

COUNCIL AGENDA: AUGUST 5, 2014

SUBJECT: WATER CONSERVATION PLAN UPDATE

SOURCE: Public Works Department - Field Services Division

COMMENT: On January 17, 2014, Governor Brown issued a drought emergency proclamation following three dry years in California. The proclamation asked all Californians to reduce water consumption by 20%. On July 15, 2014, the State Water Resources Control Board (State Water Board) adopted emergency water conservation regulations to go into effect around August 1<sup>st</sup>. With this regulation, all Californians will be expected to stop:

- washing down driveways and sidewalks;
- watering of outdoor landscapes that cause excess runoff;
- using a hose to wash a motor vehicle, unless the hose is fitted with a shut-off nozzle, and
- using potable water in a fountain or decorative water feature, unless the water is recirculated.

The regulation makes an exception for health and safety circumstances.

Larger water suppliers will be required to activate their Water Shortage Contingency Plan to a level where outdoor irrigation restrictions are mandatory. In communities where no water shortage contingency plan exists, the regulation requires that water suppliers either limit outdoor irrigation to twice a week or implement other comparable conservation actions. Finally, large water suppliers must report water use to the state on a monthly basis to track progress.

Per the new regulation, local agencies can ask courts to fine water users up to \$500 a day for failure to comply with conservation requirements. The State Water Board could initiate enforcement actions against water agencies that do not comply with the new regulations. Failure to comply with a State Water Board enforcement order by water agencies is subject up to a \$10,000 a day penalty.

The City of Porterville water production for the month of July 2014 had an 11% decrease from 2013. This reduction has been achieved with only voluntary water conservation measures. The regulations anticipate that mandatory outdoor irrigation restrictions can result in up to 20% reduction in outdoor water use.

Staff has modified the existing Water Conservation Plan to incorporate the mandatory restriction requirements of the new regulations and it is

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Report No. II.2

presented to Council in draft form to review before the August 19, 2014, Public Hearing to Adopt the Urban Water Management Plan (UWMP). The Water Conservation Plan is an element of the UWMP.

The modifications to the Phases of the Water Conservation Plan are summarized below:

Water Conservation Phase 1 - Title change to include the words "Water Conservation," no other changes.

Drought Response Phase 2 - Title change to include the words "Drought Response," and added a three day per week odd/even water schedule as a mandatory restriction, and prohibits washing sidewalks, driveways and other paved areas.

Drought Response Phase 3 - Title change to include the words "Drought Response," and added a two day per week odd/even water schedule as a mandatory restriction.

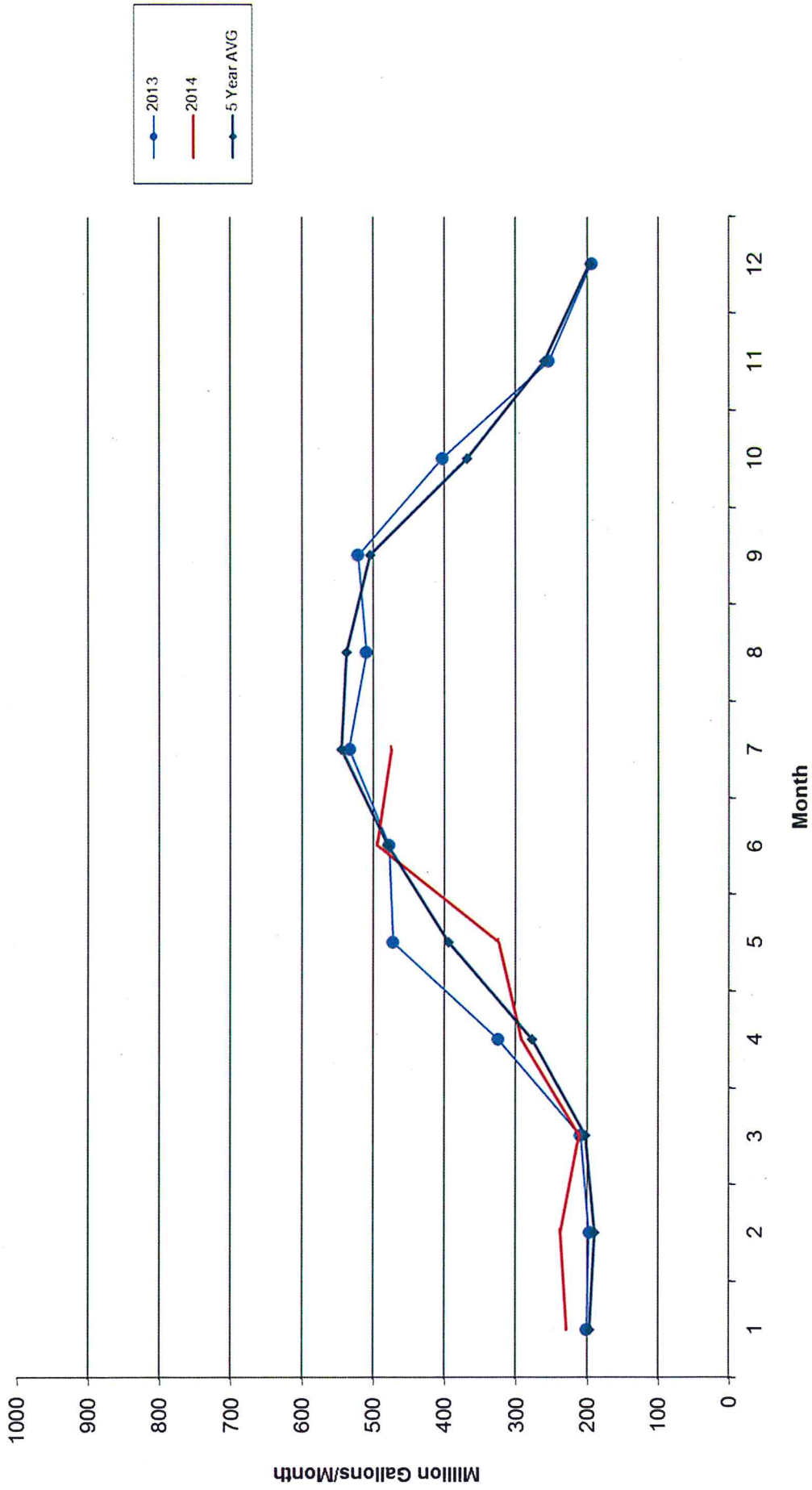
Emergency Response Phase 4 – Title change to include the words "Emergency Response." The elements of the old Phase 3 were moved to this new Phase 4, which includes a 20% rate increase. A new element was added that would prohibit outdoor watering.

Staff is still working with the State to determine if we can implement the mandatory three day per week water schedule and meet the requirements of the regulations. This scenario may be acceptable to the State since we have a water shortage plan (Water Conservation Plan) in place. Water suppliers without a plan are required to either limit outdoor irrigation to twice a week or implement other comparable conservation actions.

RECOMMENDATION: Informational Item.

ATTACHMENT: Production Graph  
Draft Water Conservation Plan

# Monthly Production Status 2014 Comparison to 2013 & 5 Year Average



VERSION 3.0  
JULY 25, 2014



# WATER CONSERVATION PLAN

EVERY DROP COUNTS.

PRESENTED BY: FIELD SERVICES DIVISION  
PUBLIC WORKS DEPARTMENT

CITY OF PORTERVILLE  
555 N. PROSPECT ST., PORTERVILLE, CA 93257

**REVISED BY:**

**JOHN LOLLIS,  
CITY MANAGER**

**BALDOMERO S. RODRIGUEZ,  
PUBLIC WORKS DIRECTOR**

**BRYAN B. STYLES,  
DEPUTY PUBLIC WORKS DIRECTOR  
& FIELD SERVICES MANAGER**

**MICHAEL KNIGHT,  
WATER UTILITIES SUPERINTENDENT**

**ROMAN FERRO,  
WATER SYSTEMS SPECIALIST**

**DENYS THOMPSON,  
ADMINISTRATIVE AIDE**

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# PREFACE

The City of Porterville water system is municipally-owned with more than 15,299 service connections, 97% of which are metered, serving a population of 55,490, with approximately 1,100 service connections outside the city limits. Water supplies for the City system are produced entirely from groundwater underlying the City, which is recharged from rainfall and runoff of the Western Sierra Nevada. The major stream contributing to the recharge of the Tule Basin Aquifer underlying Porterville is the Tule River.

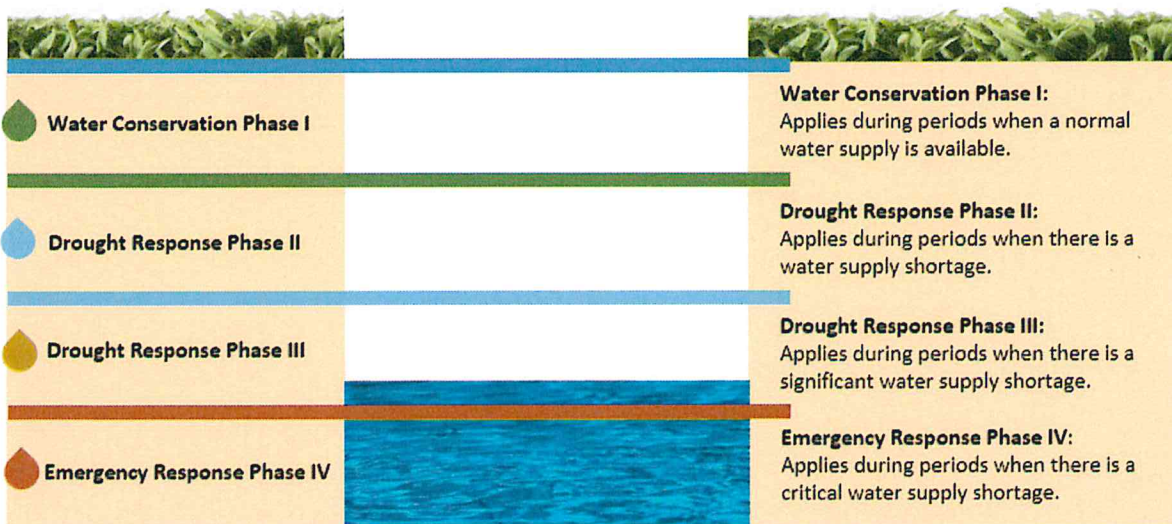
Storage capacity represents over ten million gallons within the distribution system and five hillside reservoirs, three with a capacity of three million gallons. One with a capacity of three hundred and five thousand gallons, one with the capacity of five hundred and fifty thousand gallons.

A telemetry system controls the operation of 23 of the City's 35 active well pumps to maintain system pressure under varying loads. The water levels in the reservoirs are also monitored and controlled by the computerized telemetry control system.

Water conservation and awareness have always been areas of concern for the Porterville community. Less than normal rainfall and runoff makes efforts to promote water conservation a high priority. In addition to the benefits of conserving water as a limited natural resource, additional benefits accrue to the community in the form of a reduced impact on the Wastewater Treatment Plant and a reduction in energy costs when water supplies are conserved.

It is vitally important that the Water Conservation Plan be a joint partnership between the City and the General Public in order to achieve optimal effect. The Plan has been developed in four phases with each phase defined in terms of the available water supply.

## Well Storage Levels and Drought Phase Triggers



Actions within each phase have been defined as either actions to be undertaken by the City or by the General Public. Due to the number of variables which affect the water conditions in existence at any one point in time, a City staff analysis of those variables will be utilized in determining the transition of the City from one phase to a more (or less) stringent phase. At such time as staff determines that water supply conditions warrant a phase change, staff will present the request to the City Council for their approval.

This plan differs from other valley community plans because the City of Porterville is in a more favorable position of having almost all of its water customers metered, which allows the City to basically control the water conservation program.

## CITY WATER SYSTEM

The City has always been diligent in its efforts to provide sufficient safe and affordable drinking water to the residents of the community. Water conservation has long been a permanent part of the City's water resource management program. Efforts to that end include:

### NEW WELLS:

Over the past five years new wells have been added to the City water system in order to serve the needs of the community. Additional wells are planned for completion within the next few years.

### TELEMETRY SYSTEM:

This system controls the operation of the well pumps to maintain system pressure under varying loads. Water levels in the reservoirs are also monitored and controlled by the computerized telemetry control system. Water is usually pumped to the reservoirs during the off peak usage hours for later use by consumers. This system was designed to operate the City wells in the most efficient and productive way possible with additional benefits of energy cost savings.

### RESERVOIRS:

The City currently operates and maintains five (5) hillside reservoirs, three (3) with a capacity of three million gallons, one (1) with a capacity of 305,000 gallons, and one (1) with a capacity of 550,000. The three largest reservoirs are usually filled during off peak hours and then release water during the high usage hours. There is also a 300,000 gallon reservoir located at the Airport which is also part of the City system, the reservoirs increase the City's ability to maintain system pressure during peak demand and fire flow situations.

### METERIZATION PROGRAM:

With over 97% of all service connections metered, the City has a goal of 100% meterization. All new connections are required to have meters.

### UTILITY BILLING NOTICE:

The City's computerized utility billing system provides consumers with their current and past water usage history for comparison purposes. While variations may be attributable to a change known to the consumer (i.e. additional persons in the home, addition of a swimming pool), it may also be the result of an undetected leak or other controllable occurrence.

### WATER AUDIT/LEAKAGE DETECTION & REPAIR PLAN:

The City will continue in its proactive plan to audit water supply usage. Upon detection of the source of any leakage, corrective action will be taken immediately in order to promote the efficient use of the existing water supply and in turn reduce the energy required to operate the system.



NEW WATER LINE TESTING:

The City requires full pressure and leak testing of all newly constructed water lines.

FIRE HYDRANT TESTING:

The City Fire Department schedules their annual fire hydrant testing program during the early spring and late fall to avoid the peak water use season. Such testing is required to maintain the integrity of the fire protection system.

# CONSERVATION PHASING

The effectiveness of any voluntary plan ultimately depends on the public's awareness of the need for the plan. Local residents have a history of commitment to their community and support of the public welfare. It is a reliance upon this tradition that makes the distribution of public information the cornerstone of the City's Water Conservation Plan.

## ● WATER CONSERVATION PHASE I: NORMAL WATER SUPPLY

*The Water Conservation Phase I applies during periods when a normal water supply is available.*

### ACTIONS BY THE CITY:

<p><b>Public Information Program</b></p>	<ul style="list-style-type: none"> <li>• Distribution of suggestions for residential, commercial, and industrial water conservation and awareness.</li> <li>• Coordination of public information with the local news media.</li> <li>• City participation in Water Awareness Month (May).</li> <li>• Lawn and Landscape Watering Guides will be made available upon request.</li> <li>• City staff will coordinate with local nurseries to compile a list of low water using trees and plants. The list will be made available at City Hall, the Corporation Yard, and the Parks &amp; Leisure Services Department for local residents.</li> <li>• Coordination with local schools to encourage young people to become aware of local water issues and conditions.</li> </ul>
<p><b>Project Review Committee</b></p>	<ul style="list-style-type: none"> <li>• The City's Project Review Committee (PRC) will include the evaluation of all submitted projects for water use and conservation efforts. The goal of City staff in cooperation with the developer will be to voluntarily reduce consumption of water used in the project.</li> <li>• City staff will assist the developer in familiarization with the Xeriscape Concept, combining creative landscaping and efficient irrigation to save water and promote attractive alternatives to traditional, high water use landscapes.</li> </ul>
<p><b>City Landscapes and Watering Schedules</b></p>	<ul style="list-style-type: none"> <li>• City parks, median islands, and landscaped public facilities will be watered during late night or early morning hours to the greatest extent possible.</li> <li>• All new landscaping projects undertaken by the City will incorporate conservation design.</li> </ul>
<p><b>Retrofit Bathroom Facilities</b></p>	<p>Water saving kits which contain toilet water conservation and low flow shower head devices will be made available to City water consumers, both residential and commercial, upon request, as funds are available.</p>

<b>Fire Hydrant Testing</b>	The City's fire hydrant testing program will be scheduled during non-peak water usage times to the greatest extent possible without impairing the integrity of the City's fire protection service.
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**ACTIONS BY THE GENERAL PUBLIC:**

<b>Mindful Water Use</b>	The general public will be encouraged to utilize those water conservation measures contained within the City's Public Information Program.
<b>Voluntary Odd/Even Watering Schedule</b>	<ul style="list-style-type: none"> <li>• This schedule is encouraged, but not mandated. This plan is designed to minimize water usage and requests that the public water their lawn and shrubs according to their street address, per Exhibit 1 below.</li> <li>• Addresses ending in an odd number (1, 3, 5, 7, or 9) water on Tuesday, Thursday, and Saturday. Addresses ending in an even number (0, 2, 4, 6, or 8) water on Wednesday, Friday, and Sunday. There is no watering on Monday. <b>Watering should be avoided between the hours of 5:00 AM to 10:00 AM and 5:00 PM to 10:00 PM.</b></li> </ul>

**Voluntary Odd/Even Water Schedule**

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
DO NOT WATER	OK TO WATER	OK TO WATER	OK TO WATER	OK TO WATER	OK TO WATER	OK TO WATER
—	ODD	EVEN	ODD	EVEN	ODD	EVEN

Odd Address
  Even Address

Exhibit 1

## ● DROUGHT RESPONSE PHASE II: WATER SUPPLY SHORTAGE

*Drought Response Phase II applies during periods when there is a water supply shortage. When water supply conditions start to deteriorate, the City is mandated to implement more stringent water conservation provisions for the benefit of its community.*

### ACTIONS BY THE CITY:

<p><b>Adoption and Enforcement of Stricter Water Regulations and Restrictions</b></p>	<ul style="list-style-type: none"> <li>• The City of Porterville will enforce an odd/even watering schedule for all residents. Watering is prohibited between the hours of 5:00 AM to 10:00 AM and 5:00 PM to 10:00 PM. Watering shall only occur on designated watering days. Excessive run-off is prohibited.</li> <li>• Non-compliance with the City of Porterville’s water conservation regulations, as outlined below, will result in one written warning from the City of Porterville before the issuance of a citation. A second violation within a 12 month period will result in the issuance of a citation with a fine of \$100.00; a second citation will result in a fine of \$200.00; a third citation will result in a fine of \$500.00. Willful and egregious violations will result in issuance of a citation without a warning. Each day that a violation continues shall be regarded as a new and separate offense.</li> <li>• Per Section 25-5 of the City Municipal Code, “The consumer shall use reasonable care to prevent the waste of water, shall not allow water to run or waste from his property onto streets or highways, shall not use water in washing sidewalks, building entrances or lobbies or other properties to such excess that water shall flow in street gutters beyond the frontage of the properties occupied by them.”</li> </ul>
<p><b>Public Information Program</b></p>	<p>The City will pursue a more aggressive distribution of information than its efforts initiated in the initial Water Conservation Phase to promote public awareness of the need to conserve water with a stronger emphasis on the water shortage condition.</p>
<p><b>Water System Pressure Reduction</b></p>	<p>The City’s water system may experience reduced water pressures during high usage periods. This may deter water use for nonessential activities and encourage scheduling of landscape watering to late nights or early mornings.</p>
<p><b>City Landscapes and Watering Schedules</b></p>	<p>All City parks, median islands, and public facility landscapes will be watered during the late night or early morning hours to reduce impact on the water system during peak usage hours.</p>
<p><b>Leak Detection Water Waste</b></p>	<p>The City will continue in its proactive plan to audit water supply usage. All City staff will be reminded of the necessity of reporting any evidence of leaks or water waste for immediate action. There will be an emphasis on coordinated community efforts to reduce water waste.</p>
<p><b>“Waste of Water” Notices</b></p>	<p>City staff will be equipped to issue “Waste of Water” notices to consumers identified as misusing water.</p>
<p><b>Mandatory Odd/Even Watering days</b></p>	<p>Increase public education on the mandatory watering schedule program. Public outreach will emphasize changes from the Water Conservation Phase I (Voluntary) to Phase II (Mandatory).</p>

Continuation of all Conservation Programs Established in Phase I	See Phase I
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**ACTIONS BY THE GENERAL PUBLIC:**

<b>Mandatory Odd/Even Watering Schedule</b>	<ul style="list-style-type: none"> <li>• Addresses ending in an odd number (1, 3, 5, 7, or 9) water on Tuesday, Thursday and Saturday. Addresses ending in an even number (0, 2, 4, 6, or 8) water on Wednesday, Friday and Sunday. There is no watering on Monday. See Exhibit 2 below.</li> <li>• Watering is prohibited between the hours of 5:00 AM to 10:00 AM and 5:00 PM to 10:00 PM. Watering shall only occur on designated watering days.</li> <li>• Excessive runoff is prohibited.</li> </ul>
<b>Conservation Efforts</b>	The general public will be strongly encouraged to utilize those water conservation measures contained within the City's public information program.
<b>Restaurants</b>	Notices will be sent to all restaurants within the City limits requesting support of water conservation efforts by serving water to customers upon request only.
<b>Lawn and Landscaping Watering</b>	Mandatory implementation of the Odd/Even Watering Program initiated in the Water Conservation Phase I, all residential, commercial, and industrial landscape watering scheduled times.
<b>Vehicle Washing and Sidewalk Hosing</b>	<ul style="list-style-type: none"> <li>• The washing of sidewalks, driveways, parking areas, patios or other paved areas is prohibited, unless it is necessary for the health and safety of the public.</li> <li>• The washing of automobiles, trucks, trailers, boats, and airplanes is only permitted on designated watering days. Such washing, when allowed, shall be done either by automatic car washes that recycle water or with a hand held bucket, or hand held hose equipped with a positive shutoff nozzle for quick rinses.</li> <li>• Per Section 25-5 of the City Municipal Code, "The consumer shall use reasonable care to prevent the waste of water, shall not allow water to run or waste from his property onto streets or highways, shall not use water in washing sidewalks, building entrances or lobbies or other properties to such excess that water shall flow in street gutters beyond the frontage of the properties occupied by them."</li> </ul>

### Mandatory Odd/Even Water Schedule

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
DO NOT WATER	OK TO WATER	OK TO WATER	OK TO WATER	OK TO WATER	OK TO WATER	OK TO WATER
—	ODD	EVEN	ODD	EVEN	ODD	EVEN

 Odd Address  Even Address

Exhibit 2

## ● DROUGHT RESPONSE PHASE III: SIGNIFICANT WATER SUPPLY SHORTAGE

*Drought Response Phase III applies during periods when there is a significant water supply shortage. In addition to upholding the programs and provisions outlined in Phases I and II, the City must be diligent in its water conservation efforts by issuing penalties for non-compliance.*

### ACTIONS BY THE CITY:

<p><b>Adoption and Enforcement of Stricter Water Regulations and Restrictions</b></p>	<ul style="list-style-type: none"> <li>The City of Porterville will enforce a two day a week odd/even watering schedule for all residents. Watering is prohibited between the hours of 5:00 AM to 10:00 AM and 5:00 PM to 10:00 PM. Watering shall only occur on designated watering days. Excessive run-off is prohibited.</li> <li>Non-compliance with the City of Porterville’s water conservation regulations, as outlined below, will result in one written warning from the City of Porterville before the issuance of a citation. A second violation within a 12 month period will result in the issuance of a citation with a fine of \$100.00; a second citation will result in a fine of \$200.00; a third citation will result in a fine of \$500.00. Willful and egregious violations will result in issuance of a citation without a warning. Each day that a violation continues shall be regarded as a new and separate offense.</li> <li>Per Section 25-5 of the City Municipal Code, “The consumer shall use reasonable care to prevent the waste of water, shall not allow water to run or waste from his property onto streets or highways, shall not use water in washing sidewalks, building entrances or lobbies or other properties to such excess that water shall flow in street gutters beyond the frontage of the properties occupied by them.”</li> </ul>
<p><b>Public Information Program</b></p>	<p>The utility billing system will begin to notify customers of restrictions on water use. The program to promote public awareness will be intensified with emphasis placed on communicating the mandatory water conservation requirements to the public.</p>
<p><b>City Landscapes and Watering Schedules</b></p>	<p>All City parks, median islands, and public facility landscapes will adopt a two-day watering schedule. If it becomes necessary, watering of City parks and median islands will be suspended and evaluated each day.</p>
<p><b>Continuation of all Conservation Programs and Regulations Established in Phases I and II</b></p>	<p>See Phases I and II</p>

### ACTIONS BY THE GENERAL PUBLIC:

<p><b>Mandatory Reduction in Watering Days Durations</b></p>	<ul style="list-style-type: none"> <li>Addresses ending in an odd number (1, 3, 5, 7, or 9) water on Tuesday and Saturday. Addresses ending in an even number (0, 2, 4, 6, or 8) water on Wednesday and Sunday. There is no watering on Monday, Thursday, or Friday. See Exhibit 3 below.</li> <li>Watering is prohibited between the hours of 5:00 AM to 10:00 AM and 5:00 PM to 10:00 PM. Watering shall only occur on designated watering days.</li> </ul>
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	<ul style="list-style-type: none"> <li>Excessive runoff is prohibited.</li> </ul>
<b>Ornamental Water Features</b>	<ul style="list-style-type: none"> <li>Filling or re-filling ornamental lakes or ponds is prohibited, except to the extent needed to sustain aquatic life.</li> <li>The operation of ornamental fountains or other structure making similar use of water is prohibited unless the fountain uses a recycling system.</li> </ul>
<b>Vehicle Washing and Sidewalk Hosing</b>	<ul style="list-style-type: none"> <li>The washing of sidewalks, driveways, parking areas, patios or other paved areas is prohibited, unless it is necessary for the health and safety of the public.</li> <li>The washing of automobiles, trucks, trailers, boats, and airplanes is only permitted on designated watering days. Such washing, when allowed, shall be done with a hand held bucket, or hand held hose equipped with a positive shutoff nozzle for quick rinses.</li> <li>Per Section 25-5 of the City Municipal Code, "The consumer shall use reasonable care to prevent the waste of water, shall not allow water to run or waste from his property onto streets or highways, shall not use water in washing sidewalks, building entrances or lobbies or other properties to such excess that water shall flow in street gutters beyond the frontage of the properties occupied by them."</li> </ul>
<b>Water Leaks</b>	All leaks must be treated as a priority upon discovery and repaired at the safest scheduled opportunity.

**Mandatory Odd/Even Water Schedule**

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
DO NOT WATER	OK TO WATER	OK TO WATER	DO NOT WATER	DO NOT WATER	OK TO WATER	OK TO WATER
—	ODD	EVEN	—	—	ODD	EVEN

Odd Address
  Even Address

Exhibit 3



## ● EMERGENCY RESPONSE PHASE IV: CRITICAL WATER SUPPLY SHORTAGE

*Applies during periods when there is a severe water supply shortage as determined by California State mandate, City Manager, system outage, equipment failure, contamination of water supply, or other emergency*

### **ACTIONS BY THE CITY:**

<b>Rate Structure Enhancement</b>	A 20% rate increase on all residential and landscape accounts will go into effect. This rate increase will encourage water conservation and will also serve as a provision to recover the lost revenues from water conservation.
<b>City Landscapes and Watering Schedules</b>	Watering of City parks and median islands will be suspended and evaluated each day.
<b>Continuation of all Conservation Programs and Regulations Established in Phases I, II, and III</b>	See Phases I, II, and III

### **ACTIONS BY THE GENERAL PUBLIC:**

<b>Lawn and Landscaping Watering</b>	Lawn and landscaping watering is prohibited.
<b>Vehicle Washing</b>	Vehicle washing should be accomplished either by automatic car washes that recycle water or with buckets and hoses equipped with a shut-off nozzle.
<b>Continuation of all Conservation Programs and Regulations Established in Phases I, II, and III</b>	See Phases I, II, and III