2020 Water Shortage Contingency Plan

This plan was adopted on June __, 2021
pursuant to
San Luis Obispo City Council Resolution
No. _____ (2021 series).

San Luis Obispo City Council

Heidi Harmon, Mayor
Erica A. Stewart, Vice Mayor
Carlyn Christianson
Jan Marx
Andy Pease

Plan Prepared by:

City of San Luis Obispo, Utilities Department
879 Morro Street
San Luis Obispo, CA. 93401

The City's 2020 Water Shortage Contingency Plan is available for public review at the City's web page at slowater.org

For 2020, the City's Water Shortage Continency Plan is published separately from the 2020 Urban Water Management Plan consistent with State requirements. The 2020 Urban Water Management Plan is also available for public review at the City's web page at slowater.org

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The City's Water Shortage Contingency Plan (WSCP) provides the foundation for a staged response to worsening water shortage conditions. A water shortage could occur due to drought, earthquake, infrastructure failure, or other emergency. Drought may occur with unpredictable frequency, intensity, and duration.

An update to the City's Water Conservation Ordinance (Chapter 13.07 of the Municipal Code), will establish the regulations and procedures for implementing this Plan and update the ordinance to comply with newer requirements under Water Code *Chapter 3.3: Excessive Residential Water Use During Drought.* A preliminary draft Water Conservation Ordinance is provided in Appendix VI.

The California Department of Water Resources defines drought as:

"*A deficiency of precipitation over an extended period of time resulting in a water shortage for some activity, group, or environmental sector.*"

1. WATER SUPPLY RELIABILITY ANALYSIS

Water supply reliability is the City's ability to meet the water needs of its customers under varying conditions. Chapter 6 of the City's Urban Water Management Plan (UWMP) assesses water supply reliability by analyzing the hydrological variability of the City surface water reservoirs (Salinas, Whale Rock, and Nacimiento), regulatory variability, climate conditions, and other factors that may affect the City's water supplies and customer water uses. The analysis applies worst-case drought conditions according to guidelines set forth in the UWMP plan documentation. The following tables provide data on the reliability of the City's water supply during normal, single-dry, and a severe drought period lasting five consecutive years. The City remains confident in the reliability of its multi-source water supply portfolio.

Table 1 lists the years which correlate to the guidelines for the specific water year type and are based on rainfall information. The City's average water year was determined to be 2020 based on review and update of the City's average rainfall total. The City's single dry water year was determined to be 2013 as the rainfall total that year was the lowest on record. The City's multiple dry year scenario was determined to be 2011 to 2015 as the combined rainfall total for those five years was the lowest on record.

Table 2, Table 3, and Table 4 summarize the City's water supplies in a normal year, single dry year and a multiple dry year scenario. To address Water Code Section 10635 (b), Table 5 includes available water supply and demand estimate for 2021 through 2025. These water demand projections were derived using 117 gpcd and population growth levels identified in the City's *General Plan Land Use Element*. Both factors are higher than current gpcd and the current population. The City does not anticipate a water shortage necessitating any water supply augmentation or requiring water use restrictions if the City entered five consecutive years of drought.

TABLE 1: Basis of Water Year Data

Year Type	Base Year(s)	Volume Available
Average Year	2020	10,143
Single-Dry Year	2013	10,143
Consecutive-Dry Years, 1st year	2011	10,143
Consecutive -Dry Years, 2nd year	2012	10,143
Consecutive -Dry Years, 3rd year	2013	10,143
Consecutive -Dry Years, 4th year	2014	10,143
Consecutive -Dry Years, 5th year	2015	10,143

NOTES

1. Volume available includes the City's contractual supply to Nacimiento Reservoir, Safe Annual Yield from Salinas and Whale Rock Reservoirs, and recycled water.
2. Units are in acre-feet per year.

Source: City of San Luis Obispo Utilities Department, 2021.

TABLE 2: Supply and Demand Comparison (Normal Year)

	2020 (actual)	2025	2030	2035	2040
Supply totals	10,143	10,337	10,537	10,587	10,637
Demand totals	4,817	7,272	7,713	8,191	8,624
Difference	5,326	3,166	2,824	2,396	2,013

NOTES
1. Units are in acre-feet per year.
2. Supply total includes the City's contractual supply to Nacimiento Reservoir, Safe Annual Yield from Salinas and Whale Rock Reservoirs, and projected increases in recycled water deliveries.
3. Water demand projections for 2025 through 2040 were derived using 117 gpcd and population growth levels identified in the City's General Plan Land Use Element. Both factors are conservatively higher than the City's 2020 population and actual gpcd (92 gpcd).

Source: City of San Luis Obispo Utilities Department, 2021.

TABLE 3: Single Dry Year Supply and Demand Comparison

	2020 (actual)	2025	2030	2035	2040
Supply totals	10,143	10,337	10,537	10,587	10,637
Demand totals	4,817	7,272	7,713	8,191	8,624
Difference	5,326	3,166	2,824	2,396	2,013

NOTES
1. Units are in acre-feet per year.
2. Supply total includes the City's contractual supply to Nacimiento Reservoir, Safe Annual Yield from Salinas and Whale Rock Reservoirs, and projected increases in recycled water deliveries.
3. Water demand projections for 2025 through 2040 were derived using 117 gpcd and population growth levels identified in the City's General Plan Land Use Element. Both factors are conservatively higher than the City's 2020 population and actual gpcd (92 gpcd).

Source: City of San Luis Obispo Utilities Department, 2021.

TABLE 4: Multiple Dry Year Supply and Demand Comparison

		2020 (actual)	2025	2030	2035	2040
First year	Supply totals	10,143	10,337	10,537	10,587	10,637
	Demand totals	4,817	7,272	7,713	8,191	8,624
	Difference	5,326	3,166	2,824	2,396	2,013
Second year	Supply totals	10,143	10,337	10,537	10,587	10,637
	Demand totals	4,817	7,272	7,713	8,191	8,624
	Difference	5,326	3,166	2,824	2,396	2,013
Third year	Supply totals	10,143	10,337	10,537	10,587	10,637
	Demand totals	4,817	7,272	7,713	8,191	8,624
	Difference	5,326	3,166	2,824	2,396	2,013
Fourth year	Supply totals	10,143	10,337	10,537	10,587	10,637
	Demand totals	4,817	7,272	7,713	8,191	8,624
	Difference	5,326	3,166	2,824	2,396	2,013
Fifth year	Supply totals	10,143	10,337	10,537	10,587	10,637
	Demand totals	4,817	7,272	7,713	8,191	8,624
	Difference	5,326	3,166	2,824	2,396	2,013

NOTES
1. The urban water targets determined in this UWMP were considered when developing the 2020 water demands included in this table.
2. Supply total includes the City's contractual supply to Nacimiento Reservoir, Safe Annual Yield from Salinas and Whale Rock Reservoirs, and projected increases in recycled water deliveries.
3. Water demand projections for 2025 through 2040 were derived using 117 gpcd and population growth levels identified in the City's General Plan Land Use Element. Both factors are conservatively higher than the City's 2020 population and actual gpcd (92 gpcd).

Source: City of San Luis Obispo Utilities Department, 2021

TABLE 5: Five Year Drought Risk Assessment (2021-2025)

2021	Total
Total Water Use	6,276
Total Supplies	10,177
Surplus/Shortfall w/o/ WSCP Action	3,901
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP – supply augmentation benefit	0
WSCP – use reduction savings benefit	0
Revised Surplus/(shortfall)	3,901
Resulting % Use Reduction from WSCP action	0%
2022	**Total**
Total Water Use	6,528
Total Supplies	10,217
Surplus/Shortfall w/o/ WSCP Action	3,689
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP – supply augmentation benefit	0
WSCP – use reduction savings benefit	0
Revised Surplus/(shortfall)	3,689
Resulting % Use Reduction from WSCP action	0%
2023	**Total**
Total Water Use	6,593
Total Supplies	10,257
Surplus/Shortfall w/o/ WSCP Action	3,664
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP – supply augmentation benefit	0
WSCP – use reduction savings benefit	0
Revised Surplus/(shortfall)	3,664
Resulting % Use Reduction from WSCP action	0%
2024	**Total**
Total Water Use	6,659
Total Supplies	10,297
Surplus/Shortfall w/o/ WSCP Action	3,638
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP – supply augmentation benefit	0
WSCP – use reduction savings benefit	0
Revised Surplus/(shortfall)	3,638
Resulting % Use Reduction from WSCP action	0%
2025	**Total**
Total Water Use	6,725
Total Supplies	10,337
Surplus/Shortfall w/o/ WSCP Action	3,612
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP – supply augmentation benefit	0
WSCP – use reduction savings benefit	0
Revised Surplus/(shortfall)	3,612
Resulting % Use Reduction from WSCP action	0%

Notes:

1. Units are in acre-feet per year.
2. Supply total includes the City's contractual supply to Nacimiento Reservoir, Safe Annual Yield from Salinas and Whale Rock Reservoirs, and projected increases in recycled water deliveries.
3. Water demand projections for 2021 through 2025 were derived using 117 gpcd and population growth levels identified in the City's General Plan Land Use Element. Both factors are conservatively higher than the City's 2020 population and actual gpcd (92 gpcd).

Source: City of San Luis Obispo Utilities Department, 2021.

2. ANNUAL WATER SHORTAGE ASSESSMENT

Consistent with the requirements of the 2020 UWMP, the City will perform a water shortage assessment each year to review available water supplies and confirm its approach for the coming year. The degree of the water supply shortage determines the necessary level of response from the City and customers, if any. This water shortage assessment includes evaluation of the following:

a. Current year water demand across customer categories (residential, the "CII" sector which includes commercial, industrial, institutional uses, and irrigation)
b. Water availability at each water supply source
c. Available supplemental water supply options
d. Infrastructure considerations, including planned maintenance, repairs, and upgrades

The City utilizes a Water Projection Model to test both hypothetical and actual water demand scenarios and to forecast how long water supplies will sustain the community under specific conditions. The Water Projection Model accounts for the storage in the City's surface water reservoirs, in conjunction with other available resources (i.e., groundwater and recycled water), needed to meet the City's water demand. The model uses historical hydrologic information (rainfall, evaporation, inflow) based on the average for the worst drought period (2012 to 2014). Other data included in the model is:

a. Water entitlement
b. Current reservoir levels/storage
c. Average gallons per capita per day community water demand
d. Rainfall
e. Temperature
f. Evaporation
g. Existing population
h. Population growth

Utilizing the Water Projection Model as part of its water supply management, the City can foresee whether a water supply shortage is anticipated in any given year, and the severity of a shortage based on the availability of the City's different sources of supply and water demand trends. The City uses the model to study the potential impacts of various intensities of drought conditions, including increased temperature and evaporation rates, along with decreased precipitation.

In accordance with 2018 UWMP requirements, each year the City will prepare a water supply and demand assessment, present it to the City Council for review, and submit its annual Water Shortage Assessment Report to DWR. The Assessment will be conducted based on the use of the City's Water Projection Model and the key data inputs described above to characterize near-term water supply conditions (i.e., for the next 12 months). Using the Water Projection Model described above for 2021, the City has more than ten years of water available under current water supply and demand conditions.

TABLE 6: Reservoir Storage

Reservoir	Volume (Acre-Feet)	Percent of Capacity
Salinas	16,267	68.23%
Whale Rock	30,050	77.12%
Nacimiento	123,365	32.64%

Notes:
1. Reservoir volumes are as of 5/13/2021.
2. Of the total Whale Rock Reservoir volume above, the City's available balance is 15,295 acre-feet.

Source:https://www.slocity.org/government/department-directory/utilities-department/water/water-sources

3. WATER SHORTAGE RESPONSE

The City's water shortage response is dependent on the ability to temporarily augment supply and/or reduce water demand. The City's water shortage response would combine a variety of strategies including outreach, indoor water efficiency regulations, and outdoor irrigation restrictions, each increasing in intensity as the shortage persists and the City's water supplies are further restricted. Implementation of these restrictions is necessary to conserve the City's water supply for the greatest public benefit regarding domestic use, sanitation, and fire protection. This section describes the general strategies the City will employ to mitigate the impacts of water shortage on the community.

Voluntary Reduction Measures
All customers may be asked to voluntarily reduce their water usage during a water shortage. The City may provide water conservation tips and suggestions through various public outreach methods, encourage and distribute conservation devices such as low flow shower heads and faucet aerators, discourage excessive outdoor watering, and encourage landscaping with drought tolerant plants. Voluntary reductions measures are described in more detail in Section 4.

Mandatory Reduction Measures
The City may place mandatory reduction measures on certain uses, such as restricting outdoor watering to prescribed times and number of days per week beginning in the Warning Stage, with days and times for landscape watering further limited in later stages of the plan. Mandatory reduction measures may limit specific inefficient methods of irrigation (i.e., overhead spray/sprinkler ban).

The seasonal increase in water demand underscores the importance of implementing outdoor irrigation-focused reduction programs. Approximately 50 percent of residential water use in San Luis Obispo is for landscape irrigation. Therefore, restrictions on outdoor water use are generally effective in reducing water demand. Many outdoor uses are considered discretionary, or nonessential for health and safety purposes, are highly visible and relatively easy to monitor, and often are a substantial component of water demand, particularly during the summer months when drought conditions are often most severe.

Water Use Prohibitions
Water use prohibitions will vary by drought stage, with the fundamental purpose of restricting or prohibiting non-essential uses that are not required for basic health and safety. During a declared water shortage, specific prohibitions would be described in a Water Shortage Ordinance adopted by the City Council. In the Critical Stage, all non-essential outdoor water use, except recycled water or grey water, may be prohibited.

The City will adopt regulations at the appropriate water shortage stage to promote water conservation, such as posting signage at various establishments, offering water audits to maximize water conservation, and prescribing to customer-specific water budgets (i.e., water allocations).

Supplemental Water Supply Options
During a declared water shortage emergency, the City may also utilize supplemental water supply options, or acquire a new supply as warranted by the current situation. This may include utilizing more groundwater and/or expanding the City's use of recycled water. These water supply options may be less desirable during normal operations due to increased operational costs.

4. WATER SHORTAGE STAGES

The goals of the WSCP are to extend the City's available water resources long enough to gain another winter rainfall period which could serve to add to reservoir storage. Extending available water resources through water demand reduction provides time for the City to bring on supplemental water supplies to meet demand. It is the City's goal to implement water demand reduction programs that will achieve measurable water savings without requiring customers to make significant lifestyle changes. In the more advanced water shortage stages lifestyle and water-use habit changes will be necessary.

This section identifies the measures that may be taken at each stage to achieve desired water use reduction levels. The purpose of establishing water shortage stages is to clearly define the severity of the shortage and establish appropriate targets for demand reductions. Defining these stages allows the City to respond to worsening conditions, with each stage "triggering" different actions. The multi-stage approach provides different levels of response for a water shortage event ranging from a ten percent supply deficiency up to a 50 percent or greater deficiency.

Table 7 provides a quick reference guide to the WSCP, though City Council may adopt variations of these Water Shortage Response Actions, independent from the stage resulting from the use of the Water Projection Model, to strategically address the current water shortage situation. Each stage describes increasing levels of water demand reduction and water supply augmentation methods. As stated previously, during an actual water shortage emergency, other measures may be imposed. The City Council would formally declare a water shortage emergency, per Water Code Chapter 3.

TABLE 7: Water Shortage Response Stages
Quick Reference Guide

STAGE	WATER SUPPLY STATUS[1]	CITY ACTIONS
Monitor	5+ years of available water supply	City maintains existing water conservation staffing levels and budget that supports meeting internal water efficiency goals and regulatory requirements for water conservation, including ongoing public outreach.
Watch	< 5 years of available water supply (up to 10% water shortage)	City increases programs that encourage voluntary water conservation including public outreach, rebate programs, and water efficient fixture giveaways. City examines available alternative water sources (groundwater expansion, recycled water filling stations, water purchase agreements, etc.), City modifies internal operations to focus on decreasing water loss and prepares for subsequent WSCP stages. City ceases any short-term outside-City water sales/leases.
Warning	< 4.5 years of available water supply (up to 20% water shortage)	City implements time of use irrigation restrictions (7:00 PM – 7:00 AM). City increases staffing, budget, and outreach to achieve additional voluntary conservation savings while preparing for Alert-Critical stages.
Alert	< 4 years of available water supply (up to 30% water shortage)	City requires mandatory conservation measures including outdoor irrigation restrictions (four day a week watering) and considers a Water Offset Program for new connections.
Severe	< 3.5 years of available water supply (up to 40% water shortage)	City implements Water Allotment Program. Water Offset Program for new connections may be increased (1.5:1 or 2:1 offset ratio). Allowable irrigation reduced to three days per week.
Extreme	< 3 years of available water supply (up to 50% water shortage)	City continues to implement a Water Allotment Program with reduced allotment levels. Water Offset Program for new connections may be increased (1.5:1 or 2:1 offset ratio). Allowable irrigation reduced to two days per week with optional additional measures limiting turf and spray irrigation.
Critical	< 2.5 year of available water supply (>50% water shortage)	City continues to implement a Water Allotment Program at further reduced levels (minimum for public health and safety). Irrigation no longer permitted. Water Offset Program to cease and no new connections permitted.

NOTE:
The City's Water Supply Status is informed by the Water Projection Model described in Section 2, Annual Water Shortage Assessment, of this WSCP.

Water Shortage Response Stage: MONITOR

The City of San Luis Obispo has made water conservation an integral part of the community's culture and policy context for managing its water resources. The community has demonstrated a high commitment to reducing its water usage during water shortages. Although not an actual declaration of a water shortage, the Water Shortage Contingency Plan's Monitor Stage remains in place at all times along with voluntary conservation.

This stage is focused on achieving voluntary water savings, as opposed to a mandatory demand reduction programs. To ensure the City is using water responsibly and remaining in compliance with water efficiency goals are regulations, the City continually assesses available water supply levels, monitors customer water demand trends, conducts water loss audits, and evaluates potential supplemental supply projects. The following are examples of demand management measures that may be taken to maintain water use efficiency goals:

1. Implement public outreach and communication programs (bill stuffers, social media, etc.)
2. Participate in trade shows, home shows, and special community events
3. Offer complimentary water audits
4. Identify and notify customers of possible leaks and inefficient uses of water
5. Encourage the use of drip irrigation and drought tolerant plants
6. Implement school (K-12) education programs related to water conservation
7. Enforce the water efficiency retrofit program (toilet retrofit upon sale program)

Actions at the Monitor Stage would also include active enforcement of the City's water waste prohibitions, such as those from Chapter 13.07 of the City's Municipal Code, which defines water waste as follow:

City of San Luis Obispo, Municipal Code

13.07.020 – Water runoff prohibited.

A. No person shall cause any water delivered by the city water system to flow away from property owned, occupied or controlled by such person in any gutter, ditch or in any other manner over the surface of the ground, so as to constitute water waste runoff.

B. "Water waste runoff" means water flowing away from property and which is caused by excessive application(s) of water beyond reasonable or practical flow rates, water volumes or duration of application. (Ord. 1089 § 1 (part), 1987)

Water Shortage Response Stage: WATCH

When the City's available water supply would provide **less than five years** of water, staff could recommend to the City Council that they adopt a resolution declaring a water shortage and to enter the Watch Stage and urge the public to reduce water use by approximately ten percent.

During the Watch Stage, the demand management measures utilized during the Monitor Stage above will increase along with a continued focus on voluntary water use reduction. The City will also increase public outreach, implement system and operational changes, increase enforcement actions and patrols, and undertake other administrative actions. These program expansion and changes may include:

1. Water Demand Reduction Programs:

A. Accelerate water audit programs for all customer classes
B. Identify largest water users in each sector and contact for complementary water audits
C. Increase water waste patrols
D. Conduct water use surveys
E. Implement rebate programs
F. Consider the use of irrigation limitations
G. Host workshops on effective irrigation practices

2. Public Outreach Programs:

A. Issue a press release following Watch Stage declaration
B. Include information in quarterly Resource Newsletter
C. Evaluate outreach effectiveness and expand outreach for non-English languages as needed
D. Update City website and create a page dedicated to information on details of WSCP Watch Stage
E. Use billing inserts to notify public of current situation and needs
F. Coordinate with regional partners on messaging and outreach
G. Increase outreach to Cuesta and Cal Poly students and at public events such as Farmers Market, SLO Home Show, homeowners association board meetings, meetings with hospitality industry, etc.
H. Focus social media platforms on issues consistent with needed demand reductions

3. System and Operational Changes:

A. Cease any short-term water sales.
B. Reduce water usage for water main flushing and hydrant flushing
C. Reduce distribution system pressure where feasible
D. Increase leak detection, water meter testing, and water meter replacement
E. Require use of non-potable water sources for all street sweeping and hydrocleaning
F. Activate the Drought Taskforce

4. Enforcement Actions:

A. **First Violation:** Customer Notification and Education

Staff will notify the customer of the particular violation observed, and the demand reduction programs currently in place. Staff will assist the customer in determining resources necessary to comply with requirements. Examples of notification include: door tags containing educational information, mailed letter, and/or personal phone call by staff.

B. **Second Violation:** Issuance of Notice of Violation

Customer will be issued a written notice of violation (NOV), notifying the customer of specific violation, date and time the violation was observed, and consequences of subsequent violations.

C. **Subsequent Violations:** Customer may be issued a penalty/fine for violation.

5. Other Administrative Actions:

A. Begin drafting ordinance revisions and code changes that would go into effect in subsequent water shortage stages.
B. Plan for the funding and implementation of specific conservation programs launched in subsequent water shortage stages.
C. Review potential fiscal impacts of drought (i.e., increased water supply, operational, and capital costs); and demand reductions (reduced revenue).
D. Identify and plan for the need for additional staff. In planning for additional staff, consideration should be given to funding, available office space, vehicles, training, and other needed supplies and support.
E. Consider need for drought surcharge to stabilize revenue.
F. Consider deferring previously scheduled capital projects as necessary to invest in acquisition of needed water supply sources and demand reductions.
G. Review available supplemental water supply options, such as increased use of groundwater, utilization of potable reuse, and implementation of residential recycled water filling stations for landscape irrigation.

Water Shortage Response Stage: WARNING

When the City's available water supply would provide **less than 4.5 years** of water, staff could recommend to the City Council that they adopt a resolution to enter the Warning Stage and urge the public to reduce water use by an additional 10 percent including mandatory conservation measures.

The water conservation measures described in the Monitor and Watch Stages above may increase during the Warning Stage, with an increased focus on limiting outdoor water uses. System and operational changes would remain in place. These increases and additions to programs may include:

1. Water Demand Reduction Programs:

A. Continue implementation of and possible increase of all demand reduction programs listed in Watch Stage.
B. Limit outdoor watering to between the hours of 7:00 PM and 7:00 AM.
C. Require restaurants to only serve water upon request.
D. Restrict use of decorative water features and fountains.

2. Public Outreach Programs:

A. Continue implementation of and possible increase of all public outreach programs listed in Watch Stage.
B. Issue a press release following Warning Stage declaration.
C. Target outreach to customers with large landscapes regarding irrigation restrictions.
D. Use of billing inserts, social media, postcards, and direct mail pieces to inform customers of new requirements and prohibitions.
E. Coordinate with local business groups such as the Chamber of Commerce and landscaping associations to help encourage conservation among commercial customers.
F. Coordinate with homeowners associations, property rental agencies, and other local groups to help encourage conservation among residential customers.

3. Enforcement Actions (Same as previous stage)

4. Other Administrative Actions:

A. Continue implementation of and possible increase of all other administrative actions listed in Watch Stage.
B. Begin preparing for the Alert Stage.

5. Optional Implementation of a Water Demand Offset Program:

During the Warning Stage, staff will begin updating the Water Demand Offset Program and messaging about the program to the development community. The City may consider implementing a water demand offset program during this stage. Water demand offset programs are designed to require new development that causes increased water demand to offset such demand through conservation or acquisition/development of new water supplies. The goal of an offset program is to ensure that new development does not increase current water demands. It should be noted that offset programs simply expedite water efficiency measures and thus create water savings in the short term. Depending on the nature of the offset, long-term savings may not be realized.

At the Warning Stage the City may choose to implement a "net neutral" offset program, requiring that new demands offset usage at a rate of 1:1. Future stages of the WSCP may suggest a more aggressive, "net positive" water demand offset program. A "net positive" water demand offset program would require a positive offset of a project's water demand. An example of this would be a project required to offset its water demand at a ratio higher than 1:1, such as 2:1 or 3:1.

There are several types of offset programs in use across California and the United States. Examples of potential offset programs are listed below.

A. Toilet replacements
B. Smart irrigation controllers
C. Submetering
D. In-lieu fees (fees are used to support new water supply projects)
E. Irrigation system retrofits
F. Waterless urinals
G. Rainwater capture
H. Recycled Water Retrofit Projects

Water Shortage Response Stage: ALERT

When the City's available water supply would provide less than four years of water, staff could recommend to the City Council that they adopt a resolution to enter the Alert Stage and urge the public to reduce water use by an additional 10 percent including mandatory conservation measures.

The water conservation measures described in the stages above may increase during the Alert Stage, with an increased focus on limiting outdoor water uses. System and operational changes would remain in place. These increases and additions to programs may include:

1. Water Demand Reduction Programs:

A. Limit outdoor watering to **four days a week** and only between the hours of 7:00 PM and 7:00 AM.
B. Defer landscape installations for new development or require development to install landscaping that provides a 50 percent reduction in Maximum Applied Water Allowance (MAWA). This would not apply to sites irrigated with recycled water.

2. **Public Outreach Programs:**

   A. Continue implementation of and possible increase of all public outreach programs listed in previous stages.
   B. Issue a press release following Alert Stage declaration
   C. Utilize water use allocation software to identify inefficient water users and make direct contact with these properties.

3. **Enforcement Actions** (Same as previous stage)

4. **Other Administrative Actions:**

   A. Continue implementation of and possible increase of all other administrative actions listed in prior stages.
   B. Prepare utility billing system and bill format for water allocations and reductions listed in subsequent stages.
   C. Establish appeals committee for customers who exceed allotments in subsequent stages, request health and safety variances, or receive fines from violating water waste prohibitions.
   D. Increase utility billing training and support to address additional requirements of future stages.
   E. Begin preparing for Severe Stage.

Implementation of a Water Demand Offset Program:

At the Alert Stage the City may implement a "net neutral" offset program or increase a previously approved program to a "net positive" program (ex: 1.5:1 or 2:1 offset ratio). Future stages of the WSCP may suggest a more aggressive, "net positive" water demand offset program.

Water Shortage Response Stage: SEVERE

When the City's available water supply would provide **less than 3.5 years** of water, staff could recommend to the City Council that they adopt a resolution to enter the Severe Stage and urge the public to reduce water use by an additional approximately 10 percent.

At this water shortage response stage, the City would continue implementation of demand reduction measures, public outreach, enforcement, and other responses and programs described in prior stages. System and operational changes would remain in place. At the Severe Stage, a water offset program may increase to a "net positive" program, such as 1.5:1 or 2:1 ratio.

Previous Water Demand Reduction Programs should be increased to include:

- Limit outdoor watering to **three days a week** and only between the hours of 7:00 PM and 7:00 AM.

During the Severe, Extreme, and Critical stages of the WSCP the City may adopt a Water Allotment Program, restricting the water use on an account-by-account basis. The following allotment method may be used:

Customer Classification	Severe Stage Allotment
Single-family Residential and Multi-family Residential	A per capita allotment allowing for indoor use and a minimal outdoor irrigation budget. Verification of persons per household may be requested
Commercial and Institutional	Baseline allocation or allocation based on percent reduction from normal usage
Landscape Meters	Allocation based on percent reduction from normal usage

Water Shortage Response Stage: EXTREME

When the City's available water supply would provide **less than three years** of water, staff could recommend to the City Council that they adopt a resolution to enter the Extreme Stage and urge the public to reduce water use by an additional 10 percent.

At this water shortage response stage, the City would continue implementation of demand reduction measures, public outreach, enforcement, and other responses and programs described in prior stages. System and operational changes would remain in place. At the Severe Stage, a water offset program may increase to a "net positive" program, such as 1.5:1 or 2:1 ratio.

Previous Water Demand Reduction Programs should be increased to include:

- Limit outdoor watering to **two days a week** and only between the hours of 7:00 PM and 7:00 AM.
- Optional implementation of additional restrictions on turf and/or spray irrigation.

Customer Classification	Extreme Stage Allotment
Single-family Residential and Multi-family Residential	A per capita allotment allowing for indoor use and a reduced outdoor irrigation budget versus the Severe Stage. Verification of persons per household may be requested
Commercial and Institutional	Reduced baseline allocation or allocation based on percent reduction from normal usage
Landscape Meters	Reduced allocation based on percent reduction from normal usage

At this stage, due to the limited water supplies that remain, the City could consider removal of the "courtesy notification."

Water Shortage Response Stage: CRITICAL

When the City's available water supply would provide **less than 2.5 years of** water, staff could recommend to the City Council that they adopt a resolution to enter the Critical Stage and urge the public to reduce water use by an additional approximately 10 percent.

At this water shortage response stage, the City would continue implementation of demand reduction measures, public outreach, enforcement, and other responses and programs described in prior stages. System and operational changes would remain in place. Due to the limited water supplies that remain, the City would consider the cessation of new connections to the City's water system.

Previous Water Demand Reduction Programs should be increased to include:

- Cessation of irrigation for all customers, minus specific exemptions.

Customer Classification	Critical Stage Allotment
Single-family Residential and Multi-family Residential	A per capita allotment allowing for indoor water use. Irrigation not permitted. Verification of persons per household may be requested
Commercial and Institutional	Reduced baseline allocation or allocation based on percent reduction from normal usage. Irrigation not permitted.
Landscape Meters	Not permitted.

5. AERIAL IMAGERY BASED WATER BUDGETS

In 2021, the City is investigating the use of software that would allow for aerial imagery to be used to establish parcel-by-parcel water budgets during the Severe, Extreme, and Critical stages of the WSCP. This software utilizes aerial imagery to identify the irrigated, irrigable, and non-irrigable square footage of every parcel within the City's water service area. These measurements can then be used to establish an outdoor irrigation budget for each property. If the City invests in this technology, day per week irrigation restrictions outlined in the WSCP may be replaced by property-specific outdoor irrigation efficiency goals, requiring that property owners meet increasing efficiency measures at progressive stages of the WSCP. Additionally, many of these aerial imagery software packages allow for indoor water use budgets to be established, generally based on the number of residents living within a home, much like the City's water allocation program identified within the WSCP. The use of this technology in establishing water budgets would require an update to the City's WSCP prior to implementation.

6. EXEMPTIONS AND APPEALS

As the community was impacted by the 2011-2015 drought and irrigation restrictions were put into place, community members advocated for certain exemptions related to water use restrictions. The following series of exemptions will help ensure the health and well-being of the community while not making a substantial impact on available water supplies[1] .

Sites using Recycled Water for Irrigation

Sites utilizing recycled water are exempt from irrigation restrictions due to their reliance on recycled water in place of potable water. These sites include major City parks, such as Damon Garcia Park, French Park, Islay Park, Laguna Lake Park, Laguna Hills Park, De Vaul Park, the Laguna Lake Golf Course, and Laguna Middle School, as well as many multifamily and commercial properties.

Irrigation Exceptions at Specific Facilities

During the recent drought City staff and community members provided feedback that City parks with inadequate irrigation allotments could lead to hazardous conditions at recreation and play environments. To address these concerns, and to provide communal spaces for recreation during times when many homes allowed landscapes to die, in 2016 the City Council approved an amendment to Chapter 13.07.030 of the Municipal Code, allowing for daily irrigation at designated City facilities during turf renovation, and three times per week thereafter. This exemption is recommended to be expanded to include schools within the City's boundaries as they are used for recreation in a similar manner to City parks. This exemption would only go into place in stages of the WSCP requiring irrigation restrictions.

Irrigation of Trees

During the 2011-2015 drought, the City heard from many residents who opted to cease irrigation of their trees in order to reduce their water demand. Unlike turf, shrubs, and other groundcover, trees take a great amount of time to grow and provide substantial ecological, environmental, practical, and economic value to the community. An exemption to irrigation restrictions allowing for the use of a hose and shutoff nozzle to hand water trees will allow the community to preserve this precious multi-benefit resource.

Hospitals, Healthcare Facilities, and other Specific Business Types

Hospitals, healthcare facilities, and other businesses requiring water for the health and safety of at-risk people may apply for an exemption on a case by case-basis. This exemption may be granted at the discretion of the Utilities Director or his/her/their designee.

Appeals

Appeals related to water use restrictions within the WSCP and associated penalties may be appealed to the Utilities Director or his/her/their designee.

[1] The City does not supply potable water to separately metered water features, such as ponds, lakes, waterfalls, and fountains.

7. REVENUE AND EXPENDITURE IMPACTS

During a water shortage, revenues from water sales can be reduced but the City's operations and maintenance costs would not reduce accordingly. In fact, during these periods, the City's operational and staffing budgets can increase due to the implementation of water demand reduction measures, public outreach, increased enforcement, groundwater exploration, and other actions taken by the City during the shortage. The reduction in revenues resulting from decreased water use may also result in the need to raise water rates during that period.

Under the City's existing water rate structure (updated in 2018), water rates include both a base fee and volumetric charge based on customer usage and resulting demand on the water system. To minimize the need to raise rates during water shortages, the City has a policy that requires a minimum reserve of twenty percent of the Water Fund's operating budget. The City also maintains a rate stabilization fund which is ten percent of rate revenue. This rate stabilization fund is designed to help stabilize rate increases and could be used to achieve this purpose of costs went up during a water shortage.

City staff provides ongoing tracking of revenues and evaluates the potential impacts associated with changes in water demand assumptions used in the Water Fund Analysis. The City Council considers the water rates necessary to provide water service to the community on an annual basis and must approve water rate increases in order for them to become effective.

In addition to securing water supplies, Water Fund revenue supports ongoing maintenance and operating programs needed to ensure that the water treatment and delivery systems meet all federal and state water treatment regulations and are operated and maintained to provide safe and reliable service.

During the 2012-2015 drought, the City utilized a drought surcharge to help with revenue shortfalls that occurred due to the State of California's mandatory conservation measures. This drought surcharge was subject to Proposition 218 and expired upon the end of the State of Emergency related to the drought. The adoption of a temporary drought surcharge remains an option for meeting future drought-related revenue shortfalls.

8. MONITORING, REPORTING, AND REFINEMENT PROCEDURES

The City reads water meters monthly to ensure water consumption data is collected for tracking, analysis, and to meet state reporting requirements. Monitoring and reporting key water use metrics is fundamental to water supply planning and management. Monitoring is also essential to ensure that the response actions are achieving their intended water use reduction purposes, or if new actions need to be considered. Compliance tracking is also necessary for an effective enforcement program.

To evaluate the functionality of the WSCP and ensure strategies are effective, staff will monitor community response to water demand reduction measures, public outreach, enforcement, and other administrative actions at each water shortage response stage. This will include review of monthly water consumption data for each customer class and monitoring associated revenue and expenditure impacts. Staff will make recommendations on program refinements to the City Council with water shortage stage progression.

9. CATASTROPHIC WATER SUPPLY INTERRUPTION

The City's Local Hazard Mitigation Plan (LHMP) was completed in 2019 as part of a countywide effort. The LHMP was adopted by the City Council in 2020. This work included risk assessment related to seismic risk (earthquakes, faults, and liquefaction). The LHMP will be submitted with the 2020 UWMP to satisfy the requirements of CWC Section 10632.5.

The City has an Emergency Response Plan (ERP) to cover a variety of potential disasters including earthquakes, floods, wildland fires, etc. The ERP identifies resources available to the City from other agencies or private companies in the area. Additionally, the City of Morro Bay and the Whale Rock Commission (of which the City of San Luis Obispo is a member) executed an agreement in June of 2000 which provides for Mutual Aid between the agencies during disruption of water deliveries or lack of available water supplies. The agreement provides a general framework for exchanging water between agencies in the event of emergencies or other water disruptions. The agreement is voluntary based on each agency's ability to assist at any point in the future.

In relation to providing water service, the City would utilize both on-site and portable generators to minimize water disruptions during an extended power outage. These generators are available to the City at any time and actively maintained to ensure they are functioning adequately.

The City is a member of the Water Agency Response Network (WARN). WARN is a statewide organization of water agencies and companies that have entered into a mutual aid agreement to assist other water agencies during emergencies or other water related situations. The agreement provides the framework for providing assistance and provides a key contact to initiate a multiple agency response to a water emergency situation.

10. REQUIRED STANDARDIZED TABLES

Water Shortage Contingency Plan Levels		
Shortage Level	**Percentage Shortage Range**	**Shortage Response Actions**
1	Up to 10%	City increases programs that encourage voluntary water conservation including public outreach, rebate programs, and water efficient fixture giveaways. City examines available alternative water sources (groundwater expansion, recycled water filling stations, water purchase agreements, etc.), City modifies internal operations to focus on decreasing water loss and prepares for subsequent WSCP stages. City ceases any outside-City water sales/leases.
2	Up to 20%	City implements time of use irrigation restrictions (7:00 PM – 7:00 AM). City increases staffing, budget, and outreach to achieve additional voluntary conservation savings while preparing for Alert-Critical stages (Stages 3-6).
3	Up to 30%	City requires mandatory conservation measures including outdoor irrigation restrictions (four day a week watering) and considers a Water Offset Program for new connections.
4	Up to 40%	City implements Water Allotment Program. Water Offset Program for new connections may be increased (1.5:1 or 2:1 offset ratio). Allowable irrigation reduced to three days per week.
5	Up to 50%	City continues to implement a Water Allotment Program with reduced allotment levels. Water Offset Program for new connections may be increased (1.5:1 or 2:1 offset ratio). Allowable irrigation reduced to two days per week with optional additional measures limiting turf and spray irrigation.
6	>50%	City continues to implement a Water Allotment Program at further reduced levels (minimum for public health and safety). Irrigation no longer permitted. Water Offset Program to cease and no new connections permitted.