



City of Shasta Lake

# WATER SHORTAGE CONTINGENCY PLAN

FINAL | June 2021







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## Abbreviations

ADU	Accessory Dwelling Unit
AFY	acre-feet per year
AP	action plan
BMP	best management practice
BVWD	Bella Vista Water District
CCSD	Centerville Community Services District
CII	commercial, industrial, and institutional
City	City of Shasta Lake
County	Shasta County
CWC	California Water Code
DDW	Division of Drinking Water
DRA	drought risk assessment
EOC	Emergency Operations Center
ERP	Emergency Response Plan
gpcd	gallons per capita per day
I-5	Interstate 5
ICS	Incident Command System
MFR	multi-family residential
mgd	million gallons per day
PIO	Public Information Officer
RHNA	Regional Housing Needs Assessment
SCWA	Shasta County Water Agency
SFR	single-family residential
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
WSCP	Water Shortage Contingency Plan
WTP	Water Treatment Plant



## Chapter 1

# WATER SHORTAGE CONTINGENCY PLAN

### 1.1 Purpose

The City of Shasta Lake (City) Water Shortage Contingency Plan (WSCP) details the stages of action to be undertaken during a reduction in available water supply, either due to reductions in the City's available water supply during drought years, or due to catastrophic interruption due to flooding, major fire emergencies, earthquake, regional power outages, water contamination or other situations that could impact the City's water supply.

The goal is to have a procedure for managing and mitigating shortages allowing the City to respond in an efficient and timely manner. This WSCP may be amended as needed at any time.

In the event any provision of this WSCP conflicts or overlaps with any mandatory State regulation related to water conservation, the most stringent shall apply.

### 1.2 Application

The provisions of this WSCP shall apply to all persons, customers, and property served by the City, wherever situated, and for all types of water provided by the City. In situations where a property is serviced by both the City and a private well, no City water may be used for activities that are prohibited by any regulations set forth in this WSCP.

The prohibited uses of water are not applicable to water necessary for public health and safety.

### 1.3 Authorization

The WSCP will be adopted by City Council and authorize the City Manager to declare a water shortage emergency and impose voluntary or mandatory water conservation restrictions by identifying the applicable stage.

### 1.4 Enforcement

The City Manager, Building Official, Development Services Director, and Water Conservation Coordinator and each of their respective designees are each authorized to administer and enforce all provisions of this WSCP, including the issuance of citations.

### 1.5 Definitions

The following words and phrases as used in this WSCP have the following meanings:

1. "Available water supply" means the amount of potable water available to the city in any given water year, including water available through long-term water purchase agreements/contracts, taking into consideration reductions to the allocations during drought years, and any supplemental water purchased from other water purveyors under short-term agreements.
2. "Bubbler" means an irrigation device that bubbles water only a short distance from the device, generally used for watering trees and shrubs on a per-tree/shrub basis.

3. "City" means the City of Shasta Lake.
4. "Drip irrigation" means a landscape watering system using low water pressure and flexible tubing placed on the ground to target the roots of plants, thereby conserving moisture that would be lost to evaporation with sprinkler systems
5. "Emitter" means a drip irrigation emission device that delivers water slowly from the system to the soil.
6. "Landscape irrigation system" means an irrigation system with pipes, spray heads or sprinkling devices that are operated through an automated or manual valving system.
7. "Large water user" means schools, commercial, industrial, civic/social/fraternal and government customers with a one-inch meter or larger, or more than one meter serving a property or facility, and single-family residential users with a water use of over 10,000 cubic feet per month over the prior 12-month period.
8. "Ornamental pond" or "ornamental fountain" means a design element where open water performs solely an aesthetic function.
9. "Person" means property owners, occupants, tenants, lessees, sub-lessees, individuals, partnerships, corporations, joint ventures, receivers, limited liability companies, trust, estates, cooperatives, associations public or private agency, government agency or institution, school district or any other user of water provided by the city.
10. "Potable water" means water that is provided to customers through the city's water treatment and distribution system. This does not include reclaimed water.
11. "Reclaimed water" means former wastewater that is treated to remove solids and impurities pursuant to state water quality requirements and used for landscape irrigation and/or to meet commercial and industrial water needs.
12. "Retrofit kit" means water saving devices that can assist customers to save water, including, but not limited to, low-flow showerheads, faucet aerators, spray hose nozzles, and hose timers.
13. "Shut-off nozzle" shall mean a device attached to the end of a hose that must be manually operated, pressed or otherwise held in place to allow water to flow out of the hose.
14. "Soaker hose" means a garden hose with small holes that allow water to seep into the ground to the roots of plants, conserving moisture that would be lost to evaporation with sprinkler systems.
15. "Station" means a landscaped area served by one valve or by a set of valves that operate simultaneously.
16. "Unnecessary and wasteful use of water" means the application or usage of water for functions or activities which do not have any health or safety purpose, are not required by regulation, and are not part of the core function or business process at a site.
17. "Water year" means the period from and including March 1 of each calendar year through the last day of February of the following calendar year as established by the long-term water contract between the City and the United States Bureau of Reclamation (USBR).

## Chapter 2

# WATER SUPPLY RELIABILITY ANALYSIS

The City's water service area is located north of Redding in western Shasta County (County). The City is located along the Interstate 5 (I-5) corridor, south of Shasta Lake and the Shasta Dam. The City water supply is surface water diverted from Shasta Lake. Raw water is pumped to the Fisherman's Point Water Treatment Plant (WTP) via the USBR Raw Water Pumping Station located at the base of Shasta Dam. The Fisherman's Point WTP is capable of treating and distributing a maximum of approximately 9.72 million gallons per day (mgd).

In 2020, the population was estimated to be approximately 10,626. The population is anticipated to increase to 13,627 by the year 2045, which is based on an average annual growth rate of 1.0 percent. Water demands served by the City are primarily residential, including single-family residential (SFR) and multi-family residential (MFR), commercial, industrial, and institutional (CII), and landscape irrigation. All connections in the City are metered. The total volume supplied in 2020 was approximately 2,215 acre-feet per year (AFY). Demands are anticipated to increase to 3,282 AFY by the year 2045.

The per capita water demand was 186 gallons per capita per day (gpcd) in 2020. Although the City was able to meet the 2020 target of 215 gpcd, the year 2020 did not represent a typical year due to the impacts of the COVID-19 pandemic. However, since the 2020 per capita demand of 186 gpcd was below the 2020 goal, adjustments for extraordinary events were not made.

Supply availability was reviewed under a single-dry year and five-consecutive-year drought. In addition, a drought risk assessment (DRA) from 2021 through 2025 found that there is sufficient supply to meet projected demands within the next five years.



## Chapter 3

# ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT PROCEDURES

The annual water supply and demand assessment identifies key data and methods for determining the supply reliability each year. The annual assessment is due on or before July 1 of each year, as required by California Water Code (CWC) Section 10632.1. The assessment plans for the following calendar year assuming the year following the planning year is a dry year.

The annual supply and demand assessment will include:

- Anticipated shortage.
- Triggered shortage response actions.
- Compliance and enforcement actions.
- Communication actions.
- Review of assets.

### 3.1 Water Conservation Coordinator

As of 2014, the City has a designated Water Conservation Coordinator (Tony Thomasy, [tthomasy@cityofshastalake.org](mailto:tthomasy@cityofshastalake.org)) that supervises best management practice (BMP) implementation, evaluates effectiveness, and communicates program goals to the community. The Water Conservation Coordinator tasks may include, but are not limited to, managing implementation of water conservation efforts and programs, preparing conservation reports, promoting water conservation to agency staff, evaluating the results of efforts, monthly tracking of production versus consumption, and enforcement of water use restrictions.

The Water Conservation Coordinator shall review and evaluate the status, condition, and availability of the City's water supplies and recommend and advise the City Manager concerning the water supply reliability of surface water source (Shasta Lake), the City's ability to purchase or transfer water, the system's ability to produce and distribute water to its customers, shortage levels (also referred to as stages), declaration of a water shortage emergency, and other water conservation matters, including but not limited to the number of new service connections allowed annually.

The Water Conservation Coordinator shall compare the previous year assessment to the actual state of the water supply prior to the summer high use period. This procedure will help the City to refine the assessment process and make changes as needed.

In the event of a water shortage, emergency, or drought condition, the Water Conservation Coordinator shall review and evaluate the status, condition, and availability of the City's water supplies and recommend and advise the City Manager concerning conservation and other significant resource management constraints, including the declaration of a Water Shortage Emergency.

### 3.2 Timeline

The proposed timeline for the annual supply and demand assessment is listed below and is subject to change. The USBR water year is March 1 through February 28/29 of the following year. The City submits their annual assessment (due on or before July 1 of each year to the state) in February prior to the start of the USBR water year.

- Preparation of Draft Supply and Demand Analysis – December.
- Submit and Present Assessment to City Manager or his/her designee – January.
- Update and Finalize Assessment – February.
- Receive City Manager Approval – February.
- Annual Supply and Demand Assessment – February (Due to state July 1).

### 3.3 Decision-Making Process

The steps in the decision-making process that the City Water Conservation Coordinator will use each year to determine and subsequently report to the state are listed below.

1. Water Conservation Coordinator determines:
  - a. Previous calendar year water production.
  - b. Infrastructure constraints.
  - c. Expected demand.
2. Water Conservation Coordinator compares supply and demand and decides on the water supply reliability for the current year and one dry year.
3. Water Conservation Coordinator prepares and submits the Annual Assessment Report to the state.
4. Water Conservation Coordinator presents the findings and recommendations of the Annual Assessment Report to the City Council.
5. City Manager and Water Conservation Coordinator determines the shortage levels and other conservation matters, including but not limited to the number of new service connections allowed annually that are appropriate for all or portions of the City water system.
6. The City Manager, Building Official, Development Services Director, and Water Conservation Coordinator and each of their respective designees implements the provisions of this WSCP.

### 3.4 Key Data and Methodologies

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, include the following:

- 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.
- 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.
- Existing infrastructure capabilities and plausible constraints.

- A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.
- A description and quantification of each source of water supply.

### 3.4.1 Water Supply

The annual assessment will evaluate the current year available and one subsequent dry year. The available water supplies for the City shall be quantified each year by summing the available water supplies. Potential production constraints, hydrological, and regulatory conditions will be considered. The long-term contract amount with USBR is sufficient to meet City demands when allocations are not reduced. During a single-dry year, the USBR allotments can be reduced by 50 percent or more.

### 3.4.2 Unconstrained Customer Demand

Water use for the previous year shall be quantified by summing the meter usage of each customer class for the previous year. Customer water demands shall be projected for the upcoming year based on the previous year's water usage and the number of anticipated new customer connections.

### 3.4.3 Planned Water Use for Current Year Considering Dry Subsequent Year

The planned water use for the current year is not impacted by an anticipated subsequent dry year. When USBR allocations are reduced, the City has emergency inter-ties with the City of Redding and Bella Vista Water District (BVWD) in which transfers of water can be made. The City also can purchase supplemental water under short-term contracts from the Shasta County Water Agency (SCWA), the McConnell Foundation, and the Centerville Community Services District (CCSD).

### 3.4.4 Infrastructure Considerations

Infrastructure projects anticipated for the upcoming year that could impact water supply will be evaluated for the timeframe the projects will impact supply. The available water supply will be increased or reduced accordingly for each month.

### 3.4.5 Other Factors

The Regional Housing Needs Assessment (RHNA) is mandated by State Housing Law as part of the periodic process of updating local housing elements of the General Plan. The RHNA for Shasta Lake for the 2018 to 2028 projection period is 238 new housing units, including 28 extremely low-income units, 28 very low-income units, 39 low-income units, 42 moderate-income units, and 101 above moderate-income units. It should also be noted, State legislation in 2017 made Accessory Dwelling Units (ADU) legal in all California cities. Homeowners can decide to build either a detached ADU in their backyard, an attached ADU that is part of a home addition, or an ADU conversion. Although the State has determined ADU's contribute no additional stress on utilities, the addition of another dwelling unit, another family occupant, on a single-family property does impact water usage.

### 3.4.6 Criteria

Evaluation of the appropriate shortage level will include, but not be limited to, the following considerations:

1. Current surface water level (Shasta Lake).
2. Recent trends in surface water level (Shasta Lake).
3. Other hydrological or other local conditions indicative of water supply available.
4. The previous winter's precipitations.
5. The previous year's water demand.
6. Current demand and anticipated demand for water by City Customers.
7. Current and anticipated supply of City water sources.
8. Damage to the City's water system.
9. Predicted weather patterns.
10. Water content of the snowpack.
11. Climate change impacts.

If the available water supply is greater than the anticipated customer demand for the upcoming year, then the City does not need to take any further action. If the anticipated customer demand for the upcoming year is greater than the available water supplies, the City can initiate water conservation actions as detailed in this WSCP.

## Chapter 4

# SIX STANDARD WATER SHORTAGE LEVELS

The following section describes the City water shortage levels and the conservation measures employed during each stage.

No Customer shall make, cause, use, or permit the use of water from the City for any residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this WSCP or in an amount in excess of that use permitted by the Shortage Level then in effect.

The WSCP will be adopted by City Council and authorize the City Manager to declare the appropriate water shortage level utilizing the factors contained in the annual water supply and demand assessment. Any shortage level shall be effective on declaration.

### 4.1 Shortage Levels

There shall be six shortage levels in response to water supply shortages. The six levels, including greater than 50 percent reduction in water supply are summarized in Table 4.1. The percent shortage is from the normal reliability condition. The existence of each level conservation conditions may be declared and adopted by the City in accordance with California State law.

Table 4.1 Water Shortage Contingency Plan Levels

Shortage Level	Percent Shortage Range	Water Shortage Condition
1	10 percent	Water Shortage Alert
2	11 to 20 percent	Moderate Water Shortage
3	21 to 30 percent	Emergency Water Shortage
4	31 to 40 percent	Severe Water Shortage
5	41 to 50 percent	Critical Water Shortage Emergency
6	>50 percent	Catastrophic Interruption of Water Supplies <sup>(1)</sup>

Notes:

(1) Including flooding, major fire emergencies, earthquake, regional power outages, water contamination, and emergencies other than water shortage.

### 4.2 Triggering Mechanisms for Shortage Levels

The triggering mechanisms to use as guidelines for the shortage levels are summarized in Table 4.2. The City Manager may impose any of the following conservation stages based upon facts and circumstances which may not have been otherwise anticipated in this plan.

Table 4.2 Shortage Level Triggers

Shortage Level	Triggers
1 10 percent Water Shortage	<ul style="list-style-type: none"> <li>• System malfunction resulting in 10 percent shortage.</li> <li>• City or State declaration due to drought.</li> <li>• Federal, state, or local disaster declaration that may impact water supplies.</li> <li>• Water Conservation Coordinator determination.</li> <li>• Unplanned City water system maintenance.</li> </ul>
2 11-20 percent Water Shortage	<ul style="list-style-type: none"> <li>• System malfunction resulting in 11 percent to 20 percent shortage.</li> <li>• City or State declaration due to drought.</li> <li>• Federal, state, or local disaster declaration that may impact water supplies.</li> <li>• Water Conservation Coordinator determination.</li> <li>• Unplanned City water system maintenance.</li> </ul>
3 21-30 percent Water Shortage	<ul style="list-style-type: none"> <li>• System malfunction resulting in 21 percent to 30 percent shortage.</li> <li>• City or State declaration due to drought.</li> <li>• Federal, state, or local disaster declaration that may impact water supplies.</li> <li>• Water Conservation Coordinator determination.</li> <li>• Unplanned City water system maintenance.</li> </ul>
4 31-40 percent Water Shortage	<ul style="list-style-type: none"> <li>• System malfunction resulting in 31 percent to 40 percent shortage.</li> <li>• City or State declaration due to drought.</li> <li>• Federal, state, or local disaster declaration that may impact water supplies.</li> <li>• Water Conservation Coordinator determination.</li> <li>• Unplanned City water system maintenance.</li> </ul>
5 41-50 percent Water Shortage	<ul style="list-style-type: none"> <li>• System malfunction resulting in 41 percent to 50 percent shortage.</li> <li>• City or State declaration due to drought.</li> <li>• Federal, state, or local disaster declaration that may impact water supplies.</li> <li>• Water Conservation Coordinator determination.</li> <li>• Unplanned City water system maintenance.</li> </ul>
6 >50 percent Water Shortage	<ul style="list-style-type: none"> <li>• System malfunction resulting in up to &gt;50 percent shortage or catastrophic interruption of water supplies.<sup>(1)</sup></li> <li>• City or State declaration due to drought.</li> <li>• Federal, state, or local disaster declaration that may impact water supplies.</li> <li>• Water Conservation Coordinator determination.</li> <li>• Unplanned City water system maintenance.</li> </ul>

Notes:

(1) Including flooding, major fire emergencies, earthquake, regional power outages, water contamination, and emergencies other than water shortage.

## Chapter 5

# SHORTAGE RESPONSE ACTIONS

The following rules and regulations associated with the shortage levels, described below, will be effective immediately upon declaration and approval of the City Manager. Additional water shortage response actions and/or changes in shortage levels may be recommended by the Water Conservation Coordinator and approved by the City Manager, whenever they determine necessary, in accordance with the annual water supply and demand assessment methodologies.

The water shortage response actions include demand reduction, supply augmentation, operational changes, and mandatory prohibitions to address shortage levels. Violations are considered waste and an unauthorized use of water, which result in penalties as outlined in Section 7.2, as amended from time to time.

### 5.1 Permanent Restrictions

The City enforces permanent State water conservation restrictions that are required regardless of the water supply condition. There are no additional local permanent water conservation restrictions.

### 5.2 Shortage Restrictions

The mandatory reduction measures for each water shortage level are detailed in the following tables (Tables 5.1 through 5.6).

### 5.3 Stage 1 – Water Shortage Alert

In Stage 1, there is a 10 percent reduction in the City's available water supply. The City's water supply (treatment) and/or distribution system is able to meet much of or most of the water demands of its customers in the immediate future.

The water conservation requirements in Table 5.1 are state mandated regardless of drought stages in an effort to reduce water consumption.

Table 5.1 Stage 1 Restrictions

Type Use	Restriction	Compliance
Hose Use	Free-flowing hoses for any use shall be prohibited. Customers shall use automatic shutoff devices on any hose or filling apparatus.	Mandatory
Fixtures	Faulty sprinklers and/or breaks within the customer's plumbing system shall be repaired within twenty-four (24) hours after the customer is notified or discovers the break.	Mandatory

Type Use	Restriction	Compliance
Other	All large water users, such as industrial uses, schools, supermarkets, civic/government buildings, etc., shall develop a water conservation plan indicating a ten percent reduction in water usage and submit the plan to the City's Water Conservation Coordinator for approval within thirty (30) calendar days.	Mandatory
Landscape Irrigation	Use of landscape irrigation systems for all customers, including parks and school grounds, shall be limited to the hours between 9:00 p.m. and 9:00 a.m. to reduce evaporation.	Mandatory
Landscape Irrigation	Irrigated landscaped areas shall include efficient irrigation systems (e.g., drip irrigation systems, timed sprinklers, rain sensors, low-flow spray heads, etc.).	Mandatory
Fixtures	All new development shall be required to install low flow devices (i.e., toilets and shower heads) pursuant to California Building Code standards.	Mandatory
Construction	The use of potable water for dust control shall be reduced to the greatest extent possible.	Mandatory

#### 5.4 Stage 2 – Moderate Water Shortage

In Stage 2, there is an 11 to 20 percent reduction in the City's available water supply. There is a probability that the City's supply (treatment) and/or distribution system will not be able to meet all water demands of City customers with the City's available water supply for the current water year.

The water conservation requirements in Table 5.2 apply during a declared Shortage Level 2 in an effort to increase conservation by 10 percent above Stage 1. All measures from Stage 1 become mandatory in Stage 2 unless noted as more restrictive.

Table 5.2 Stage 2 Restrictions

Type Use	Restriction	Compliance
Water Features	Water use for ornamental ponds and fountains shall be prohibited.	Mandatory
Other	All large water users, such as industrial uses, schools, supermarkets, civic/government buildings, etc., shall develop or update their water conservation plans and submit the plan to the City's Water Conservation Coordinator for approval within thirty (30) calendar days. <sup>(1)</sup>	Mandatory
Landscape Irrigation	Parks and school grounds shall be watered at night only between the hours of 9:00 p.m. and 9:00 a.m., no more than three nights per week, and shall achieve a twenty (20) percent reduction in water use. <sup>(2)</sup>	Mandatory
Landscape Irrigation	Use of landscape irrigation systems for all other customers shall be limited between the hours of 9:00 p.m. and 9:00 a.m. no more than three nights per week. <sup>(3)</sup>	Mandatory

Type Use	Restriction	Compliance
Other	All City water customers who do not comply with the reduced consumption amount shall be required to install retrofit kits. <sup>(4)</sup>	Mandatory
Other	The City will implement excessive water use penalties or tier water rates to discourage excessive water use and shall penalize water customers who fail to meet the reduced consumption amount.	Mandatory
Restaurants	Restaurants and other food establishments shall only serve and refill water upon request.	Voluntary <sup>(5)</sup>

Notes:

- (1) The plan shall address all rationing stages as follows: Stage 2: Demonstrate a twenty (20) percent reduction in water usage; Stage 3: Demonstrate a thirty (30) percent reduction in water usage; Stage 4: Demonstrate a forty (40) percent reduction in water usage; Stage 5: Demonstrate a fifty (50) percent reduction in water usage.
- (2) The reduction shall be measured based on the amount of water used in the previous calendar month compared to the same calendar month in the previous year.
- (3) The limitation for times does not apply to: (a) Drip, bubbler, or soaker irrigation hardware or emitters; (b) Use of an irrigation system for the express purposes of repairing or completing routine maintenance; (c) Watering by use of a hand-held bucket or similar container or a hand-held hose equipped with shut-off nozzle; and (d) Watering by use of a hose-end sprinkler with a radius of not more than ten feet if such sprinkler causes no overspray or runoff to adjoining property or to the roadside ditch or gutter.
- (4) Retrofit kits are water saving devices that can assist customers to save water, including, but not limited to, low-flow showerheads, faucet aerators, spray hose nozzles, and hose timers.
- (5) Unless mandated by State law.

### 5.5 Stage 3 – Emergency Water Shortage

In Stage 3, there is a 21 to 30 percent reduction in the City's available water supply. There is a probability that the City's supply (treatment) and/or distribution system will not be able to meet all water demands of City customers with the City's available water supply for the current water year.

The water conservation requirements in Table 5.3 apply during a declared Shortage Level 3 in an effort to increase conservation by 10 percent above Stage 2. All measures from Stages 1 and 2 become mandatory in Stage 3 unless noted as more restrictive.

Table 5.3 Stage 3 Restrictions

Type Use	Restriction	Compliance
Landscape Irrigation	Parks and school grounds shall be watered at night only between the hours of 9:00 p.m. and 9:00 a.m., no more than two nights per week, and shall achieve a thirty (30) percent reduction in water use.	Mandatory
Landscape Irrigation	Use of landscape irrigation systems for all other customers shall be limited between the hours of 9:00 p.m. and 9:00 a.m. no more than two nights per week for a maximum total run time of fifteen (15) minutes per station per night. <sup>(1)</sup>	Mandatory
Landscape Irrigation	Installation of irrigated landscaping for all new development shall be deferred pursuant to a written Agreement with the City.	Mandatory

Type Use	Restriction	Compliance
Landscape Irrigation	No new landscape irrigation systems shall be installed on developed parcels. This restriction shall not apply to the replacement of inefficient irrigation systems with systems that incorporate water-savings technologies, such as the installation of high efficiency sprinkler heads, weather-based irrigation controllers, and/or drip irrigation systems.	Mandatory
Hotels, motels, and bed and breakfasts	Must offer and clearly notify guests of a "limited linen/towel exchange" program.	Mandatory
Industrial and Commercial	Reduction of water use by any means is encouraged. Compliance with mandatory demand reduction measures is required for outdoor water uses including landscape irrigation, swimming pools, and vehicle washing.	Mandatory

Notes:

- (1) The limitation for times does not apply to: (a) Drip, bubbler, or soaker irrigation hardware or emitters; (b) Use of an irrigation system for the express purposes of repairing or completing routine maintenance; (c) Watering by use of a hand-held bucket or similar container or a hand-held hose equipped with shut-off nozzle; and (d) Watering by use of a hose-end sprinkler with a radius of not more than ten feet if such sprinkler causes no overspray or runoff to adjoining property or to the roadside ditch or gutter.

### 5.6 Stage 4 – Severe Water Shortage

In Stage 4, there is a 31 to 40 percent reduction in the City's available water supply. The City's supply (treatment) or distribution system will not be able to meet all demands of City customers with the City's available water supply for the current water year.

The water conservation requirements in Table 5.4 apply during a declared Shortage Level 4 in an effort to increase conservation by 10 percent above Stage 3. All measures from Stages 1, 2, and 3 become mandatory in Stage 4 unless noted as more restrictive.

Table 5.4 Stage 4 Restrictions

Type Use	Restriction	Compliance
General	Water use shall be restricted so as to meet the minimum requirements for personal health and safety. Priority shall be given to supplying adequate water to ensure public/community health and safety (i.e., fire suppression, medical, veterinarian, and educational institutions).	Mandatory
Swimming Pools	Swimming pools that have been filled prior to Stage 4 shall not be emptied and refilled.	Mandatory
Swimming Pools	Filling of new swimming pools is prohibited as of the effective date of the Stage 4 declaration.	Mandatory
Other	Flushing of sewers and fire hydrants shall be prohibited except in cases of emergency.	Mandatory

Type Use	Restriction	Compliance
Construction	No potable water from the City system shall be used for construction purposes, such as dust control, compaction, or trench jetting.	Mandatory
Hotels, motels, and bed and breakfasts	Must limit linen/towel changes to once every two (2) nights or for the entire stay, whichever is shorter, except for health and safety.	Mandatory

### 5.7 Stage 5 – Critical Water Shortage Emergency

In Stage 5, there is a 41 to 50 percent reduction in the City's available water supply. The City's supply (treatment) or distribution system will not be able to meet all demands of City customers with the City's available water supply for the current water year. In Stage 5, the City is experiencing a major failure of supply, storage, or distribution facilities. The City is not able to meet all customer water requirements with Stage 4 measures.

The water conservation requirements in Table 5.5 apply during a declared Shortage Level 5 in an effort to increase conservation by 10 percent above Stage 4. All measures from Stages 1, 2, 3, and 4 become mandatory in Stage 5 unless noted as more restrictive.

Table 5.5 Stage 5 Restrictions

Type Use	Restriction	Compliance
Residential Development	No new residential development shall be permitted unless the developer has submitted a complete building permit application to the City prior to the Stage 5 declaration. <sup>(1)</sup>	Mandatory
Landscape Irrigation	Use of landscape irrigation systems for lawns for all customers shall be prohibited. To the extent possible, the City will water all public parks and sports fields as needed for public use. Watering, including trees and shrubs, by use of a hand-held bucket or similar container or a hand-held hose equipped with shut-off nozzle is allowed.	Mandatory
Hotels, motels, and bed and breakfasts	Must limit linen/towel changes to once every three (3) nights or for the entire stay, whichever is shorter, except for health and safety.	Mandatory
Vehicle and Equipment Washing	Non-commercial washing of vehicles and mobile equipment is prohibited. Only commercial facilities with water recycling systems may be used.	Mandatory

Notes:

(1) Building permit applications may proceed with a deferral of landscape installation, until the water shortage level has been lifted. Issuance of Temporary Certificate of Occupancy will be allowed in the interim.

### 5.8 Stage 6 – Catastrophic Interruption of Water Supplies

In Stage 6, there is a greater than 50 percent reduction in the City's available water supply. The City's supply (treatment) or distribution system will not be able to meet all demands of City customers with the City's available water supply for the current water year. In Stage 6, the City is experiencing a catastrophic interruption of water supplies including flooding, major fire

emergencies, earthquake, regional power outages, water contamination, and emergencies other than water shortage. The City is not able to meet all customer water requirements with Stage 5 measures.

The water conservation requirements in Table 5.6 apply during a declared Shortage Level 6.

Table 5.6 Stage 6 Restrictions

Type Use	Restriction	Compliance
General	City may establish mandatory water use budgets, if needed.	Mandatory
General	Water use is restricted to essential water uses only. The term "essential water use" is defined to mean water necessary for human consumption, sanitation, and fire protection. All other uses of water that are not specifically required to meet these needs shall be considered non-essential.	Mandatory
Indoor Water Use	Wash only full loads of laundry and/or dishes.	Voluntary
Indoor Water Use	Shorten showers and turn off faucets while brushing teeth or shaving.	Voluntary
Landscape	No new landscape shall be installed until the appropriate water shortage level has been lifted. Exceptions are replacing landscaping with drought tolerant landscape material.	Mandatory
Swimming pools, hot tubs	All pools and tubs shall be covered when not in use to reduce evaporation.	Mandatory
Vehicle & Equipment Washing	Fleet managers are encouraged to only wash those vehicles as is necessary for health and safety.	Mandatory

### 5.9 Supply Augmentation and Other Methods

The methods to augment supply include the following:

- Transfers.
- Purchases.
- Emergency interties.

Actions the City can take to reduce consumption include the following:

- Expand public information campaign.
- Improve customer billing.
- Increase frequency of meter reading.
- Offer water use surveys.
- Provide rebates on plumbing fixtures and devices.
- Decrease line flushing.
- Reduce system water loss.
- Moratorium or net zero demand increase on new connections.
- Implement or modify drought rate structure or surcharge.

- Voluntary rationing.
- Mandatory rationing.

### 5.10 Operational Changes

During times of water supply shortage, the City can:

- Reduce system flushing.
- Monitor meter information to determine where water leaks may be.

### 5.11 Emergency Response Plan

During declared shortages, or when shortage declarations appear imminent, emergency regulations can be enacted by City Council.

The purpose of the City Emergency Response Plan (ERP) is to provide the City 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 City will respond to additional emergency response situations and includes specific action plans (APs) that will be used to respond to events and incidents.

The goals of the ERP are to:

- Rapidly restore water service after an emergency.
- Ensure adequate water supply for fire suppression.
- Minimize water system damage.
- Minimize impact and loss to customers.
- Minimize negative impacts on public health and employee safety.
- Provide emergency public information concerning customer service.

### 5.12 Hazard Mitigation Plan

The City's Hazard Mitigation Plan includes a seismic risk and vulnerability assessment and is included as an appendix in the Urban Water Management Plan (UWMP). The Hazard Mitigation Plan may be updated at any time. The most recent Hazard Mitigation Plan shall apply to the current WSCP.

### 5.13 Shortage Response Action Effectiveness

The effectiveness of the shortage response actions and the extent to which it reduces the gap between supply and demand can be determined through monitoring. The metered data will be analyzed on a month-by-month basis to monitor the effectiveness of reduction actions for each shortage level declarations.



## Chapter 6

# COMMUNICATION PROTOCOLS

The communication protocols contained herein for shortage level declarations reflect the procedures in the City ERP. Due to the sensitive nature of the information contained in the ERP only brief descriptions have been included. Communications will be provided to the customers, public, and partners established in the ERP for emergency planning and mutual aid.

The Water Conservation Coordinator will evaluate supply planning, operational, financial, and communication issues related to the WSCP as needed. The information provided to customers at each shortage level will answer the following:

1. What the customers need to do to save water.
2. Why they need to save water.
3. How long does the City estimate they will need to save water.
4. What the City is doing to correct/supplement the supply problem or address the situation.

The degree of communication will vary based on the shortage level, supply/regulatory conditions, seasonal impacts, and other factors. The key audiences the City will need to communicate with include:

- Public (water customers).
- Homeowners.
- Public officials.
- Multi-family property owners/managers.
- Commercial-industrial property managers.
- Landscape contractors/suppliers.
- Business/civic leaders.
- High-visibility or high-water-use industries (restaurants, hotels, construction, etc.).
- Land-use agencies.
- Environmental groups.
- Community-based service organizations.
- Non-English-speaking populations.
- Temporary residents (tourists, etc.).
- Coordinating agencies.

Depending on the conditions, some of these audiences may be prioritized for outreach.

### 6.1 Communication Protocol for Normal Water Supply Conditions

During normal water supply conditions, the City will promote water efficiency by sharing information on the City's website ([www.cityofshastalake.org](http://www.cityofshastalake.org)):

- Permanent water conservation restrictions.
- Water efficiency rebate and other efficiency programs.
- Water conservation tips.

## 6.2 Communication Protocol for Current and Predicted Shortages

The Water Conservation Coordinator and the City Manager will meet to review the outcome of the annual supply and demand assessment and determine steps to be taken for current and predicted shortages. The shortage levels will be communicated to the City Council and the City Manager or his/her designee will prepare for and establish timing for a declaration. Public notification is not part of this stage.

## 6.3 Communication Protocol for Stages 1 – 5 Declarations

In the event of a shortage level declaration the City shall:

- Mail or electronically mail information to every customer and reasonably available potential water user explaining the importance of significant water use reductions.
- Provide technical information to customers on ways to improve water use efficiency.
- Conduct media campaign to remind consumers of the need to save water.
- Enforce the permanent water conservation restrictions.

## 6.4 Communication of a Catastrophic Emergency and Stage 6 Declaration

The City uses the Incident Command System (ICS) for its command structure during water emergencies. In the event of a catastrophic emergency, the City will fully implement the Emergency Response Plan, immediately initiate appropriate APs and fully activate the City Emergency Operations Center (EOC).

## 6.5 Public Notice Procedures

The City's Public Information Officer (PIO) is the official spokesperson for the City and is authorized to speak directly to public media representatives. The PIO will contact the news media to broadcast the necessary information. As a follow-up measure, the local newspaper(s) that serves the service area will be contacted.

The City of Shasta Lake has prepared a series of public notices and press releases for use during various emergency situations in accordance with Division of Drinking Water (DDW) guidance. If the water system is experiencing power outages, water outages, or low-pressure problems, a consumer alert may be issued to the public. The notice provides consumers information on conserving water.

## Chapter 7

# COMPLIANCE AND ENFORCEMENT

A violation of any requirement set forth in this WSCP shall be subject to the water service termination procedures and penalties as outlined in Section 7.2, as amended from time to time.

### 7.1 Enforcement

The City Manager, Building Official, Development Services Director, and Water Conservation Coordinator and each of their respective designees are each authorized to administer and enforce all provisions of the WSCP, including the issuance of citations.

### 7.2 Penalties

It is unlawful for any person to violate or cause or permit the violation of any of the provisions of this WSCP or provide false information to the City in response to City requests for information. The penalties for violations of any provision of this WSCP are as follows:

- First Violation: No penalty shall be imposed. The City shall provide notice of the violation and a copy of this WSCP to the current property owner and/or billing address.
- Second Violation: No penalty shall be imposed. The City shall issue a written notice of the violation by certified mail to the current property owner and/or billing address and provide notice that additional violations may result in penalties or termination of service.
- Third Violation: A third violation within 12 calendar months of the second violation shall result in a penalty not to exceed \$100.00.
- Fourth Violation: A fourth violation within 12 calendar months of the third violation shall result in a penalty not to exceed \$200.00.
- Fifth and Subsequent Violations: A fifth violation and subsequent violations within 12 calendar months of the fourth violation shall result in a penalty not to exceed \$500.00.

For third and subsequent violations, the city shall issue a written notice of the violation by certified mail to the current property owner and/or billing address. The amount of the penalty shall be added to the next water bill 30 days after the date of the written notice of the violation, if not paid in full or protested pursuant to Section 7.2.4. If the penalty is added to the water bill, failure to pay the penalty shall be treated as nonpayment of the water bill and water service may be terminated as a result.

Each separate day or portion thereof in which any violation of this WSCP occurs or continues without a good faith effort by the customer to correct the violation shall constitute a separate violation.

#### 7.2.1 Termination of Service

In addition to any penalties, the City may disconnect and/or terminate a customer's water service. If water service is disconnected, it shall be restored only upon payment of the connection charge fixed by City Council.

The City may not terminate service due to a customer's failure to comply with the rules and regulations unless the City first gives notice of the violation and the consequence of the violation.

### **7.2.2 Civil Enforcement**

Violations of this WSCP may also be redressed by civil action. In addition to being subject to prosecution, any person who violates any of the provisions of this WSCP may be made the subject of a civil action. Appropriate civil action includes, but is not limited to, injunctive relief and cost recovery.

### **7.2.3 Remedies Cumulative**

The remedies available to the City to enforce this WSCP are in addition to any other remedies available under the Shasta Lake Municipal Code or any state statutes or regulations and do not replace or supplant any other remedy but are cumulative thereto.

### **7.2.4 Protesting Penalties/Fines**

A protest of penalties/fines shall be in writing on a form prescribed by the City and shall be filed with the City no later than 14 calendar days from the date of notice of a violation. The protest shall be accompanied by photographs, maps, drawings, or other information showing why the protest should be granted.

The City Manager or his/her designee shall consider all protests and make a determination on the request no later than 10 calendar days after submittal and may approve, conditionally approve, or deny the protest. The applicant shall be notified in writing of any action taken.

The decision of the City Manager or his/her designee may be appealed to the City Council by written notice within 10 calendar days of the date of action taken on the protest request. The appeal shall be scheduled for City Council consideration at the next possible City Council meeting. Upon granting any protest request, City Council may impose any conditions it determines to be appropriate. The decision of City Council shall be prepared in writing and provided to the applicant.

## **7.3 Hardship Variances**

If, due to unique circumstances, a specific requirement of this WSCP would result in undue hardship to a person using water or to property upon which water is used, that is disproportionate to the impacts to water users generally or to similar properties or classes of water users, then the person may apply for a variance from the provisions of this WSCP.

An application for a variance shall be in writing on a form prescribed by the City. The application shall be accompanied by photographs, maps, drawings, or other information showing why the request should be granted.

The City Manager or his/her designee shall consider all variance applications and make a determination on the request no later than 10 calendar days after submittal and may approve, conditionally approve, or deny the variance request. The applicant shall be notified in writing of any action taken.

An application for a variance shall be denied unless the City Manager or his/her designee finds, based on the information provided in the application, supporting documents, or such additional

information as may be requested by the City, and on water use information for the property as shown by the records of the City, all of the following:

1. Due to unique circumstances a specific requirement would result in undue hardship.
2. The variance does not constitute a grant of special privilege inconsistent with the limitations upon other residents and businesses.
3. Because of special circumstances applicable to the property or its use, the strict application of this WSCP would have a disproportionate impact on the property or use that exceeds the impacts to residents and businesses generally.
4. Granting the variance will not be of substantial detriment to adjacent properties and will not be detrimental to the general welfare of the public.
5. The conditions of the subject property or the intended use of the property for which the variance is sought is not common, recurrent or general in nature.
6. Proposed alternative water use restrictions for the property would result in equal or greater water savings than the existing water use restrictions and the customer has achieved the maximum practical reduction in water consumption.

### **7.3.1 Appeal Process**

Any interested person may appeal the decision of the City Manager or his/her designee to the City Council by written notice within 10 calendar days of the date of the decision on the variance request. The appeal shall be scheduled for City Council consideration at the next possible City Council meeting. Upon granting any appeal, City Council may impose any conditions it determines to be appropriate. City Council's decision on the variance request shall be prepared in writing and provided to the appellant. The decision of City Council shall be final.

### **7.3.2 Previous Violations.**

Any approved or conditionally approved variance is valid from the date it was approved or conditionally approved. Any previous violations and subsequent penalties associated with those violations are final and will not be reimbursed.



## Chapter 8

# LEGAL AUTHORITIES

The City Manager, Building Official, Development Services Director, and Water Conservation Coordinator and each of their respective designees are each authorized to administer and enforce all provisions of this WSCP, including the issuance of citations. The City Manager or a designated representative shall likewise be authorized to grant hardship variances from any provision of the WSCP as they deem appropriate under the circumstances. Any interested person may appeal the decision of the City Manager or their designee to the City Council. The decision of the City Council shall be final.

The WSCP will be adopted by City Council and authorize the City Manager to declare and adopt a water shortage emergency condition in accordance with California State law (Water Code Section Division 1, Chapter 3, Section 350).

The City will 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 (California Emergency Services Act, Article 2, Section 8558). Coordination protocols and a list of contacts is contained in the City ERP.



## Chapter 9

# FINANCIAL CONSEQUENCES OF WSCP

The City is fully metered and all City customers are billed volumetrically. Therefore, the City may experience a decrease in revenue with reduced water sales during a water shortage. Annually during the budget process, the City forecasts the revenues expected for the upcoming year. At that time, shortfalls in revenues relating to water shortage will be identified and rate adjustments recommended. The City shall monitor water revenues and expenses closely to evaluate whether “water shortage” adjustments to water rates are required.

The City’s water rates and charges include drought surcharges for Stages 1 through 5. The drought surcharge for Stage 6 shall be the same as Stage 5. Additional costs are associated with increased monitoring during water shortage situations, namely due to an increase in the hours required to monitor customer accounts and enforce reduction actions. The additional costs associated with this effort, however, are not expected to significantly impact City revenues and expenditures.

The City does not expect to use financial reserves to address decreased water sales during a water shortage. The City will consider postponement of capital improvements to overcome impacts from water shortage contingency planning to revenues and expenditures. This evaluation would be considered during the annual supply and demand assessment.



## Chapter 10

# MONITORING AND REPORTING

The City is fully metered and all City customers are billed volumetrically. The City uses these meters to monitor City-wide use, individual customer use, and track actual reductions in water use. By periodic review of customer water use, the City is able to track the effectiveness of the shortage level reduction actions, educate customers regarding water use, and also identify leaks and other areas where additional conservation may be possible.

Monitoring will be used to ensure appropriate data is collected, tracked, and analyzed for purposes of determining:

- Customer compliance.
- Effectiveness of reduction actions.
- Potential leaks in the distribution system.
- Accurate monthly demand data for the annual supply and demand assessment.

Monitoring and reporting key water use metrics is fundamental to water supply planning and management and will be a critical part of the annual supply and demand assessment. Monitoring is also essential to ensure that the shortage level response actions achieve their intended water use reduction purposes or to determine if improvements or new actions are needed. Monitoring for customer compliance tracking is useful in enforcement actions. It should be noted that timing, frequency, and metrics will likely be variable, depending on the water shortage level and enforcement action logistics.

The City can compare meter data with water use in prior months and during non-drought years to determine if it is achieving specific percentage goals for water consumption associated with the drought response levels. If the goals are not being met, the City can implement additional shortage response actions at any time.



## Chapter 11

# WSCP REFINEMENT PROCEDURES

To evaluate the effectiveness of the WSCP and to ensure that procedures and practices developed under the WSCP are adequate and are being implemented properly, the Water Conservation Coordinator will perform audits of the program on a periodic basis, at least every five (5) years in coordination with the UWMP update. The Water Conservation Coordinator will also assess the effectiveness of the communication plan so that it may be modified as appropriate in the future.

The Water Conservation Coordinator will perform a thorough review of monitoring and reporting program data to determine the effectiveness of the reduction actions and whether the procedures and provisions of the WSCP need to be revised. The review will compare the expected percent demand reduction against actual reductions and shortage response actions.

City staff, customers, and other interested parties may have suggested actions or procedures to refine the WSCP. The Water Conservation Coordinator will evaluate these on a case-by-case basis for incorporation into the WSCP.



## Chapter 12

# SPECIAL WATER FEATURE DISTINCTION

The City restricts potable water use for the ornamental water features listed below unless the water is recirculated:

- Ponds.
- Lakes.
- Waterfalls.
- Fountains.

An ornamental or decorative water feature is defined as a design element where artificially supplied open water performs solely an aesthetic function. Ornamental water features do not include recreational water features, such as swimming pools and spas.



## Chapter 13

# PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

Per the CWC, the following steps shall be performed prior to adoption of the WSCP:

- The City will issue a notification of a public hearing to customers, the county, and public.
  - The City will publish notification of the public hearing in a local newspaper for two consecutive weeks.
  - The City shall hold a public hearing to obtain public input.
  - Following the public hearing or a subsequent meeting, the City Council shall formally adopt the WSCP.
  - Per CWC Section 10632 (a)(c), the City will make the WSCP available on the City's website ([www.cityofshastalake.org](http://www.cityofshastalake.org)) within 30 days of the adoption.
- The City may choose to amend the WSCP at any time. If so, each of the steps above must be followed.