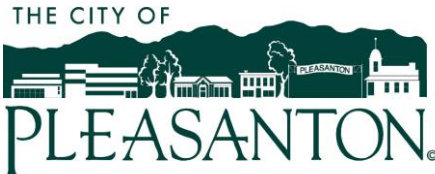


City of Pleasanton Water Shortage Contingency Plan

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AFY	Acre-Feet Per Year
AMI	Advanced Metering Infrastructure
AWSDA	Annual Water Supply and Demand Assessment
Cal Water	California Water Service-Livermore District
City	City of Pleasanton
CWC	California Water Code
DSRSD	Dublin San Ramon Services District
DWR	Department of Water Resources
EPA	Environmental Protection Agency
GPQ	Groundwater Pumping Quota
Legislature	California State Legislature
Livermore	City of Livermore
PIO	Public Information Officer
PMC	Pleasanton Municipal Code
SB	Senate Bill
SBA	South Bay Aqueduct
SFWD	San Francisco Water Division
SWP	State Water Project
UWMP	Urban Water Management Plan
WARN	Water/Wastewater Agency Response Network
Water ERP	Water Emergency Response Plan
WEOC	Water Emergency Operations Center
WSCP	Water Shortage Contingency Plan
WSR Team	Water Shortage Response Team
Zone 7	Zone 7 Water Agency

City of Pleasanton

Water Shortage Contingency Plan

Water shortages occur whenever the available water supply cannot meet the normally expected customer water use. This can be due to several reasons, such as climate change, drought, and catastrophic events. Drought, regulatory action constraints, and natural and manmade disasters may occur at any time. In 2018, the California State Legislature (Legislature) enacted two policy bills, (Senate Bill (SB) 606 (Hertzberg) and Assembly Bill (AB) 1668 (Friedman)) (2018 Water Conservation Legislation), to establish a new drought planning foundation to adapt to climate change and the resulting longer and more intense droughts in California. The 2018 Water Conservation Legislation set new requirements for water shortage contingency planning.

This Water Shortage Contingency Plan (WSCP) describes the City of Pleasanton's (City) strategic plan in preparation for and responses to water shortages, including water shortage stages and associated shortage response actions. This WSCP provides a guide for the City to proactively prevent catastrophic service disruptions and has been updated to be consistent with the 2018 Water Conservation Legislation requirements. As part of this WSCP, the City's legal authorities, communication protocols, compliance and enforcement, and monitoring and reporting are described. Chapter 9.30 of the Pleasanton Municipal Code (PMC) supports the City's WSCP.

The City intends for this WSCP to be dynamic so that it may assess response action effectiveness and adapt to emergencies and catastrophic events. Refinement procedures to this WSCP are provided to allow the City to modify this WSCP outside of the Urban Water Management Plan (UWMP) process.

1.0 WATER SUPPLY RELIABILITY ANALYSIS

Chapters 6 and 7 of the City's 2020 UWMP present the City's water supply sources and reliability, respectively. Zone 7 Water Agency (Zone 7) is the City's exclusive water wholesaler, so the City's water supply reliability is fundamentally linked with Zone 7's water supply reliability. Findings show the City can reliably meet its projected demands through 2045 in normal and dry hydrologic conditions, including single dry years and five consecutive dry years.

Statewide water supply conditions, changes in groundwater levels, and actions by other agencies may impact Zone 7's (and thus the City's) available water supply. For Zone 7, a water shortage condition occurs when the available supply of potable water cannot meet its retailers' normal water demands for human consumption, sanitation, fire protection, and other beneficial uses. Besides the City, Zone 7's retailers include the California Water Service-Livermore District (Cal Water), the City of Livermore (Livermore), and the Dublin San Ramon Services District (DSRSD).

The analysis associated with this WSCP was developed in the context of Zone 7's water supply sources and reliability. In some cases, the City and Zone 7 may be able to foresee a water shortage condition, but the water shortage may also be caused by an unforeseen sudden or emergency event. In general, Zone 7's water supply conditions may be affected by the following:

- SWP supply allocations and storage levels
- Delta vulnerability to seismic events, changing environmental and regulatory requirements, and climate change
- Salts, nutrients, or contaminants in the Main Basin

2.0 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT PROCEDURES

Beginning July 1, 2022, California Water Code (CWC) §10632.1 requires water suppliers to submit an Annual Water Supply and Demand Assessment (AWSDA) and an Annual Water Shortage Assessment Report to the Department of Water Resources (DWR). This section provides the procedures for the City to conduct its AWSDA, which will inform the City's Annual Water Shortage Assessment Report and assist the City with planning for potential water supply shortages. The objective of the AWSDA is to forecast near-term supply conditions so that the City can prepare logistically and financially for any anticipated water supply constraints, as well as enact appropriate shortage response actions in a timely manner.

The City's AWSDA will be developed from Zone 7's "Annual Review of the Sustainable Water Supply Report" (Annual Sustainability Report).

This section provides the decision-making process, key data inputs, and methodology necessary for the City to produce its AWSDA. This includes steps the City may take to declare a water shortage emergency and associated water shortage stage (see Section 3.0) and implement water shortage response actions (see Section 4.0).

2.1 Decision-Making Process

The City will use the decision-making process described below to consistently produce its AWSDA. The City may adjust and improve this process as needed.

The Projection Team, consisting of Utilities Planning managers and the Managing Director of Environmental Services and Utilities, is responsible for preparing the City's AWSDA and Annual Water Shortage Assessment Report and submitting them to DWR by July 1st of each year (starting in 2022). This team will gather key data inputs described in Section 2.2 and conduct the assessment in accordance with Section 2.3. In April, the Projection Team will finalize the assessment based on Zone 7's Annual Sustainability Report. The AWSDA and Annual Water Shortage Assessment Report will be presented to the Managing Director of Utilities and Environmental Services, or designee, for review and approval. If the AWSDA finds that available water supply will be sufficient to meet expected demands for the current year and one subsequent dry year, no further action will be required.

To conduct the AWSDA, the Projection Team will follow the schedule of activities shown on Table 1. Due to variations in climate and hydrologic conditions, the timeframes shown in the tables are approximate and may be adjusted as needed. The City intends to implement shortage response actions to effectively address anticipated water shortage conditions in a timely manner while complying with the State's reporting requirements.

Water Shortage Contingency Plan

Table 1. Schedule of Annual Water Supply and Demand Assessment Activities		
Timeframe	Activities	Responsible Party
Late summer - fall of prior year	Convene Projection Team: Utilities Planning managers and Managing Director of Environmental Services and Utilities (Managing Director).	Projection Team
Late summer - fall of prior year	Determine water supply sources for the current year and one subsequent dry year. Describe sources and quantities considering factors affecting supply as described in Section 2.2.	Projection Team
December - January	Determine water demands for the current year and one subsequent dry year. Describe demand types and quantities, considering factors affecting demand as described in Section 2.2.	Projection Team
December - January	Calculate the City's water supply reliability for the current year and one subsequent dry year using the methodology described in Section 2.3.	Projection Team
February - March	Complete AWSDA based on Zone 7's Annual Sustainability Report.	Projection Team
April	Based on determinations of the AWSDA, prepare the Annual Water Shortage Assessment Report with recommendations on water shortage condition determination and response actions. Submit to Managing Director, or designee, for review.	Projection Team
April	Review AWSDA and Annual Water Shortage Assessment Report and provide comments as needed.	Managing Director
May	Finalize and approve AWSDA and Annual Water Shortage Assessment Report.	Projection Team and Managing Director
By July 1	Submit finalized AWSDA and Annual Water Shortage Assessment Report to DWR.	Projection Team

Should the AWSDA find that available supply will not meet expected demands, the Projection Team will coordinate with the City's Environmental Services Manager and Director of Operations and Water Utilities; this group is collectively referred to as the Water Shortage Response Team (WSR Team). The WSR Team will present the finalized assessment to the City Council, along with recommendations on water shortage condition determination and actions. Recommended actions may include declaration of a water shortage emergency, declaration of a water shortage stage, and water shortage actions.

Based on the findings of the AWSDA, the City Council will determine if a water shortage condition exists and, if needed, adopt a resolution declaring a water shortage emergency and an associated water shortage stage and authorizing water shortage actions. The WSR Team will then prepare the City's Annual Water Shortage Assessment Report, incorporating City Council determinations and approved actions. The schedule of decision-making activities is provided in Table 2. The timeframes and the activities shown in this table are approximate and may be adjusted as needed.

Water Shortage Contingency Plan

Timeframe	Activities	Responsible Party
January - March	If a water shortage emergency condition exists, prepare recommendations on water shortage condition determination and action based on AWSDA findings. Prepare resolutions approving determinations and actions.	WSR Team
April	Coordinate with the region's water service providers, and with Alameda County for the possible proclamation of a local emergency.	WSR Team
1st or 2nd City Council Meeting in May	Present finalized determinations and recommendations, along with resolutions approving determinations and actions.	WSR Team
1st or 2nd City Council Meeting in May	Receive presentation of finalized determinations and recommendations. Make determination of degree of emergency and act on resolutions that declare a water shortage emergency condition. Authorize water shortage response actions for implementation.	City Council
After City Council Meeting	If a water shortage emergency condition is declared, implement the WSCP (follow Section 5.0) and the water shortage response actions as approved by the City Council.	WSR Team
May - June	Finalize AWSDA and Annual Water Shortage Assessment Report.	WSR Team
By July 1	Submit final AWSDA and Annual Water Shortage Assessment Report to DWR.	WSR Team

2.2 Key Data Inputs

The State requires that the AWSDA evaluate supplies and demands for, at a minimum, the current year and one subsequent dry year. The planned water supply and demand for the current year and a subsequent dry year will be used to evaluate the City's water supply reliability.

Zone 7's Annual Sustainability Report may use the following data inputs as applicable and appropriate to evaluate planned water supplies:

1. State Water Project (SWP) supply availability
2. Hydrological conditions
3. Regulatory conditions
4. Contractual constraints
5. Surface water and groundwater quality conditions
6. Groundwater well production limitations
7. Infrastructure capacity constraints or changes

In addition to Zone 7's Annual Sustainability Report, the City may also consider groundwater well production limitations and infrastructure capacity constraints/changes as inputs to the AWSDA.

Water Shortage Contingency Plan

Planned water supply sources and quantities will be described and be reasonably consistent with the supply projections in Chapter 6 (Water Supply Characterization) of the City's most recent UWMP. Should supply sources and projections differ significantly between the AWSDA and the UWMP, an explanation for the difference will be provided.

Planned unconstrained water demands will be used as input to the AWSDA for the current year and the following one dry year. Unconstrained water demands are customer demands where no water conservation measures are in effect. In planning for water demands, the following factors are considered, as applicable and appropriate:

1. Weather conditions
2. Water year type
3. Population changes (e.g., due to development projects)
4. Demand trends and anticipated new demands (e.g., changes to land use)
5. Pending policy changes that may impact demands
6. Infrastructure operations

Planned water demand types and quantities will be described and should be reasonably consistent with the demand projections in Chapter 4 (Water Use Characterization) of the City's most recent UWMP. Should the demand projections deviate significantly between the AWSDA and the UWMP, an explanation for the difference will be provided.

2.3 Assessment Methodology

In preparing the AWSDA, the City will use the following assessment methodology and criteria to evaluate the agency's water supply reliability for the current year and following one dry year.

The City uses a spreadsheet to plan for current year and future year supply and demands. Planned supply and demand inputs described in Section 2.2 will be entered in the spreadsheet in annual increments. As needed, the increments may be revised to monthly or seasonal periods to more closely evaluate specific conditions and needs.

Supply and demand will be compared to determine the City's water supply reliability in the current year and the following one dry year. The City's water supply will be deemed reliable if it can meet planned water demands in both the current year and the following dry year. If water supply cannot meet planned water demands in the current year or the following dry year, the extent of the water shortage condition will be determined, and the City will prepare response actions in accordance with this WSCP.

3.0 SIX STANDARD WATER SHORTAGE LEVELS

To provide a consistent regional and statewide approach for conveying the relative severity of water supply shortage conditions, the 2018 Water Conservation Legislation mandates that water suppliers plan for six standard water shortage levels that correspond to progressive reductions of up to 10, 20, 30, 40, 50 percent, and greater than 50 percent from the normal reliability condition. Each shortage condition should correspond to additional actions water suppliers would implement to meet the severity of the impending shortages.

Water Shortage Contingency Plan

For each of the State’s standard shortage levels (also called “stages”), Table 3 summarizes the water shortage range (i.e., percent shortage from normal supplies) and a brief narrative description of the corresponding water shortage condition. These water shortage stages apply to both foreseeable and unforeseeable water supply shortage conditions. The City’s 2015 UWMP included four stages that addressed up to 50 percent water demand reduction. Table 3 presents the City’s reorganized stages, which align with the State’s standard stages.

Shortage Level	Percent Shortage Range	Water Shortage Condition Definition	Shortage Response Actions
1	Up to 10%	Adequate supply is currently available. To protect and preserve water supply, the elimination of wasteful water uses is encouraged.	Voluntary conservation; implement actions per Table 4 and Table 5
2	Up to 20%	There is sufficient uncertainty concerning water supply, either based upon AWSDA findings or unforeseeable event, to lead to the conclusion that supply may not adequately meet normal demand in the current or upcoming years.	Voluntary or mandatory conservation; implement actions per Table 4 and Table 5
3	Up to 30%	Definable events, including but not limited to AWSDA findings, lead to a reasonable conclusion that in the current and/or upcoming water years, water supplies may not be adequate to meet all customer water demands. Or, previous water conservation target has not been met, therefore further action is necessary.	Mandatory conservation; implement actions per Table 4 and Table 5
4	Up to 40%	Definable events, including but not limited to AWSDA findings, lead to a firm conclusion that in the current water year, water supplies will not be adequate to meet customers' water demands; and/or previous water conservation target has not been met, therefore further action is necessary to reduce water demand.	Mandatory conservation; implement actions per Table 4 and Table 5
5	Up to 50%	Definable events, including but not limited to AWSDA findings, lead to a firm conclusion that water supplies are considerable inadequate to meet customers' water demands; and/or previous water conservation target has not been met, therefore further action is necessary to reduce water demand.	Mandatory conservation; implement actions per Table 4 and Table 5
6	>50%	Definable events, including but not limited to AWSDA findings, have severely compromised water supplies in the current water year, and/or earlier stages have been in effect and the reduction goal is not being meet, therefore further action is necessary to reduce water demand.	Mandatory conservation; implement actions per Table 4 and Table 5

Notes: AWSDA = Annual Water Supply and Demand Assessment

4.0 SHORTAGE RESPONSE ACTIONS AND EFFECTIVENESS

The City will track progress toward water use reduction goals through a comparative analysis of total monthly water production volumes. The analysis will compare the drought month production with the previous non-drought month production to obtain a percent reduction. The City will increase or decrease its public outreach efforts based on observed usage reduction. The shortage response actions discussed below may be considered as tools that allow the City to respond to water shortage conditions. The City will adjust response actions to demands and available water supply.

4.1 Demand Reduction

The City may request that its customers reduce their water demands in response to any water shortage stage through PMC §9.30.80. During water shortage conditions, the City plans to reduce demand by implementing the actions shown in Table 4. Demand reduction actions are organized by the triggering water shortage stage, and each action includes an estimate of how much its implementation will reduce the shortage gap. For each demand reduction action, Table 4 also indicates if the City uses compliance actions such as penalties, charges, or other enforcement. Demand reduction actions are only listed in Table 4 in the stage when they are first implemented. The City will continue to use these actions in higher stages unless otherwise noted.

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Water Shortage Contingency Plan

Table 4. Water Shortage Contingency Plan Demand Reduction Actions (DWR Table 8-2)

Shortage Level	Demand Reduction Actions <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.</i>	How much is this going to reduce the shortage gap? <i>Include units used (volume type or percentage)</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>For Retail Suppliers Only Drop Down List</i>
1	Increase Frequency of Meter Reading	(see Note 1)	Track customer water usage using advanced metering infrastructure (AMI)	No
	Reduce System Water Loss	Could reduce system loss by up to 25-35%	Will be determined by City's response to upcoming State Water Loss Standard. City will be developing a water loss program to address requirement.	No
2	Expand Public Information Campaign	(see Note 1)	Public information campaign would be expanded upon each stage change.	No
	Landscape - Limit landscape irrigation to specific days	Up to 25% reduction in landscape irrigation use	Outdoor irrigation of lawn and ornamental landscaping shall be limited to one day per week October through March, and no more than three non-consecutive days per week April through September.	Yes
	CII - Other CII restriction or prohibition	(see Note 1)	Commercial customers should post water conservation messages on bathroom lavatory mirrors.	No
	Other - Prohibit use of potable water for construction and dust control	3,000 gal/acre/day for construction areas	Construction activities shall use recycled water, rather than potable water, in a manner that does not result in water discharging to the storm drain system.	Yes
3	Increase Water Waste Patrols	(see Note 1)	City defines this activity as increasing water waste response by leveraging potential leak data through City's Meter Management Program.	No
	Decrease Line Flushing	Depends on extent and frequency of current flushing activities	City will evaluate line flushing on a case-by-case basis to ensure no reduction to water quality.	No
	Landscape - Limit landscape irrigation to specific days	Up to 33% reduction in landscape irrigation use	Lawn watering and landscape irrigation, for all customer classes, shall be reduced to no more than one day per week during the months of October through March, and no more than two non-consecutive days per week during the months of April through September.	Yes
4			Single-family residential individually metered and multi-family (non-irrigation) classes shall be limited in the use of all outdoor watering to hand-watering using a hose with a positive shut-off nozzle, drip, or subsurface irrigation on two non-consecutive days per week only.	
	Landscape - Limit landscape irrigation to specific days	Up to 56% reduction in landscape irrigation use	Commercial nurseries; public sport fields, golf courses, and other water dependent industries shall work together with city staff under the direction of the director to develop an approved irrigation schedule.	Yes
			All other water customer classes shall be limited in the use of all outdoor watering to hand-watering using a hose with a positive shut-off nozzle, drip, or subsurface irrigation to two non-consecutive weekdays; specified as Mondays and Thursdays unless otherwise granted permission for alternate watering days by the director.	
	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	100-200 gal/year/residential connection	Washing of autos, trucks, trailers, and other types of mobile equipment is permitted only at commercial car wash facilities that recycle all or part of the water.	Yes
5	Water Features - Restrict water use for decorative water features, such as fountains	Public display of conservation, see Note 1	Potable water shall not be used for decorative ponds, basins, lakes, waterways, and fountains.	Yes
6	Landscape - Limit landscape irrigation to specific days	Up to 60% reduction in landscape irrigation use	The irrigation of turf or lawn using potable water is prohibited. All water customers, with the exception of commercial nurseries, golf courses, sport fields, and other water dependent industries, shall be limited in the use of all other non-lawn area watering to hand-watering from a container of less than five-gallon capacity on Saturday and Sunday only. The aforementioned water dependent industries shall work with city staff under the direction of the director to develop an approved irrigation schedule.	Yes

NOTES: (1) These actions boost the effectiveness of other actions, so a shortage gap reduction estimate cannot be quantified. (2) Actions introduced in a lower stage will also be used in higher stages, unless otherwise noted.

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Water Shortage Contingency Plan

In addition to the demand reduction actions above, the City has mandatory water use restrictions that apply when PMC Chapter 9.30 is in effect. Table 5 summarizes these conservation measures (from PMC §9.30.080), which protect and preserve the community water supply by eliminating wasteful water uses.

Table 5. Water Use Restrictions
Applicable at All Times^(a)
Prohibit irrigation landscapes in a manner that causes runoff
Prohibit irrigation between the hours of 6:00 a.m. to 9:00 p.m. ^(b)
Prohibit outdoor landscaping irrigation during and within 48 hours after measurable rainfall
Prohibit washing down sidewalks, driveways, and other hardscapes by direct application of potable water
Use of potable water for washing vehicles and/or machinery from a hose equipped with a shut-off nozzle is permitted as long as water does not enter the storm drain system
Commercial power washing should utilize recycled water, in a manner that does not result in water discharging into the storm drain system
Restaurants shall serve water to their customers only when specifically requested
Construction activities should utilize recycled water, rather than potable water, in a manner that does not result in runoff or illicit discharge into the storm drain system
Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily
Potable water leaks from breaks within the customer's plumbing system shall be repaired within eight hours after the customer is notified or discovers the break
Interior or exterior uses of water shall be reduced to minimize or eliminate excessive runoff or waste
Pools should be equipped with recirculating pump(s) and remain covered when not in use to prevent evaporation
Prohibit using potable water in non-re-circulatory ponds, fountains, or decorative water features
Standard Shortage Level 3 (Up to 30% Shortage)
Restaurant kitchens shall be equipped with low-flow rinse nozzles.
Standard Shortage Level 5 (Up to 50% Shortage)
No person shall empty and refill a swimming pools except to prevent or repair structural damage or comply with public health regulations.
Standard Shortage Level 6 (More than 50% Shortage)
No person shall drain and refill swimming pools and spas. Nor shall new pools be filled.
Laundromats are prohibited from using non-efficient washing machines.
(a) Per PMC §9.30.080, these consumption reduction measures apply when PMC Chapter 9.30 is in effect (i.e., regardless of water supply level).
(b) Watering is permitted at any hour if a hand-held nozzle or drip irrigation is used. Special landscapes are also exempted.

The City will monitor water production, demands, and changing conditions to determine the intensity of its public outreach, the extent of its enforcement actions, and the need to adjust its water shortage stage declaration as discussed in Section 9.0.

Water Shortage Contingency Plan

4.2 Additional Mandatory Restrictions

The City protects and preserves the community water supply by defining wasteful water use as a violation of water service. Per PMC §14.04.060, the City’s current definitions of water waste include:

1. Use of potable water between 9:00 a.m. and 6:00 p.m. to irrigate grass, lawns, groundcover, shrubbery, crops, vegetation, and trees, with the exception of hand watering and drip irrigation.
2. The application of potable water to outdoor landscaping in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots or structures.
3. Use of potable water to irrigate outdoor landscaping during and within 48 hours after measurable rainfall.
4. Use of potable water to wash down sidewalks, walkways, driveways, parking lots, open ground or other hard surface areas by the direct application of water thereto, unless needed for health or safety reasons.
5. Use of potable water in non-recirculating decorative ponds, fountains and other water features, with the exception of child water-play features.
6. Allowing potable water to escape from breaks within the person or consumer’s plumbing system for more than eight hours after the person or consumer is notified or discovers the break.
7. Use of potable water for outdoor landscaping through a dedicated irrigation meter within the city’s recycled water use area unless exempted by the director of operations and water utilities for existing water customers, or city engineer for new development.

These restrictions are in addition to State-mandated prohibitions.

4.3 Supply Augmentation and Other Actions

Chapter 6 of the City’s 2020 UWMP describes the City’s normal supply portfolio, which includes purchased treated water from Zone 7 and local groundwater. While Zone 7 has its own supply augmentation options, increased groundwater pumping is the City’s only such option. Per its water supply contract with Zone 7, the City has a groundwater pumping quota (GPQ) of 3,500 acre-feet per year (AFY), with the possibility of carrying over up to 700 AFY of unused GPQ from the previous year. To exceed its GPQ, the City would have to coordinate with Zone 7. Table 6 lists this supply augmentation method, which the City would use during Stage 6 (i.e., greater than 50 percent shortage).

Table 6. Supply Augmentation and Other Actions (DWR Table 8-3)

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUEdata online submittal tool</i>	How much is this going to reduce the shortage gap? <i>Include units used (volume type or percentage)</i>	Additional Explanation or Reference <i>(optional)</i>
6	Stored emergency supply	Up to shortage gap	Request expansion of groundwater pumping quota from Zone 7

Water Shortage Contingency Plan

4.4 Operational Changes

The City can make several operational changes to address a short-term water shortage, including more closely tracking customer water usage via the City's developing meter management program, which may result in increasing water waste response, and the potential decrease of line flushing upon case-by-case evaluation, resulting in no potential compromise to water quality. These operational changes will further water loss reduction efforts during a shortage and are included in Table 4, as they either directly or indirectly reduce demands.

For a specific emergency event, the City can adjust water operations staff schedules such that rotating shifts cover the duration of the emergency. For more local water shortages, the City can activate emergency interties with DSRSD and Livermore.

4.5 Emergency Response Plan

As stated in Section 3.0, the City's water shortage stages outlined in Table 3 apply to both foreseeable and unforeseeable water supply shortage conditions. The latter includes catastrophic water shortage conditions, which are addressed in the City's Water Emergency Response Plan (Water ERP). The Water ERP outlines preparation, response, and recovery procedures associated with unforeseeable incidents such as water supply contamination, earthquake, infrastructure failure, and other events. The ERP is currently being revised to incorporate requirements of the 2018 American Water Infrastructure Act and will be submitted to the Environmental Protection Agency (EPA) on or before July 1, 2021.

The City's Water ERP specifies that the City Council, the Director of Emergency Services (City Manager), or the Director of Operations Services has the authority to proclaim a Local Water Emergency. In a water emergency, the City would activate a Water Emergency Operations Center (WEOC), with partial or full staffing dependent on the magnitude of the event. WEOC and other emergency support staff and departments would typically work under the direction of the Director of Emergency Services (i.e., the City Manager). As defined in the City's Water Management Plan, if there were a major failure of supply, storage or facility distribution, a declaration of mandatory water use restrictions would be necessary in designated affected areas (expected reduction would vary in response to the specific situation).

The City will also follow the lead of Zone 7, or the State of California, during a major catastrophe or drought period. When Zone 7 announces a curtailment in water deliveries, the City will assess the impact on the City supplies and determine its water shortage level. The City will monitor the situation closely, both from a supply and demand perspective, and carefully select the appropriate shortage response actions to close the gap between anticipated supplies and. The City will move from one stage to the next if the situation worsens and reduce restrictions when it subsides. To provide supplies during an emergency, the City has two interties with DSRSD and one intertie with Livermore. Per agreements with DSRSD and Livermore made in 1996 and 2011, respectively, the City can receive from each agency a reasonable quantity of water required during the emergency.

The City has mutual aid agreements with the San Francisco Water Division (SFWD), Livermore, DSRSD, and Zone 7. The City also participates in the Water/Wastewater Agency Response Network (WARN), a statewide public utility mutual assistance organization. After exhausting its own resources, the City can call on these neighboring agencies for aid.

Water Shortage Contingency Plan

4.5.1 Interrupted Supply from Zone 7

If imported water deliveries are interrupted, Zone 7 plans to meet its current water demands with existing facilities using groundwater and Zone 7's share of water stored in Lake Del Valle. The City and other retailers with groundwater pumping capacity may be asked to increase their groundwater pumping, if possible. In this case, Zone 7 would declare a water shortage emergency in coordination with the City and its other retailers, who would then put into effect their WSCPs and associated voluntary and mandatory water consumption reductions.

Zone 7 has emergency generators (both portable and dedicated) at strategic locations in preparation for any regional power outage. These generators would allow both the Del Valle Water Treatment Plant and the Patterson Pass Water Treatment Plant to continue operating even under a power outage. Assuming no interruptions in surface water supply, Zone 7 would be able to provide service to all treated water contractors. If warranted by demand, Zone 7 would also operate groundwater wells, which have either a dedicated generator in place or have the necessary hook-ups to receive power from a portable generator. If the power failure were to occur during the high-demand summer season, Zone 7 may be unable to meet hourly peak demands throughout the transmission system. Zone 7 would work closely with the City and other retailers to manage demands to minimize impacts.

4.5.1.1 Unavailable SWP Water

There could be an emergency situation where no water was available from the SWP. This could occur if the South Bay Aqueduct (SBA) was inoperable due to maintenance or damage from an earthquake. Water supplies from the SWP could also be limited or unavailable during a future drought. If no water were available from the SWP, Zone 7 would need to meet customer demand with groundwater and available local water stored in Lake Del Valle. The worst disruption to SWP deliveries would likely result from a moderate to a large earthquake, causing multiple Delta island levee failures and cessation of exports from the Delta of up to a year.

Under this scenario and under current conditions, Zone 7 estimates that it would be able to make full deliveries to the retailers during non -summer months using a combination of groundwater and water stored in Lake Del Valle. During the peak demand of the summer months, however, Zone 7 will need to reduce deliveries to the retailers, including the City. Zone 7's analysis shows that Zone 7 has sufficient groundwater supply and pumping ability to serve the indoor water use needs of the service area over a one -year period; the availability of water supply for outdoor water use during the summer months will depend on the amount of water available in Lake Del Valle. Depending on timing and degree of recovery, the City might enact any of the stages of water shortage conditions discussed in Section 3.0.

4.5.1.2 Unavailable Zone 7 Water

The City receives Zone 7 supplies at seven different turnout locations. If Zone 7 supplies are unavailable at one or more turnouts, Zone 7 supplies may still be available at the remaining turnouts. If the City's wells are not sufficient to meet demands, the City may also be able to obtain emergency supplies from its emergency interties with DSRSD. Depending on the availability of water from these sources, the City may need to enact various water shortage stages discussed in Section 3.0 to deal with a supply shortfall.

4.5.2 Area -Wide Electrical Power Failure

During a prolonged electrical power outage, the City would continue to receive water from Zone 7. Zone 7 has emergency generators (both portable and dedicated) at strategic locations in preparation for a regional power outage. These generators would allow both the Del Valle Water Treatment Plant and the

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Patterson Pass Water Treatment Plant to continue operating during a power outage. If warranted by demand, Zone 7 would also operate their wells, which have either a dedicated generator in place (Mocho I well) or have the necessary hook -ups installed for connection to a portable generator. Zone 7's turnouts to the City receive gravity flow from the treatment plant clearwells, so a power outage would not impact transmission from the treatment plants to the City.

The City can also operate its own wells during a power outage through the use of emergency generators located at its well sites. Additionally, the City could also receive water from emergency interties with DSRSD and Livermore when necessary.

4.5.3 Earthquake

Water system infrastructure, including pump stations, storage tanks, and pipelines, can be damaged during a strong earthquake. The City's facilities, as well as Zone 7's facilities, have been constructed in accordance with the applicable building codes to minimize potential damage during an earthquake. Additionally, approximately 85 percent of the City's water infrastructure has been earthquake reinforced, and no area within the service area is solely dependent on non -earthquake reinforced infrastructure. The City has multiple turnouts from Zone 7, so If one is damaged during an earthquake, the City can use the remaining turnouts to continue receiving water supply from Zone 7. Furthermore, the pipelines were built in a looped arterial design to ensure there is more than one route for water flow.

5.0 COMMUNICATION PROTOCOLS

In the event of a water shortage, the City must inform its customers, the general public and interested parties, and local, regional, and state entities. Communication protocols for foreseeable and unforeseeable events are provided in this section. In any event, timely and effective communication must occur for appropriate response to the event. Key City staff are provided cell phones, and all City staff are provided email accounts to communicate internally and externally.

5.1 Communication for Foreseeable Events

Water shortage may be foreseeable when the City reviews Zone 7's Annual Sustainability Report and prepares its AWSDA, as described in Section 2.0. When the City determines the potential of a water shortage event, City Council may declare a water shortage emergency. For imminent events, the City Manager may declare a water shortage emergency.

If a water shortage emergency is anticipated, City staff will coordinate interdepartmentally, with the region's water service providers, and with Alameda County for the possible proclamation of a local emergency.

In a duly noticed meeting, the City Council will receive presentation of the current or predicted shortage as determined by the AWSDA. The City Council will determine if a water shortage emergency condition exists and the degree of the emergency, while considering the shortage response actions triggered or anticipated to be triggered by the shortage level. As necessary, the City Council will act on the water shortage emergency declaration, associated water shortage stage, and shortage response actions.

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If the City Council declares a water shortage emergency, the Public Information Officer (PIO) and City staff will coordinate to communicate with its customers and the public to inform them about the declared water shortage emergency, water shortage level, and authorized water use restrictions. The City may use any combination of the following outreach formats: newspaper publication, mailers, bill stuffers, newsletters, social media, its website, local radio, and press releases.

If needed, City staff will communicate with the appropriate State agencies regarding the water shortage emergency.

5.2 Communication for Unforeseeable Events

A water shortage may occur during unforeseeable events such as earthquakes, fires, infrastructure failures, civil unrest, and other catastrophic events. The City's Water ERP provides specific communication protocols and procedures to convey water shortage contingency planning actions during these events. The City may trigger any of these communication protocols at any water shortage stage, depending on the event.

In general, communications and notifications should proceed along the chain of command. Notification decisions will be made under the direction of the Director of Emergency Services, with external communications managed by the PIO. The Water ERP provides a list of relevant contacts to notify at the local, regional, and state level.

The PIO is the official spokesperson for the City and is responsible for establishing an information center and providing information for news media. In addition, the PIO maintains a list of contacts to disseminate information to the public, typically via electronic media, radio, television, or newspapers.

6.0 COMPLIANCE AND ENFORCEMENT

After the City Council adopts a WSCP stage, customers will be notified by any of the following methods: mail, social media, and/or publication in the newspaper. PMC Chapter 9.30 includes demand reductions and compliance and enforcement measures the City may implement when a water shortage is declared.

Customers are required to reduce water demands based on past usage for the same billing period from the previous one to four years, as data is available. If insufficient historic usage information is available, then the City may base reductions on a combination of available data, per-capita water use targets, water usage from similar customer types, and other activity-specific water usage data. Customers can request adjustments to water use reductions by submitting a written request with supporting documentation within 30 days of receipt of the bill that is the subject of the adjustment request.

Should customers exceed their mandatory conservation amount, they are subject to excess use penalties that will either be added to their existing water bill or billed separately. Concurrent with the preparation of this WSCP, the City is updating PMC §9.30.100 to align with the updated water shortage conditions presented in Section 3.0. The proposed excess use penalties are shown in Table 7. Excess use penalties consist of a volumetric surcharge and a fixed fee, depending on the water shortage stage and the number of exceedances in a 12-month period. The City Manager can suspend excess use penalties for all customers when conditions (e.g., weather) make water use reduction impracticable.

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Stage	Number of Exceedances Within the Prior 12 Months			
	1 Time	2 Times	3 Times	4 or More Times
Stage 1 Up to 10% Voluntary	No penalty	No penalty	No penalty	No penalty
Stage 2 Up to 20% Voluntary	No penalty	No penalty	No penalty	No penalty
Stage 2 Up to 20% Mandatory	\$2.50 additional for all units	\$5 additional for all units + \$25	\$7.50 additional for all units + \$50	\$10 additional for all units + \$100
Stage 3 Up to 30% Mandatory	\$4 additional for all units + \$50	\$8 additional for all units + \$100	\$12 additional for all units + \$250	\$16 additional for all units + \$500
Stage 4 Up to 40% Mandatory	\$6 additional for all units + \$100	\$12 additional for all units + \$250	\$18 additional for all units + \$500	\$24 additional for all units + \$750
Stage 5 Up to 50% Mandatory	\$8 additional for all units + \$150	\$16 additional for all units + \$300	\$24 additional for all units + \$550	\$32 additional for all units + \$800
Stage 6 More than 50% Mandatory	\$10 additional for all units + \$200	\$20 additional for all units + \$350	\$30 additional for all units + \$600	\$40 additional for all units + \$850

(a) Volumetric surcharge per unit of water used (above the mandatory conservation amount) plus a fixed fee.
 (b) Per proposed update to PMC §9.30.100.

7.0 LEGAL AUTHORITIES

PMC Chapter 9.30 supports the City's water shortage contingency actions. This chapter includes provisions for declaring a water shortage emergency, determining customer use reductions, water use regulations and restrictions, and compliance and enforcement. When a water shortage is determined, the City will coordinate with Zone 7, the region's other water service providers, and the County for the possible proclamation of a local emergency in accordance with California Government Code, California Emergency Services Act (Article 2, Section 8558).

In a duly noticed meeting, the City Council will determine whether a water shortage emergency condition exists and, if so, the degree of the emergency and what regulations and restrictions should be enforced in response to the shortage. The City shall declare a water shortage emergency in accordance with CWC Chapter 3 Division 1.

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Water Code Section Division 1, Section 350

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

The water shortage emergency declaration triggers communication protocols described in Section 5.0 and compliance and enforcement actions described in Section 6.0.

8.0 FINANCIAL CONSEQUENCES OF WSCP

This section describes the financial impacts associated with implementing the WSCP and response actions needed to address these impacts. During past periods of water supply shortage and reduced customer consumption, yearly revenues dropped approximately 20 percent due to decreased water sales. Since most water shortages are sustained over multiple years, revenue reductions would compound over the same period, threatening the financial stability of the utility. In addition to lost revenue, the City would incur additional costs implementing WSCP conservation measures including:

- Increased water waste analysis and policing of each customer account
- Implementing drought rates and penalties
- Efforts responding to complaints and appeals
- Paying for conservation outreach media campaigns costing \$100,000 per year as experienced in past droughts

During water shortage events, the City may implement drought rates according to its Master Fee Schedule. Further, Zone 7 may adopt a water shortage surcharge, which the City passes through to its customers. These charges will encourage the City's customers to use water more efficiently.

9.0 MONITORING AND REPORTING

The City's water system is fully metered, from its water supply sources to individual customer meters. These meters may be used as monitoring tools for compliance and reporting purposes. The City's meters at its water sources—turnouts from Zone 7 and groundwater production wells—provide a systemwide overview of water supply and demands. Further, most customers are metered using an Advanced Metering Infrastructure (AMI) system that allows for rapid monitoring of customer water use. Approximately 700 customer meters (3.2 percent of customer meters) still need to be converted to AMI; the City expects to convert these over the next five years. The City may use metering information to assess progress in meeting its water shortage response objectives, as part of its meter management program.

As part of its required monthly Urban Water Supplier Reporting, the City conducts monthly monitoring of customer classes (commercial, irrigation, recycled water, and residential consumption), evaluates the percent of residential consumption, and residential per capita water use. This information will assist the City to adjust public outreach, enforcement, and other water shortage response actions as needed to meet available supplies and future State reporting requirements.

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10.0 WSCP REFINEMENT PROCEDURES

This WSCP is an adaptive management plan. It is subject to refinements as needed to ensure that the City's shortage response actions and mitigation strategies are effective and produce the desired results. Based on monitoring described in Section 9.0 and the need for compliance and enforcement actions described in Section 6.0, the City may adjust its response actions and modify its WSCP. The City will also seek input from staff and the public regarding the effectiveness of its WSCP and ideas for improvements.

When a revised WSCP is proposed, the revised WSCP will undergo the process described in Section 12.0 for adoption by the City Council and distribution to the County, Zone 7, and the general public.

11.0 SPECIAL WATER FEATURE DISTINCTION

The City distinguishes special water features, such as decorative fountains and ponds, from pools and spas. Special water features are regulated separately. Regulations under PMC §9.30.080 prohibit the use of potable water in non-re-circulatory ponds, fountains, and decorative water features.

12.0 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

This WSCP is adopted concurrently with the City's 2020 UWMP, by separate resolution. Prior to adoption, a duly noticed public hearing was conducted. A copy of this WSCP will be submitted to DWR within 30 days of adoption.

No later than 30 days after submittal to DWR, copies of this WSCP will be available at the City's Operations Service Center and the Pleasanton Public Library. A copy will also be provided to the County and Zone 7. An electronic copy of this WSCP will also be available for public review and download on the City's website.

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