availability

CWC Section 10632 (c)

The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.

The WSCP followed the same development process as the GCSD's 2020 UWMP. The WSCP shall be adopted, submitted, implemented, and amended alongside the GCSD's UWMP. The GCSD had a public review period of the 2020 UWMP, which included the WSCP, from September 3, 2021 to November 9, 2021. The Final UWMP and WSCP were presented to the Board of Directors for approval on November 9, 2021 and were adopted. The Final 2020 UWMP and WSCP were submitted to the California Department of Water Resources on November 10, 2021. The GCSD will make the Final 2020 UWMP and WSCP publicly available through the GCSD's website no later than 30 days after it is adopted. The public will also be notified of any amendments to the WSCP which will be made public available once adopted.