



# AGENDA

## Water Shortage Task Force

Suzanne McCombs, Task Force Chair  
Edward McCombs, Task Force Vice Chair  
Bryan Bondy, Task Force Member  
Ted Cook, Task Force Member  
Rob Corley, Task Force Member  
Diane de Mailly, Task Force Member  
Douglas Hahn, Task Force Member

Don Jensen, Task Force Member  
Robert McCord, Task Force Member  
Marty Melvin, Task Force Member  
Don Mills, Task Force Member  
Ed Summers, Task Force Member  
Diane Underhill, Task Force Member

### **TASK FORCE MEETING**

**TUESDAY, DECEMBER 16, 2014, 6:00 P.M.**

**VENTURA WATER MAINTENANCE YARD, 336 SANJON ROAD, VENTURA**

### **ROLL CALL**

### **COMMITTEE ITEMS**

**1. APPROVAL OF MINUTES, SPECIAL MEETING ON NOVEMBER 19, 2014**

Staff: Sylvia Lopez, Administrative Secretary

Recommendation: Approve November 19, 2104 meeting minutes

**2. EX PARTE COMMUNICATION**

Staff: Shana Epstein, Ventura Water General Manager

Recommendation: Receive communication.

**3. PRELIMINARY WATER SHORTAGE RATES**

Staff: Nancy Broschart, Management Analyst and Sudhir Pardiwala, Raftelis Financial Consultants, Inc.

Recommendation: Receive presentation and select which methodology should be used for the development of water shortage rates to be incorporated into the Water Shortage Contingency Plan.

**4. "VENTURA FRIENDLY" WATER EFFICIENCY INCENTIVE PLAN PROPOSAL**

Staff: Nancy Broschart, Management Analyst and Jill Sarick, Environmental Services Specialist

Recommendation: It is recommended that the Water Shortage Task Force select a Water Efficiency Customer Incentive Program in order to provide a recommendation to the City Council. Staff is recommending two options for the Task Force to select from: (1) irrigation efficiency device(s) rebates in conjunction with a water survey and (2) a turf replacement incentive with funding proposed to be increased at each successive drought stage for both programs.

## **5. WATER SHORTAGE CONTINGENCY PLAN**

Staff: Susan Rungren, Water Resources Manager

Recommendation: The Task Force members are asked to continue to make revisions to the Water Shortage Contingency Plan starting at 1.7 Catastrophic Interruptions to Water Supply, incorporate recommendations for drought rate structure and to address additional requirements of the plan as outlined by the 2010 Urban Water Management Plan Guidebook.

- 6. PUBLIC COMMENT** – (For items not listed on this agenda, but within the jurisdiction of the Task Force. Note that no general discussion of such items, or action on such items, may be taken by the Task Force. At this time, the Task Force will provide an opportunity for the public to address them on any subject, which is not scheduled on this Agenda but is within the jurisdiction of the Task Force. Comments are limited to three (5) minutes.)

## **7. ADJOURNMENT – NEXT MEETING WEDNESDAY, JANUARY 14, 2015**

Minutes relating to this agenda are available in the Ventura Water Office, 336 Sanjon Road, Ventura, during normal business hours as well as on the City's Web Site – [www.venturawater.net](http://www.venturawater.net). Materials related to an agenda item submitted to the Ventura Water Department after distribution of the agenda packet are available for public review at the Ventura Water Office.

This agenda was posted on Thursday, December 11, 2014 at 3:00 p.m. in the Ventura Water Office, City Clerk's Office, on the City Hall Public Notices Board, and on the Internet.

In compliance with the Americans with Disabilities Act, if you need assistance to participate in this meeting, please contact the Ventura Water Office at (805) 652-4503 or the California Relay Service at (866) 735-2929. Notification by Monday, December 15, 2014, at 5:00 p.m. will enable the City to make reasonable arrangements for accessibility to this meeting.



Agenda Item Number 1  
Approval of Minutes  
November 19, 2014 Meeting  
December 16, 2014



# Draft Minutes

## Water Shortage Task Force

Suzanne McCombs, Task Force Chair  
Edward McCombs, Task Force Vice Chair  
Bryan Bondy, Task Force Member  
Ted Cook, Task Force Member  
Rob Corley, Task Force Member  
Diane de Mailly, Task Force Member  
Douglas Hahn, Task Force Member

Don Jensen, Task Force Member  
Robert McCord, Task Force Member  
Marty Melvin, Task Force Member  
Don Mills, Task Force Member  
Ed Summers, Task Force Member  
Diane Underhill, Task Force Member

Shana Epstein, Ventura Water General Manager

**DECEMBER 16, 2014**

**The Water Shortage Task Force met in the City of Ventura Maintenance Yard Facility, Assembly Room, 336 Sanjon Road, Ventura, at 6:00 pm.**

### ROLL CALL

Present: Chair Suzanne McCombs, Members Edward McCombs, Bryan Bondy, Ted Cook, Rob Corley, Diane deMailly, Douglas Hahn, Don Jensen Robert McCord, Marty Melvin, Don Mills, Ed Summers and Diane Underhill.

Absent: Task Force Member Bryan Bondy.

### TASK FORCE ITEMS

#### **1. APPROVAL OF MINUTES, SPECIAL MEETING ON November 19, 2014**

Recommendation: Approve November 19, 2014 meeting minutes.

Task Force Member Marty Melvin moved to approve, Task Force Member Diane de Mailly seconded. The vote was as follows:

AYES: Suzanne McCombs, Edward McCombs, Ted Cook, Rob Corley, Douglas Hahn, Robert McCord, Marty Melvin Don Mills, Edward Summers, and Diane Underhill.

NOES: None.

ABSTAIN: Task Force Members Edward McCombs and Douglas Hahn.

Chair Suzanne McCombs declared the motion carried.

**2. EX PARTE COMMUNICATION**

Recommendation: Receive communication.

Speaker(s): None.

Staff: Shana Epstein, General Manager.

Member(s) of the public: None.

**3. STATE CONSERVATION REPORTING UPDATE**

Recommendation: Receive communication.

Speaker(s): None.

Staff: Ryan Kintz, Environmental Services Specialist.

Member(s) of the public: None.

**4. PARKS DROUGHT RESPONSE ACTIONS**

Recommendation: Receive presentation.

Speaker(s): None.

Staff: Elena M. Brokaw, Parks, Recreation & Community Partnership Director

Member(s) of the public: None.

**5. POTENTIAL REBATE AND INCENTIVE PROGRAMS**

Recommendation: It is recommended that the Water Shortage Task Force evaluate the need and options for the creation of a Water Efficiency Customer Incentive Program in order to provide a recommendation to the City Council, if desired. Staff is recommending two elements: irrigation efficiency device(s) rebates in conjunction with a water survey and a turf replacement incentive with funding proposed to be increased at each successive drought stage for both programs.

Speakers(s):

Staff: Nancy Broschart, Management Analyst and Jill Sarick, Environmental Services Specialist.

Member(s) of the public: Daniel Cormode.

Task Force Member Edward Summers moved to accept the recommendation to create an incentive plan to be forwarded to the City Council and refer back to staff to develop a specific recommendation as to what the plan would entail – the dollar amount and parameters of the plan. Task Force Member Edward McCombs seconded. The vote was as follows:

AYES: Edward McCombs, Ted Cook, Rob Corley, Douglas Hahn, Don Jensen, Edward Summers, and Diane Underhill.

NOES: Suzanne McCombs, Diane de Mailly, Robert McCord, Marty Melvin, and Don Mills.

ABSTAIN: None.

Chair Suzanne McCombs declared the motion carried.

## **6. WATER SHORTAGE CONTINGENCY PLAN REVISIONS**

Recommendation: Received and approved with additional edits through page 11 to the revised Water Shortage Contingency Plan, as prepared by the Task Force Subcommittee Members Corley, Underhill, Jensen and Cook. The Subcommittee will continue editing.

Speaker(s):

Staff: Karen Waln, Management Analyst

Member(s) of the public: Thomas Schodorf.

## **7. TASK FORCE MEETING DATE CHANGE AND ADDITION**

Recommendation: Approve the following changes to the Task Force special meeting schedule: (1) Change meeting date from Wednesday, December 3, 2014 to Tuesday, December 16, 2014, and (2) Add a meeting on Wednesday, January 14, 2015. All meetings will be held starting at 6:00p.m., at the Ventura Water Maintenance Yard, 336 Sanjon Road, Ventura

Task Force Member Robert McCord moved to approve, Task Force Member Edward Summers seconded. The vote was as follows:

AYES: Suzanne McCombs, Edward McCombs, Ted Cook, Rob Corley, Diane de Mailly, Douglas Hahn, Don Jensen, Robert McCord, Marty Melvin, Don Mills, and Ed Summers, Diane Underhill.

NOES: None.

ABSTAIN: None.

Chair Suzanne McCombs declared the motion carried.

Speaker(s):

Staff: Shana Epstein, Ventura Water General Manager

Member(s) of the public: None.

- 8. PUBLIC COMMENT** – (For items not listed on this agenda, but within the jurisdiction of the Task Force. Note that no general discussion of such items, or action on such items, may be taken by the Task Force. At this time, the Task Force will provide an opportunity for the public to address them on any subject, which is not scheduled on this Agenda but is within the jurisdiction of the Task Force. Comments are limited to three (5) minutes.)

**9. ADJOURNMENT**

The meeting was adjourned 9:10 pm. The next meeting, Tuesday, December 16, 2014, at 6:00pm located at the Ventura Maintenance Yard Facility, 336 Sanjon Road, Ventura.

Minutes relating to this agenda are available in the Ventura Water Office, 336 Sanjon Road, Ventura, during normal business hours as well as on the City's Web Site – <a href="http://www.venturawater.net">www.venturawater.net</a> . Materials related to an agenda item submitted to the Ventura Water Department after distribution of the agenda packet are available for public review at the Ventura Water Office.
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This agenda was posted on Thursday November 13, 2014 at 5 p.m. in the Ventura Water Office, City Clerk's Office, on the City Hall Public Notices Board, and on the Internet.
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Agenda Item Number 2  
Ex Parte Communication  
December 16, 2014

No Written Report for this Item



Agenda Item Number 3  
Preliminary Water Shortage Rates  
December 16, 2014



# ADMINISTRATIVE REPORT

Date: December 10, 2014

Agenda Item No: 3

Meeting Date: December 16, 2014

**To: WATER SHORTAGE TASK FORCE**

**From: SHANA EPSTEIN, VENTURA WATER GENERAL MANAGER**

**Subject: PRELIMINARY WATER SHORTAGE RATES**

## RECOMMENDATIONS

Receive presentation.

## DISCUSSION

Based on the feedback provided by the Water Shortage Task Force on rate concepts at its November 5 meeting, Raftelis Financial Consultants, Inc. (RFC) has designed preliminary water shortage rate scenarios for the Task Force's review and evaluation.

The goals of the water shortage rates are as follows:

- Meet community expectations
- Maintain fiscal stability in the event of a sudden or long-term water shortage
- Achieve State mandates and legal requirements and
- Be adopted into Ventura's Municipal Code to provide expediency and business continuity in the event of future shortages.

This item consists of a presentation to the Water Shortage Task Force, prepared by RFC. The objective will be to refine the water shortage rates for final design by RFC, anticipated to be presented to the Task Force next January.

Prepared by Nancy Broschart, Management Analyst  
For

A blue ink signature of Shana Epstein, consisting of a large, stylized 'S' followed by a horizontal line.

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Shana Epstein  
Ventura Water General Manager



Agenda Item Number 4  
“Ventura Friendly”  
Water Efficiency Incentive Plan  
Proposal  
December 16, 2014



# ADMINISTRATIVE REPORT

Date: December 5, 2014

Agenda Item No: 4

Meeting Date: December 16, 2014

**To: WATER SHORTAGE TASK FORCE**

**From: SHANA EPSTEIN, VENTURA WATER GENERAL MANAGER**

**Subject: "VENTURA FRIENDLY" WATER EFFICIENCY INCENTIVE PLAN PROPOSAL**

## **RECOMMENDATION**

It is recommended that the Water Shortage Task Force receive the "Ventura Friendly" Water Efficiency Incentive Plan proposal.

## **DISCUSSION**

At its November 19 meeting, the Water Shortage Task Force received a presentation by staff on potential rebate and incentive programs for the City of Ventura. At that meeting, the following motion by Ed Summers, and seconded by Ed McCombs, carried by a vote of 7 to 5:

*Accept the recommendation to create an incentive plan to be forwarded to the City Council and refer back to staff to develop a specific recommendation as to what the plan would entail – the dollar amount and parameters of the plan.*

Based on the Task Force's feedback, staff has further developed the program named the "Ventura Friendly" Water Efficiency Incentive Plan Proposal (Attachment A).

Prepared by Jill Sarick, Environmental Services Specialist  
For



Shana Epstein  
Ventura Water General Manager

**ATTACHMENT A**

**“VENTURA FRIENDLY”  
WATER EFFICIENCY  
INCENTIVE PLAN  
PROPOSAL**



## 2014 Ventura Friendly Water Efficiency Incentive

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### Summary

Managing water demand is an important strategy in meeting the challenges of a water shortage. Incentive programs to promote water efficiency are commonly employed to motivate customers to save water. Conservation programs are one of many tools utilities employ to efficiently manage water supplies. Ventura is the only city in the tri-county region that does not offer any kind of incentive or rebate to encourage residents to participate in greater water efficiency measures.

In July of 2014, Ventura Water called for a mandatory 20% reduction and began enforcing water waste prohibitions. A customer incentive program will not only provide a positive counter balance and an opportunity for us to work together with the community to save water but it will address the overwhelming interest in the community for such programs. Since tracking began in the summer of 2014, staff reports that overall water use is down 16%. Still, a recent report<sup>i</sup> from the State Water Resources Control Board (SWQRCB) states that water use across California dropped only 6% in October compared to 12% in August. The report cites “conservation fatigue” and recent rains as some of the reasons for the drop in conservation.

The main purpose for recommending a water incentive program at this time is to manage strained water resources during this drought with the intention to invest in water-saving opportunities that will enable the utility to avoid more costly system expansion in the future. Additionally, based upon frequent public inquiries, there is clearly a demand for these programs in Ventura. It is well documented that most discretionary water use is outdoors; therefore the Ventura Friendly Water Efficiency Incentive Plan (Plan or Program) proposes two elements that target irrigation reductions: incentives for irrigation efficiency device(s) based on individual property needs and a turf removal and replacement incentive. Other conservation measures were compared and are outlined in the Methodology section, Attachment A.

If the program is implemented through three proposed drought stages at an investment of \$1.75, nearly 482 AFY may be saved, or enough water to supply over 800 homes for one year.

## Background

To meet water reduction targets, water efficiency incentive programs are a recognized tool for utilities. While water conservation programs typically involve up-front costs, including revenue losses, the full benefits of conservation are realized in avoided costs to system expansion<sup>ii</sup>. Deferring investment in such facilities has proven to provide significant cost savings over the long-term. Also, conservation measures have the added benefit of providing environmental paybacks that outweigh short-term inconveniences incurred by drought measures. In a November 2014 report titled, *Wetter or Not*<sup>iii</sup>, a coalition of 15 environmental, fishing and public policy organizations identified that nearly 14 million AF of new supply and reduced demand on state's rivers and groundwater can be achieved through three conservation measures: irrigation efficiency, reuse and stormwater capture.

At its November 19 meeting, the Water Shortage Task Force received a presentation by staff on potential rebate and incentive programs for the City of Ventura. At that meeting, a motion was made to *"accept the recommendation to create an incentive plan to be forwarded to the City Council and refer back to staff to develop a specific recommendation as to what the plan would entail – the dollar amount and parameters of the plan"*. Based on the Task Force's feedback, staff has further developed the program named the "Ventura Friendly Water Efficiency Incentive Plan" proposal.

The State of California is experiencing unprecedented drought conditions with 2014 projected to be the driest year on record. On January 17, 2014, the Governor proclaimed a state of emergency due to water supply impacts caused by three consecutive years of drought conditions and called all Californians to reduce water usage by 20 %. On April 25, 2014, the Governor issued an Executive Order calling on Californians to take specific actions to avoid wasting water. The Order also directed State Water Resources Control Board (SWRCB) to adopt and implement emergency regulations to prevent water waste.

On July 15, 2014, the SWRCB subsequently implemented mandatory statewide water conservation actions with possibility of fines for cited violations. As an urban water supplier, the City of Ventura is required to comply with these regulations. The City's existing Urban Water Management Plan (UWMP 2010) contains comprehensive water conservation measures and identifies the direct nexus between the availability of water supply and immediate actions needed to effectively increase water conservation so that remaining supplies are preserved as related to the preservation of the public health and safety.

Our community has been excellent water stewards for decades and our overall water consumption per capita is lower than surrounding communities. However, funding for water conservation programs despite drought conditions and our reliance on a local source, remain minimal. Over the past two years, Ventura Water has unsuccessfully tried to secure federal and state grant funding for water efficiency programs. Ventura Water will continue to seek grant funding for water efficiency incentive programs, but until then, it is proposed that funding be redirected from retained earnings and later, from any avoided water supply penalty monies (Casitas rental charges or penalties for pumping over allocations set by Fox Canyon Groundwater Management Agency).

### Demand Forecast, Existing Water System Profile and Planned Facilities

As illustrated in the 2014 Comprehensive Water Resources Report<sup>iv</sup>, the city's water supply is constrained and should the drought continue beyond three years, mandatory conservation measures and/or penalties for overuse of City's water resources shall be implemented. Current supply is projected at between 14,824 to 16,824 AFY whereas projected demand by 2020 exceeds this amount by 1,256 AFY to as much as 5,156 AFY.



Potential future water supplies include investing in infrastructure to bring State Water Project water to Ventura, investing in Indirect Potable Reuse (IPR) or Direct Potable Reuse (DPR) infrastructure to access treated effluent from either the city's wastewater facility or from Ojai Valley Sanitation District. Any one of these potential sources could supply the City with between 1 MGD to 4.5 MGD or 1,095 AFY to 5,110 AFY<sup>v</sup>. However, according to studies conducted in San Diego, an estimated at \$2 million of capital infrastructure<sup>vi</sup> is required for every mile of purple pipe installed. For Ventura, we estimate closer to \$1.5 million.

For example, to invest in infrastructure to service Community Park and Arroyo Verde Park, plus the medians along Victoria Avenue, and construct a reclaimed water booster station, the city would need to finance nearly \$9 million dollars. Both parks used approximately 54 AF last year. In a normal year, they may use closer to 76 AF.

## Ventura Friendly Water Efficiency Incentive Plan– Program Components

The Program goals include:

- Show measurable water-savings to meet water reduction goals as mandated by drought stages,
- Provide a financial investment mechanism that will encourage customers to manage their water demand thereby minimizing adverse impacts to supply,
- Reduce customer confusion by offering incentives comparable to those through participating MET agencies via the “Be Water Wise Program” and
- Achieve multiple benefits, including economic, environmental and social paybacks for years to come.

### Key Elements to the Program

- Flexible participation. Allowing program participants and administrators to invest in the most appropriate device or measure for the property in question.
- Integrated outreach. Easily incorporates into existing customer outreach and education efforts. Regular re-education of City Council regarding drought stages and allocation of new funding levels.
- Collaborative. Increased collaboration with local vendors and regional partner organizations.
- Adaptively managed. Continued program evaluation on the ever-changing water supply scenarios for the City of Ventura.
- Consistent. This program is in alignment with the 5-Year Water Efficiency Plan and meets goals in the 2010 Urban Water Management Plan.
- Economically beneficial. By investing in the “new normal” for landscapes in California, Ventura would be helping develop new profitable job markets and securing our local, sustainable water supply.

Many variables play a factor in how the program will ultimately unfold. For instance, with an initial budget of \$600,000 for irrigation efficiencies and \$800,000 for turf replacement, it is impossible to accurately identify how many incentives will be issued in the first year, or for that matter, the first month. Metropolitan Water District, for instance, had such a huge response to their incentive program that funds were exhausted in the first few months of initiation and the District reallocated more funds to continue the program.

Customers who want to participate will initially fill out an application and receive a water survey. The water survey will entail a verification of the age and condition of the irrigation system if present and that the landscape is currently being actively watered. Utility billing records will be used to corroborate water usage. The survey will also include identification of other possible measures, including rainwater harvesting and graywater reuse. These

will be identified and included in a report that is given to the customer with a list of recommended actions and which incentives would be most appropriate for that location.

Irrigation efficiencies may include a rain sensor or shut-off device, a smart controller that waters only according to climate conditions, rotating nozzles with pressure regulating bodies or it may be recommended to install a pressure regulator at the valve box instead and use the precision nozzles. Turf replacement will be administered at \$2 per SF up to \$800 for properties under one acre and up to \$1,600 for properties over one acre. Applicants can also receive a rebate for the application of compost and mulch.

### **Investing in Conservation Measures**

There are many reasons for water utilities to pursue efficient use and establish a conservation program, in fact, the 5-Year Water Efficiency Plan has identified many of the most appropriate strategies for our utility. These measures are estimated to cost the utility approximately \$3,000 per AF of water saved. This is well below the estimated cost of bringing in a new source as identified by the proposed In-Lieu Fee, which was between \$10,000 and \$15,000<sup>vii</sup>. Some important reasons utilities incorporate conservation in their supply strategy include:

- Cost savings by lowering production and/or distribution costs to save the utility and its constituents money in reduced operation costs and possibly defer capital investment,
- Environmental benefits via a reduction in human consumption thereby increasing water supply for beneficial uses, and/or reducing stormwater runoff, or
- Improved supply reliability because conservation can reduce the frequency and duration of the drought water use curtailments by essentially increasing supply.

The tables below illustrate the proposed conservation measures, the cost investment by the customer associated with that of the utility and the estimated water savings. Staff estimated water savings per device or measure using published formulas and efficiency standards<sup>viii</sup>. Please refer to Attachment A for more information on the methodology used to arrive at these estimations. The estimates are for a likely combination of devices that would be dependent upon an initial water survey conducted by staff or a 3<sup>rd</sup> party contractor. The actual combination of measures or devices will vary for each property or application. Some properties may qualify for both Irrigation Efficiency incentives and Turf Replacement depending upon the water survey recommendations.



## Irrigation Efficiency

Up to \$300 per application based upon a water survey

Conservation Device/Measure	Customer Investment	Utility Investment	Est. AFY Savings	Cost/AF Savings	Annualized over 10 Yrs
Rain Sensor	\$40	\$20	<b>225</b>	<b>\$3,000</b>	<b>2250 AF saved over 10 yrs @ \$300/yr</b>
Smart Controller < 1 acre	\$300	\$85			
Rotating Nozzles w pressure regulating body; up to 20 nozzles	\$100	\$50			
Smart Controller > 1 acre	\$400	\$170			
Pressure regulator at valve box; up to 2	\$80	\$40			
Precision Nozzles w/o regulating body; up to 50 nozzles	\$150	\$75			



## Turf Replacement

Up to \$800 for < 1 acre and \$1,600 > 1 acre

Conservation Device/Measure	Customer Investment	Utility Investment	Est. AF Savings	Utility Cost/AF	Annualized over 10 yrs
Turf Replacement with low water alternative (DIY) > 1 acre	\$3,000 to 5,000	\$800	<b>256</b>	<b>\$3,400</b>	<b>2560 AF saved over 10 yrs @ \$340/yr</b>
Mulch, aeration, compost amendments	\$70-200	\$75			
Spray to Drip conversion; 1 zone up	\$25 – 75	\$25			
Synthetic Turf	\$8-\$9/SF	\$800			
Turf Replacement with low water alternative (Contractor installed) > 1 acre	\$10,000-30,000	\$1,600			
Mulch, aeration, compost amendments	\$150-500	\$150			
Spray to Drip conversion; 1 zone up to 3 zones	\$25 – 75	\$75			
Synthetic Turf	\$8-\$9/SF	\$1,600			

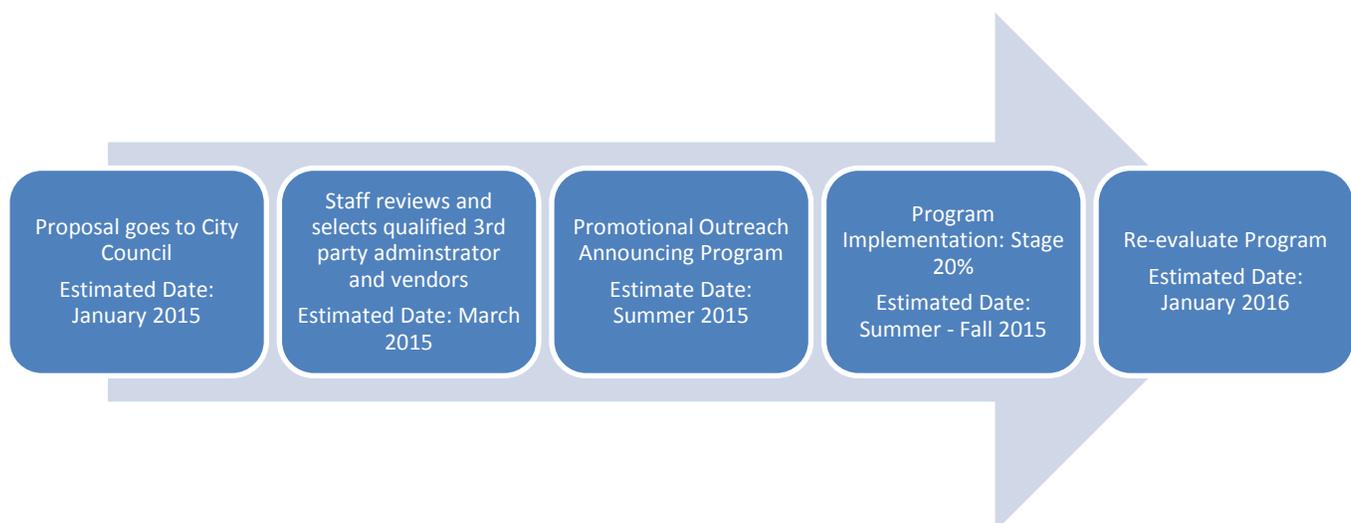
The implementation of the Plan requires a dedicated staff and budget, plus willing program participation and support and buy-in from management. Much of the existing financial resources for promotion and program management already exist and are not considered necessary budget additions. The program may require a 3<sup>rd</sup> party administrator to assist with water surveys and identification of the appropriate measure or device per application or to verify pre and post turf replacement. Vendor agreements would be initiated with several irrigation supply warehouses for the voucher-based measures.

As rebates of \$600 or more can be considered taxable income by the IRS and the State, customers receiving rebates totaling \$600 or more are required to include a completed and signed W-9 Form<sup>ix</sup>. Staff would manage the 3<sup>rd</sup> party administrator, conduct program tracking and reporting as well as administer the budget.

<b>Proposed Incentive Program Budget</b>						
<b>Drought Stage</b>	<b>Funding IE</b>	<b>Funding TR</b>	<b>Total by Stage</b>	<b>.5 FTE</b>	<b>10% Admin</b>	<b>Total</b>
<b>20%</b>	<b>\$300,000</b>	<b>\$400,000</b>	<b>\$700,000</b>	<b>\$55,000</b>	<b>\$70,000</b>	<b>\$825,000</b>
<b>30%</b>	<b>\$150,000</b>	<b>\$200,000</b>	<b>\$350,000</b>	<b>\$55,000</b>	<b>\$35,000</b>	<b>\$440,000</b>
<b>40%</b>	<b>\$150,000</b>	<b>\$200,000</b>	<b>\$350,000</b>	<b>\$55,000</b>	<b>\$35,000</b>	<b>\$440,000</b>
<b>Total</b>	<b>\$600,000</b>	<b>\$800,000</b>	<b>\$1,400,000</b>	<b>\$165,000</b>	<b>\$140,000</b>	<b>\$1,705,000</b>

### **Timeline and Implementation Schedule**

Aside from setting up the vendor agreements and identifying a qualified 3<sup>rd</sup> party contract administrator to assist with the turf replacement incentive, a comprehensive promotional effort will also be necessary. Staff recommends that this Plan be taken to City Council by January 2015. It is estimated that a .50 FTE will be sufficient to manage the 3<sup>rd</sup> party and vendor contracts. Please refer to Attachment B for more detailed budget information.



## **Contract Administration**

On average, 3<sup>rd</sup> party administration is estimated at 10% of total program budget. This is based upon personal communication with MET Program staff in October 2014. 3<sup>rd</sup> party administrators that will be contacted by Ventura Water to submit a RFQ include:

- Electric and Gas Industries Association (EGIA) is a non-profit organization dedicated to advancing energy and water conservation solutions for over 30 years. They are the administrator for Social Watersmart Rebate program for Metropolitan Water District.
- Water Wise Consulting, Inc. assists utilities to implement comprehensive conservation programs, provide program management, customer service, rebate processing, site inspection (pre and post), and program analysis and evaluation. They have been selected to administer the VCRULE program.
- California Urban Water Conservation Council (CUWCC) is a non-profit organization that supports water utilities to meet regulatory reporting for California as well as administers the Smart Rebate program which includes rebates for washing machines, toilets, urinals, and commercial water-brooms. They currently do not provide outdoor water conservation rebates.

## **Vendor Agreements**

It is recommended that some of the devices are managed through a vendor partnership similar to what we already have established with Green Thumb Nursery for the compost subsidy or Smith Pipe and Supply rain barrel subsidy. Ventura Water would allocate a set amount per stage and the vendors would invoice the utility monthly for 50% of the cost of the measures purchased. Vendors identified to participate include Ewing Irrigation Supply and Aquaflo, Inc. Aquaflo has provided a draft list of materials and costs for reference in Appendix C.

## **Budget and Fiscal Impacts**

Staff is recommending allocating \$825,000 dollars from retained earnings initially. As each drought stage is reached, approximately 3,000 customers or just over 10% of our SF/MF customer base would be served through the Program. Funds can be administered in stages, amounts can be adjusted to front-load incentives to maximize early adopters or be released after certain production targets are realized. Once the funds run out, staff would return to City Council for direction on further funding allocations options.

It is difficult to determine how much will be expended for each measure. Some properties will use less than the total amount allotted per property and others might use the maximum allowed. This proposal was developed

after careful and in-depth review of other programs offered in the tri-county region. The proposed incentives would be financed the first year through retained earnings and then from penalty revenues the subsequent years.

### **Other Programs in Tri-county region**

There are various other incentive programs offered in the tri-county region that were researched. Several are included in the Appendix D for reference.

### **Conclusion**

Some regulators require utilities to formally adopt such plans before the plan is considered “official” and is use to meet other obligations, such as water right permits, to qualify for state grant and loan programs, etc. It is recommended that City Council adopt of this Plan so that implementation may begin in the 2014-15.

Conserved water can be considered a reliable water source. Great strides have been made over the past decade in evaluating and documenting the effectiveness of various conservation measures. Today there is a body of knowledge on water conservation, gained from experiences of utilities, that provides a relatively high degree of confidence in the reliability and predictability of various water conservation measures. In the event of continued water shortages, agencies with broad-based water conservation programs are able to mitigate both short-term and long-term supply interruptions better than those without such a strategy in place. Moreover, holistic approaches to water conservation, where stormwater capture and wastewater reuse are paired with irrigation efficiency and transitional to “new normal” landscapes are a progressive, viable and sensible approach to long-term water supply sustainability.

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<sup>i</sup> CA Department of Water Resources, *Board Announces Water Conservation Workshop 12/17/2014 to Plan for Dry 2015*; <http://ca.gov/drought/topstory/top-story-18.html>

<sup>ii</sup> Pete Mayer, et all, *Conservation Limits Rate Increases for Colorado Utility*, 2013

<sup>iii</sup> National Resources Defense Council et all, *Wetter or Not – Actions to Ease the Current Drought and Prepare for the Next*, November, 2014; [http://docs.nrdc.org/water/files/wat\\_14111701b.pdf](http://docs.nrdc.org/water/files/wat_14111701b.pdf)

<sup>iv</sup> City of Ventura Water Department, *2014 Comprehensive Water Resources Report*, Prepared by RBF Consulting

<sup>v</sup> Personal communication: Ryan Kintz, Environmental Specialist, City of Ventura Water Department, November 24<sup>th</sup>, 2014

<sup>vi</sup> Fermanian Business & Economic Institute; Equinox Center, *San Diego’s Water Sources: Assessing the Options*, July 2010

<sup>vii</sup> City of Ventura Admin Report; *Water Dedication and In-Lieu Fee Ordinance and Resolution*; June 6, 2014

<sup>viii</sup> Ellen Hanak and Davide Neumark, *Public Policy Institute of California; Lawns and Water Demand in California 2006*

<sup>ix</sup> <http://www.irs.gov/uac/Reporting-Miscellaneous-Income>

## **Demand Forecast, Existing Water System Profile and Planned Facilities**

As illustrated in the 2014 Comprehensive Water Resources Report<sup>i</sup>, the city's water supply is constrained and should the drought continue beyond three years, mandatory conservation measures and/or penalties for overuse of City's water resources shall be implemented. Current supply is projected at between 14,824 to 16,824 AFY whereas projected demand by 2020 exceeds this amount by 1,256 AFY to as much as 5,156 AFY.

Potential future water supplies include investing in infrastructure to bring State Water Project water to Ventura, constructing the Saticoy County Yard Well, investing in Indirect Potable Reuse (IPR) or Direct Potable Reuse (DPR) infrastructure to access treated effluent from either the city's wastewater facility or from Ojai Valley Sanitation District. Any one of these potential sources could supply the City with between 1 MGD to 4.5 MGD or 1,095 AFY to 5,110 AFY<sup>ii</sup>; however, at this time, these measures are exceedingly cost-prohibitive; estimated at \$2 million per mile of pipeline infrastructure<sup>iii</sup>, not including operations and maintenance. The entire Ventura Be WaterWise Incentive program may save an estimated 480 AFY in water savings per \$1.75 million dollar investment.

It is worth re-iterating that the main purpose for staff to recommend a water incentive program at this time is to manage strained water resources during this drought with the intention to invest in water-saving opportunities that will enable the utility to avoid more costly system expansion in the future. Additionally, it would be remiss of staff to ignore the importance of responding to the overwhelming public appetite for these programs.

There are plenty of other types of conservation measures that were not included in this research, which include: Commercial washing machines, commercial dishwashers, commercial kitchen equipment upgrades, process water recirculating systems, cooling and heating systems efficiency improvements, and leak detection. While these measures surely prove to result in water savings, many of them require significant capital investment, would require the technical expertise of a 3<sup>rd</sup> party contractor to implement. Moreover, our commercial users account for a much smaller portion of our total customer base.

## **Calculating Estimated Water Savings**

Indoor Efficiency measures including high efficiency toilets and high efficiency washing machines provide a smaller benefit per investment cost. Without having conducted a market saturation survey, it's hard to estimate the percent of homes with newer toilets. However, it is safe to assume that 3.5 gpf toilets are uncommon.

Significant savings might be realized by installing sub-meters at multi-family residential dwellings. Sub-metering was found to achieve statistically significant water savings of 15% (21.8 gal/day/unit)<sup>iv</sup>. Multi-family properties, account for roughly 64%<sup>v</sup> of Tier 1 and Tier 2 customers in Ventura. This may offer a greater opportunity for water savings when sub-metering is included with irrigation efficiency upgrades. However, again, the initial investment is much exceedingly high for the potential return.

The average single family household in Ventura consumes approximately 21 HCF per billing cycle. This translates into roughly 95,000 gallons per year. Several studies indicate that outdoor water use in Southern California accounts for up to 40 to 60% or more of total water use. In Ventura, staff conducted a small sample of our billing records and determined the average to be closer to 40%. So, we split the difference and used 50%. This being said, over 47,000 gallons per year are applied to outdoor landscapes and there are many other published studies<sup>vi</sup> as well as valid anecdotal evidence that 50% or more of that is wasted due to poor irrigation practices, inefficient systems, poor maintenance, poor design, need to compensate for low or high pressures, etc. The table below refers to Ventura data. The G/SF estimate was derived from using the State Model Water Efficient Landscape Ordinance (MWELO) Estimate Total Water Use (ETWU) formula where

$$ETWU = (eto) \times (.62) (PF \times LA/IE)$$

Additionally, the 16 G/SF came from a Pacific Institute report on water and energy titled, *California's Next Million Acre Feet*.

HCF per household per 60 day billing cycle	Total gallons per billing cycle	GPM	GPY	Est. Gal Outdoor Use (50%)	Est. Gal Indoor Use (50%)	AFY Outdoor	G/SF*
21	15708	7854	94248	47124	47124	0.14	31.42
Turf Replacement Savings				37699		0.12	8-16
Irrigation Efficiency Savings				14137		0.04	24

In the United States, outdoor residential water use for turf and landscape irrigation and other purposes (outdoor car washing, cleaning, swimming pools) is estimated to average about 32 gallons per capita per day (gpcd). The figure comes from USGS databases of utilities reporting on public water supplies tied to the US average of indoor and outdoor use around 110 gpcd<sup>vii</sup>. Principal factors influencing residential water use for landscape

irrigation are climate, amount of natural rainfall, the price of water, household income, and prevailing landscape aesthetic.

Staff conducted a cost-benefit of various outdoor conservation measures and concluded that the highest return on investment both for the Utility and the customer, is irrigation efficiency. Turf replacement offers a larger water savings and a forever-change in that water use; however, the up-front investment is often more expensive than simply optimizing irrigation systems. See the Table 2 below for a breakdown of the various measures and their estimated water savings.

To calculate estimated water savings, baseline water use was determined for 2,600 households, or 10% of our total MF/SF accounts. Water savings resulting from the efficiency measures will depend on (1) the reduction in water use as a result of implement the measure; and (2) the degree of coverage that the measure can achieve (known as market penetration

	water use w/o measure gpd	water use w measure gpd	savings gpd	savings gpy	savings AF
3.5 gpf toilet to 1.3	43.75	16.25	27.50	10038	0.03
1.6 pgf toilet to 1.3	20.00	16.25	3.75	1369	0.004
51 gpl clothes washer to 27 gpl	51.00	27.00	24.00	8760	0.03
20% IE per SF	107880.00	71129.67		36750.33	0.11
TR per SF	107880.00	24273.00		83607.00	0.26
Sub-metering	261.80	222.53	39.27	14334	0.04

**Cost Benefit of Each Measure**

Each measure has its own investment costs which would be partially subsidized by the utility. Program participants would contribute a higher portion of the total investment. It’s difficult to determine how many applications will be submitted for each measure and how much will be spent per application. For instance, while sub-metering offers the greatest water-savings, the cost to implement even a marginal incentive is too expensive to justify. Turf replacement programs are expensive to fund, but are popular with our customers. The best investment, based on these assumptions therefore is irrigation efficiency optimization. Both irrigation efficiency and turf replacement have the added benefit of reducing dry-weather runoff, a contributing pollutant of concern for stormwater.

Using a simplified approach to estimate the cost of water saved, staff compared the measures using the following formula. In this case, the cost of the water saved does include any in-house administration costs, including staff time, publicity costs, and evaluation plus 3<sup>rd</sup> party contract fees. If the ratio is great than 1.0, the benefits outweigh the costs and the measure is considered feasible or economically efficient.

$$\text{Unit cost of water saved (\$/unit of water)} = TC/V$$

Where: TC = present value of the total efficiency program costs over planning period (dollars)

V = total volume of water save (units) over the planning period (e.g. AFY)

Measure	Cost-Benefit
HET	.01
HEW	.34
IE	.14 to .77
TR	.48 to 2.14
Sub-metering	.03

<sup>i</sup> City of Ventura Water Department, *2014 Comprehensive Water Resources Report*, Prepared by RBF Consulting

<sup>ii</sup> Personal communication: Ryan Kintz, Environmental Specialist, City of Ventura Water Department, November 24<sup>th</sup>, 2014

<sup>iii</sup> Fermanian Business & Economic Institute; Equinox Center, *San Diego's Water Sources: Assessing the Options, July 2010*

<sup>iv</sup> Peter Mayer, Erin Towler, William DeOreo, *National Multiple Family Sub-metering and allocation Billing Program Study 2004*

<sup>v</sup> Kintz, November 24<sup>th</sup> 2014

<sup>vi</sup> EPA WaterSense <http://www.epa.gov/WaterSense/pubs/outdoor.html>

<sup>vii</sup> Wayne Solley, Robert Pierce, and Howard Perlman, *Estimated Use of Water in the United States in 1995*, USGS Circular

# Proposed Budget

# ATTACHMENT A3

Proposed Program Budget											
	Irrigation Efficiency (\$300 per property*)		Water Savings (AF)	Turf Replacement (\$800 per property*)		Est. Water Savings (AF)	Total Est. Savings (AF)	Sub-Total	.5 FTE	10% Admin	Total Budget
Drought Stage	Funding	Customers*		Funding	Customers*						
20%	\$300,000	1000	43.39	\$400,000	500	57.85	101.23	\$700,000	\$ 55,000.00	\$ 70,000.00	\$825,000
30%	\$150,000	500	21.69	\$200,000	250	28.92	50.62	\$350,000	\$ 55,000.00	\$ 35,000.00	\$440,000
40%	\$150,000	500	21.69	\$200,000	250	28.92	50.62	\$350,000	\$ 55,000.00	\$ 35,000.00	\$440,000
	\$600,000	2,000	86.77	\$800,000	1,000	115.69	202.47	\$1,400,000	\$165,000	\$140,000	\$1,705,000
			6,915		\$6,914.76						



01  
30 S La Patera Unit 10  
Goleta CA 93117  
(805)967-2374  
Fax: (805)967-5509

03  
25217 Rye Canyon Rd  
Santa Clarita CA 91355  
(661)257-0909  
Fax: (661)257-9500

05  
11520 Jefferson Blvd  
West L.A. CA 90230  
(310)915-5208  
Fax: (310)915-5108

07  
2137 Dominguez St  
Torrance CA 90501  
(310)782-0355  
Fax: (310)782-0624

02  
1940 E Ojai Ave  
Ojai CA 93023  
(805)646-7244  
Fax: (805)646-7725

04  
225 S Milpas St  
Santa Barbara CA 93103  
(805)897-1166  
Fax: (805)899-3762

06  
2471 Portola Rd #300  
Ventura CA 93003  
(805)676-1114  
Fax: (805)676-1104

08  
5345 N Commerce Ave #8  
Moorpark CA 93021  
(805)529-1508  
Fax: (805)529-1808

**QUOTE  
REPRINT**

Number	425403
Date	11/25/2014
Page	1

Ship To: **Cash - Contractor  
SAME**

Bill To: **Cash - Contractor**

Reference	Expires	Slsp	Terms	Wh	Freight	Ship Via
	12/24/14	DCW David W.	CASH	06		WILL CALL

Quoted By: <b>DCW</b>	Quoted To:
-----------------------	------------

Item	Description	Ordered	UM	Price	UM	Extension
<b>OUTDOOR UNITS</b>						
18-SL1-60000	Weathermatic SL1600 4-Sta. SmartLine Contr (Expndbl to 16)	1	EA	163.133	EA	163.13
18-SLW-1ECON	Weathermatic SLW1 Economy On-Site Weather Monitor	1	EA	116.513	EA	116.51
18-SLM-40000	Weathermatic SLM4 4-Station Exp. Module for SL1600	4	EA	48.914	EA	195.66
17-EVO-4OD00	Toro Evolution 4 Sta. Outdoor Controller	1	EA	126.000	EA	126.00
17-EVO-SC000	Toro Smart Connector for Evolution	1	EA	84.000	EA	84.00
17-EVO-WS000	Toro Wireless Weather Sensor	1	EA	69.300	EA	69.30
17-EVO-MOD40	Toro 4-Station Expansion Module for Evolution	3	EA	34.300	EA	102.90
<b>INDOOR UNITS</b>						
18-SL8-00000	W/M Smartline SL800 Controller (4-Zone Base Mdl, Exp. to 8)	1	EA	85.625	EA	85.63
18-SLM-20000	Weathermatic 2-Zone Module For SL-800	3	EA	28.520	EA	85.56
18-SLW-1ECON	Weathermatic SLW1 Economy On-Site Weather Monitor	1	EA	116.513	EA	116.51
17-EVO-4ID00	Toro Evolution 4 Sta. Indoor Controller	1	EA	105.000	EA	105.00
17-EVO-MOD40	Toro 4-Station Expansion Module for Evolution	3	EA	34.300	EA	102.90
17-EVO-SC000	Toro Smart Connector for Evolution	1	EA	84.000	EA	84.00
17-EVO-WS000	Toro Wireless Weather Sensor	1	EA	69.300	EA	69.30
<b>ADDITIONAL ACCESSORIES</b>						
19-RC0-00000	Hunter RAIN-CLIK Rain Sensor w/Quick Response System	1	EA	28.000	EA	28.00
17-PRP-C10H0	Toro Precision 10-H Pres. Comp Nozzle (Female Thd)	1	EA	3.720	EA	3.72
19-MP1-90210	MP Rotator 90-210 Degree 1000 Series (Female Thread)	1	EA	6.000	EA	6.00
41-010-DS05C	1" Braukmann DS05C1089 Pressure Regulator (Dial-Set)	1	EA	97.488	EA	97.49
41-015-DS06G	1-1/2" Braukmann DS06G1000 Pressure Regulator Dial Set	1	EA	294.156	EA	294.16

QUOTE

Merchandise	Labor/Misc	Tax	Freight	Quote Total
1935.77	.00	145.18	.00	2080.95



## SMART LANDSCAPE REBATE PROGRAM

### RESIDENTIAL

Name: \_\_\_\_\_  
*(As you would like it to appear on the check; please print clearly.)*

Address: \_\_\_\_\_ Phone # (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_  
*(Mailing Address)*

City: \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
*(Mailing Address)*

Water Account Number: \_\_\_\_\_ Service Address: \_\_\_\_\_

How Did You Hear About the Rebate? \_\_\_\_\_

The City of Santa Barbara (City of SB) is offering rebates for upgrades to irrigation systems and landscaping to increase water efficiency. **PROJECTS MUST BE APPROVED IN ADVANCE. THE PROGRAM IS NOT RETROACTIVE. LANDSCAPES FOR NEW CONSTRUCTION ARE NOT ELIGIBLE. Sales receipts and/or contractor invoices are required for all rebates. Only the retail cost of material will be rebated.**

#### How Much Is The Rebate?

The program covers a portion of the cost of approved irrigation equipment and landscape materials.

- **Irrigation Equipment:** 50% of the cost of drip irrigation parts, sprinkler system efficiency retrofits, rotating sprinkler nozzles (delivering 1"/hour or less with proper pressure), pressure compensating heads, pressure regulators, and equipment for a laundry to landscape graywater system.
- **Water Wise Plants and Mulch:** 50% of the cost of water wise plants and mulch. Planted areas must be covered with a 3-inch layer of mulch. Hardscapes and pathways, including decomposed granite, are not eligible.
- **Smart Irrigation Controller:** 50% of cost of a smart irrigation controller. Smart irrigation controllers work on a simple principle: provide the appropriate watering schedule, automatically adjust for weather changes, and irrigate based on the needs of your plants.

**Performance based rebate program. Project must result in a net reduction in total landscape water consumption for the site.**

**Any combination of items above may qualify for a one-time, maximum rebate amount of \$1,000.**

#### How Do I Participate?

- Step 1:** Make an appointment for a "Pre-Qualification Inspection" site visit with a Water Conservation Program representative. If your project qualifies, you will receive the pre-qualified list of items eligible for rebate.
- Step 2:** The purchase and installation of all equipment denoted by Water Conservation staff under the heading of "Pre-Qualified Equipment" must be installed within **120 days** of the date of the Pre-Qualification Inspection.
- Step 4:** Call for a final "Post-Installation Inspection" appointment within **120 days** of the date of the **Pre-Qualification Inspection**. Receipts are required for all rebates. Ask your contractor for a separate invoice for materials stating: "Labor billed separately."
- Step 5:** Be ready to show your finished project. Rebate check will be issued within 30 days of final inspection.

### TERMS & CONDITIONS

1. The **Applicant** applying for the rebate(s) **must be a City of Santa Barbara water customer**.
2. **Only Pre-Qualified Equipment** as determined by a Water Conservation staff member, upon verification of anticipated water savings, shall qualify for a rebate after installed.
3. All Pre-Qualified Equipment as detailed on this application is **valid for 120 days** from the **Pre-Qualification Inspection** date.
4. The purchase and installation of all equipment denoted by Water Conservation staff under the heading of "Pre-Qualified Equipment" must be installed within 120 days of the date of the **Pre-Qualification Inspection**.
5. The reverse side of this form must be completely filled out.
6. Applicant must attach a legible copy of the valid, dated sales receipts to this application to qualify.
7. Rebates shall be on a one-time basis per address or customer.
8. A **Post-Installation Inspection** of the property to verify model, type and installation within 120 days of the date of the Pre-Qualification Inspection is required.
9. Before and after photos are required.

Note: **Rebate amounts are subject to change without prior notice and based upon availability of funds.**

For more information call (805) 564-5460 or visit [www.SaveWaterSB.org](http://www.SaveWaterSB.org)

**PRE-QUALIFICATION:** You are pre-qualified for a potential rebate for City-approved irrigation equipment and planting materials as denoted by staff on the table below under heading "Pre-Qualified Equipment". Once installed, (1) Complete the section under the heading "Installed Equipment," then (2) Contact the Water Conservation Office at (805) 564-5460 within 120 days of the pre-qualification inspection date.

Your **Pre-Qualification Inspection Date** is: \_\_\_\_\_

<b>PRE-QUALIFIED EQUIPMENT</b>					<b>INSTALLED EQUIPMENT</b>		
<i>(Official Use Only – Initial Inspection)</i>					<i>(Customer Use Only)</i>		
<b>Smart Irrigation Controller(s)</b>					<b>Smart Irrigation Controller(s)</b>		
	<input type="checkbox"/>						
<b>Pressure Regulator/Pressure compensating sprinkler bodies</b>					<b>Pressure Regulator Equipment</b>		
Pressure Regulation	<input type="checkbox"/>						
<b>Rain Sensors</b>					<b>Rain Sensors</b>		
	<input type="checkbox"/>						
<b>Water Wise Plants</b> *Only for replacing lawn or high water using plants					<b>Water Wise Plants</b>		
	<input type="checkbox"/>						
<b>Mulch</b> *Only for mulching 3" deep in area previously without mulch					<b>Mulch</b>		
	<input type="checkbox"/>						
<b>Sprinklers</b> *Only for replacing existing 2" or inefficient, old pop-up heads					<b>Sprinklers</b>		
4" or 6" Pop-Up Heads	<input type="checkbox"/>						
4" or 6" Pop-Up's w/ Check Valves	<input type="checkbox"/>						
<b>Rotating Nozzles (precipitation rate of 1" / hour or less with correct pressure)</b>					<b>Rotating Nozzles</b>		
	<input type="checkbox"/>						
	<input type="checkbox"/>						
<b>Drip Conversion</b>					<b>Drip Conversion</b>		
Recommended Equipment	<input type="checkbox"/>						
Recommended Equipment	<input type="checkbox"/>						
<b>Laundry to Landscape Graywater System</b>					<b>Laundry to Landscape Graywater System</b>		
Recommended Equipment	<input type="checkbox"/>						

By signing below, you indicate that you agree to the "**Terms and Conditions**" of the Smart Landscape Rebate Program as detailed on this form. All applicable rebates are only valid for a period of 120 days following the date of the **Pre-Qualification Inspection**. It is the **applicant's responsibility to arrange a Post Installation Inspection** within the 120 day period following the **Pre-Qualification Inspection**. Failure to comply with these terms and conditions are automatic grounds for disqualification from the program. Call (805) 564-5460 to schedule a Post Installation Inspection.

The applicant, on behalf of itself and any agent or employee, authorizes the City of Santa Barbara, or anyone authorized by the City of Santa Barbara, to use and reproduce in any format including, but not limited to, print or electronic, any visual representation, photograph or video footage taken of me and/or my home and/or landscaping for any purpose, without compensation or limitation. My rights to any and all video and images, together with the prints, are owned by the City of Santa Barbara.

Signature of Applicant: \_\_\_\_\_ Date: \_\_\_\_\_

Email: \_\_\_\_\_

**OFFICIAL USE ONLY**

**Date of Pre-Qualification Inspection:** \_\_\_\_\_ **Inspector:** \_\_\_\_\_ **Estimated Rebate: Amount \$** \_\_\_\_\_

**POST-INSTALLATION INSPECTION:**

**Date of Post-inspection:** \_\_\_\_\_ **Inspector:** \_\_\_\_\_ **Recommended Total Rebate: Amount \$** \_\_\_\_\_

**Date of Receipt:** \_\_\_\_\_ **Approved By:** \_\_\_\_\_ **Total Rebate Amount: \$** \_\_\_\_\_

**Rejected By:** \_\_\_\_\_ **Reason:** \_\_\_\_\_



The following are the Terms and Conditions of the Beautiful Long Beach Lawn-to-Garden Incentive program (L2G).

#### General

- “LBWD” refers to the Long Beach Water Department.
- “L2G” refers to the Beautiful Long Beach Lawn-to-Garden Incentive program.
- Only one L2G application may be approved per water account.
- “Property Owner” is the owner of the property (the lawn) that would be re-landscaped by the L2G program, or in the case when the property is owned by a corporation, “Property Owner” shall be the individual legally acting on behalf of the owner of the property. LBWD reserves the right to verify property ownership.
- If a L2G incentive payment is eventually made by LBWD, it can only be made payable to Property Owner.
- Property Owner
  - Property Owner must sign and submit the L2G application.
  - Property Owner will receive three dollars and fifty cents (\$3.50) per square foot for lawn replaced in accordance with the Terms and Conditions, Process Guidelines and Design Requirements.
  - Property Owner has sole responsibility for any and all tax consequences resulting from Property Owner receiving the **L2G** payment, and will be issued a 1099-M at the end of the year in which the incentive was issued. This is a taxable incentive program, not a rebate.
  - Property Owner has sole responsibility for complying with all applicable laws, permits, ordinances, codes, policies, covenants, and conditions that may apply to performance of the lawn removal/landscape conversion project. For City of Long Beach building and permit information call (562) 570-6651.
  - Property Owner has sole responsibility for the quality, appearance, and maintenance of the L2G landscape.
  - Property Owner shall make the property available to LBWD and/or its agents, in order (1) for LBWD to verify compliance with the L2G program, including but not limited to: the condition of the landscape prior to and after the L2G installation, the size (in square-feet) of the L2G landscape area, the efficiency of the new irrigation system; and (2) for LBWD to exercise its rights under the L2G program to use the design of the L2G landscaped area as well as descriptions of it, and before- and after-photos and videos of it, for the purpose of promoting drought tolerant landscapes
  - Any application containing inaccurate or misleading information will be disqualified from the L2G program and any and all commitments made by LBWD related to that application, including commitments to make L2G incentive payments, shall be automatically rescinded and rendered null and void.
  - Property Owner is limited to one application per water account; If a person/company owns multiple properties, a maximum of five (5) approved L2G applications will be eligible; for example, a company owning 30 properties with 90 different water accounts may receive approval for a maximum of five applications (one each for 5 water accounts).
  - Property Owner, if submitting the L2G application on-line, may be required by LBWD as a condition of receiving the incentive payment to sign a paper copy of the Application within

- two (2) weeks of being notified of having been approved, provided LBWD makes that paper application available to them.
  - Property Owner agrees to waive, release, relinquish and discharge LBWD, its officials and employees from all liability, loss, claims, demands, causes of action, and damage arising out of Property Owner's participation in this Program.
- "Re-landscaped Area" refers to that part of the landscape, in square feet, which qualifies for and for which LBWD will pay the L2G incentive of \$3.50 per square foot. The Re-landscaped Area
  - only includes areas covered by living turf grass; the grass must be living when the landscape design is approved. **(Do not kill your lawn until your landscape design has been approved by LBWD)**. Pre-existing projects are not eligible for the Lawn to Garden incentive.
  - Must be on a property whose water service is provided by LBWD.
  - Must be no greater than 1,000 square feet; there is no minimum. (Actual re-landscaped area may be larger than 1,000 square feet, but only the first 1,000 square feet are eligible for the L2G incentive.)
  - May only include the front yard and parkways; other landscaped areas, such as side yards or backyards or island medians, are not eligible. The front yard area must be visible from the street.
  - Must be re-landscaped based on a design approved by LBWD, which approval will be based on the "Design Requirements" document.
  - If, in its sole discretion, LBWD finds the re-landscaped area has not been properly maintained or if the landscape has been altered significantly from the approved design (for example: if turf grass is reintroduced), Property Owner, if he/she has not sold the property by that time, shall reimburse LBWD for the L2G payment as follows: 100% reimbursement if finding made in first 365-day period after payment; 80% reimbursement if finding made within 2nd 365 day period after payment; 60% if finding made within 3rd 365-day period after payment; 40% if finding made within 4th 365-day period after payment; and 20% if finding made within 5th 365-day period after payment.
- Applications will be approved for funding in the order in which landscape designs are approved.
- In order for an application to be approved and for incentive payment to be made, the owner of the water account irrigating the L2G re-landscaped area must stay current on its City of Long Beach utility bill from the time of the application through the L2G payment and cannot be in violation of any LBWD water-use prohibitions during that period.
- The L2G incentive program and the Terms and Conditions set forth herein, the Process Guidelines and the Design Requirements are subject to change without notice.

#### **Long Beach Water Department (LBWD)**

- Shall have the right to use the design of the Re-landscaped Area as well as before- and after-photos and videos of it, for the purpose of promoting drought tolerant landscapes. This promotion could be in the form of videos, print, web, or other venues.
- Shall have sole authority to resolve all disputes related to the L2G program, approval of applications, approval of landscape designs, and all other related matters relevant to the L2G program.
- Shall not be obligated to make, and will not make, L2G payments for that part of the approved square footage, when the size of the actual landscape installed is less than that approved and/or when some or all of the landscape actually installed differs, as determined by LBWD in its sole discretion, from the approved design. In other words, LBWD shall only pay for the square footage of the landscape actually installed that is congruent with the approved design, up to the maximum amount of square feet approved in the application.

# Terms and Conditions for the Turf Removal Program

All potential Program participants should review the following Terms and Conditions:

## PROGRAM TERMS

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- Only one Turf Removal rebate per address will be issued. Please apply for the maximum area you plan to convert. Maximum rebate paid will not exceed the cost of the project, as described on the program application.
- Prior to submitting a rebate application, applicants must have obtained any necessary approvals for their turf removal project from their city's code enforcement and/or HOA/CC&R board. **Delays from your failure to obtain an approval may result in your rebate application being cancelled.**
- Residential and Commercial sites are required to submit a simple design plan showing the proposed turf removal area along with a simple design of your new landscape.
- A minimum of 250 square feet of turf must be removed. **Exception:** Projects less than 250 square feet may qualify if the Project will completely eliminate turf from the property.
- A maximum of 10,000 square feet of turf may be removed. Projects over 10,000 square feet will be considered by the Program Administrator on a case-by-case basis. Homeowners Associations (HOAs) are eligible to participate up to a maximum of 10,000 square feet per irrigation meter irrigating the proposed turf removal area with potable water.
- At the time of the Post-Turf Removal Site Inspection, applicant must submit to the inspector copies of all invoices and/or receipts showing any costs incurred during the Project. **Costs include materials, dumping fees, design work, etc. Labor costs will be reimbursed if, and only if, a licensed contractor was hired. If you perform the turf removal work yourself, labor costs are not reimbursable. Rebate amount is not to exceed overall project cost.**
- Notices to Proceed are valid for sixty (60) days. Projects must be completed and the Post-Turf Removal Site Inspection performed prior to the notice expiring.
- Rebates may be considered taxable income, and a signed IRS W-9 form is required for rebates of \$600 or more. Municipal Water District of Orange County, Metropolitan Water District of Southern California, and your local retail water agency are not responsible for any taxes, penalties, or interest that may be imposed in connection with your receipt of any rebate.
- Converted areas are subject to mandatory Pre- and Post-Turf Removal Site Inspections. If the Pre and/or Post-Turf Removal Site Inspections cannot be scheduled and completed during the Program term, rebates will not be issued.
- The converted area must remain in compliance with all Program conditions for a period of five (5) years. If this requirement is violated, you may be required to refund all or a portion of the rebate. This requirement to maintain Program conditions is not binding on successor owners.

## **RELEASE OF CLAIMS AND INDEMNIFICATION**

Neither the Municipal Water District of Orange County, the Metropolitan Water District of Southern California, your retail water agency, or their contractors or agents makes any representation or warranty regarding the contracted services or products that you may select for your Project under this Program. Removal of turf and installation of water efficient devices and plants does not guarantee reduced water use.

By participating in the Program and accepting the rebates provided, you thereby release the Municipal Water District of Orange County, the Metropolitan Water District of Southern California, your retail water agency, and their contractors and agents from any and all claims and causes of action that may arise out of your removal of turf from your property and/or the purchase, installation, and/or use of water efficient devices in connection with this Turf Removal Program. Any and all claims or causes of action you may have in connection with any defect or failure of performance of any contracted service or installed product or device provided to you for your Project may only be pursued with the contractor you hired or the appropriate manufacturer/distributor.

The Municipal Water District of Orange County, the Metropolitan Water District of Southern California, and your retail water agency are responsible for operating and enforcing the terms and conditions of the Turf Removal Program. You, as the Program participant, are responsible for ensuring that your Project complies with all applicable Federal, State and local laws, as well as applicable CC&Rs and/or HOA restrictions. Quality of work and appearance of the converted area are the responsibility of the participant.

Further, you agree to indemnify, defend, and hold harmless the Municipal Water District of Orange County, the Metropolitan Water District of Southern California, your retail water agency, and their directors, officers, employees, contractors, and agents from all liability and claims of any kind arising out of or related to your removal of turf and purchase, installation, and use of water efficient devices in connection with this Program.



Agenda Item Number 5  
Water Shortage Contingency Plan  
December 16, 2014



# ADMINISTRATIVE REPORT

Date: December 10, 2014

Agenda Item No: 5

Meeting Date: December 16, 2014

**To: WATER SHORTAGE TASK FORCE**

**From: SHANA EPSTEIN, VENTURA WATER GENERAL MANAGER**

**Subject: WATER SHORTAGE CONTINGENCY PLAN REVISIONS**

## **RECOMMENDATION**

The Task Force members are asked to continue to make revisions to the Water Shortage Contingency Plan starting at 1.7 Catastrophic Interruptions to Water Supply, incorporate recommendations for drought rate structure and to address additional requirements of the plan as outlined by the 2010 Urban Water Management Plan Guidebook.

## **DISCUSSION**

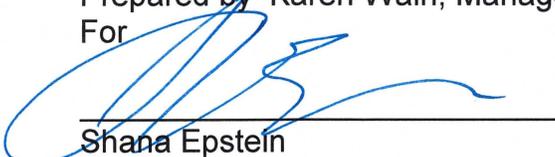
At the Task Force meeting held on Nov. 19, 2014, members participated in providing edits to the Water Shortage Contingency Plan. A revised version of those changes is attached (see Attachment A). Task Force members are asked to continue making revisions incorporating policy recommendations to the plan starting at Section 1.7.

To assist the Task Force members with the inclusion of a building and/or water connection moratorium actions in the plan, a copy of the Nov. 17, 2014 City Council action item on the subject is included as reference (see Attachment B).

In addition, staff has requested the Department of Water Resources (DWR) provide guidance as to what will be required in the 2015 Urban Water Management Plan (UWMP) with regards to Water Shortage Contingency Plan requirements. DWR is currently working on preparing revisions to the guidelines for the upcoming UWMP, and will address the Water Shortage Contingency Plan in February 2015. To assist the Task Force a summary of the guidelines from the 2010 UWMP, notes and personal communications are provided in Attachment C.

Prepared by Karen Waln, Management Analyst II

For



Shana Epstein

Ventura Water General Manager

**ATTACHMENT A**

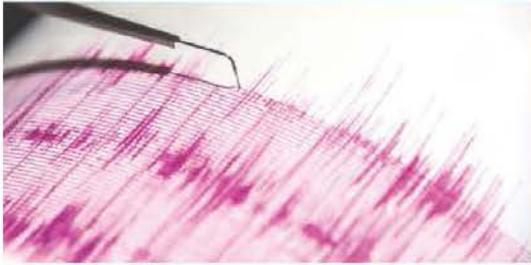
**WATER SHORTAGE  
CONTINGENCY PLAN –  
DRAFT, JULY 2014**

CITY OF  
**VENTURA**  
**WATER SHORTAGE  
CONTINGENCY PLAN**



[www.venturawater.net](http://www.venturawater.net)

**DRAFT**  
JULY 2014



## **Table of Content**

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Provide a Table of Content for ease of reference

### **Acknowledgements**

The Water Shortage Contingency Plan was developed by staff from the Ventura Water Department along with the assistance of citizen members of the Water Shortage Task Force, which included:

Suzanne McCombs, Chair  
Edward McCombs, Vice Chair  
Bryan Bondy  
Ted Cook  
Rob Corley  
Diane de Mailly  
Douglas Hahn

Don Jensen  
Robert McCord  
Marty Melvin  
Don Mills  
Ed Summers  
Diane Underhill

# **Water Shortage Contingency Plan**

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## **1. INTRODUCTION**

This plan documents the City's Water Shortage Event Contingency Plan and Emergency Response Plan (ERP) per requirements of Section 10632 of the Urban Water Management Act.

### **A. Declaration of Purpose of Plan**

The City of Ventura has developed a Water Shortage Contingency Plan (WSCP) to provide guidance if triggering events, supply, demand, or an emergency declaration, occur and identify corresponding actions to be taken during the various stages of a water shortage. The plan includes voluntary and mandatory stages which are intended to be fair to all water customers while having a minimum impact on business, employment and quality of life for residents.

The purpose of this WSCP is to:

- (1) Keep water use within supply and delivery capability, based on recommendations of citizen's advisory Water Shortage Task Force and Water Commission;
- (2) Define procedures to be used when supply cannot meet demand or continuing pumping will result in harm to supply source; and,
- (3) Familiarize all of Ventura Water's customers (residential, business, industrial and institutional) with procedures to be implemented when voluntary or mandatory water restrictions are in effect.

The Ventura Water General Manager, or designated representative, shall keep the City Council informed of the conditions of water supply, system usage, delivery capacity, and make recommendations to the City Council as appropriate, using best professional judgment and considering current weather conditions, weather forecasts, river flow conditions, and water system operations, for either enactment of initial restrictions or change to an appropriate stage in the WSCP.

The WSCP outlines specific actions that respond to and manage the City's water supplies through various circumstances, particularly drought conditions. The California Department of Public Health and the Ventura County Health Care Agency may assist in determining whether an exception to any restrictions imposed according to the WSCP is necessary for the welfare, health, and safety of the public.

### **B. Status of System Under Normal Conditions**

Average water demand is 47.5 acre-feet per day or 15.5 million gallons per day.

## Water Supply

The City's domestic water supply is derived from Lake Casitas, surface and sub-surface water from the Ventura River, and from local groundwater basins. There are presently five water sources that provide water to the Ventura Water System, in addition to reclaimed water that can be used to offset potable demand:

- Casitas Municipal Water District (CMWD)  
Water from Casitas may be used only in the territory of the Casitas Municipal Water District, which generally covers the west and midtown areas that represent about 30% of all water connections. Ventura Water is contracted to purchase 8,000 AFY but only required to purchase 6,000 AFY. Under severe drought conditions (lake levels below approximately 25% of capacity) the allocation could be reduced to 4,960 AFY. Current lake conditions are just above 50% of capacity. Additional water maybe "rented" from CMWD and used anywhere in the Ventura System. Rental charges are an ongoing charge to the City until the water is physical returned by reduced use of Lake Casitas Water. Approximately 5,000 acre-feet of water from Lake Casitas was used by the Ventura Water system in 2014. This is projected to increase by 136 acre feet of demand within the Casitas MWD service area in 2015; however a 10% reduction in supply is expected, bringing the projected 2015 actual delivery to 4,622 AFY.
- Ventura River / Foster Park Area (Foster Park)  
The 2014 Comprehensive Water Resources Report (CWRR) reported that continuing drought conditions create an unknown supply from the Ventura River sources, projected in that report to be 2,000 AFY. Estimated reliable supply of 4,200 AFY was reported in the 2013 CWRR and confirmed in the 2014 CWRR for non-drought years.
- Mound Groundwater Basin (Mound)  
Both the 2013 and 2014 CWRR show 4,000 AFY production from the Mound groundwater basin. This groundwater basin covers the central-east part of Ventura approximately from Mills Road to Saticoy Avenue, from the hillsides to the Santa Clara River.
- Oxnard Plain Groundwater Basin (Fox Canyon Aquifer)  
Estimated reliable supply of 4,100 AFY was reported in the 2013 CWRR and reduced to 3,918 AFY in the 2014 CWRR due to restrictions imposed by the Fox Canyon Groundwater Management Agency. Located to the south of the Mound Groundwater Basin, the basin supplies the well field near Buenaventura Golf Course located near the Santa Clara River, south of the 101 freeway.
- Santa Paula Groundwater Basin (Santa Paula Basin)  
Located to the east of the Mound Groundwater Basin, the basin extends past City limits toward Santa Paula, with well fields located in and near Saticoy. Estimated

reliable supply of 1,600 AFY was reported in the 2013 and 2014 CWRR. Water rights to six additional AFY were acquired in 2014. This is less than the maximum legal allocation of 3,000 AFY.

- Recycled Water

The City collects and treats wastewater at their Ventura Water Reclamation Facility (VWRF). The reclamation facility has a current capacity of 12 MGD. Average annual flows to the reclamation facility total approximately 9 MGD. A portion of the effluent is pumped to recycled water customers and the remaining effluent is discharged to the Santa Clara River Estuary. The recycled water produced from the VWRF is used for general irrigation of the two golf courses, a City park and landscape irrigation areas located along the existing distribution alignment. The City's average annual recycled water demand is approximately 700.

The City's existing water supply portfolio is summarized in Table 4-1 of the 2013 Comprehensive Water Resources Report:

**Table 4-1  
Summary of Current Water Supply**

<b>Water Supply Source</b>	<b>Current Supply (AFY)</b>
Casitas Municipal Water District	5,000 [1]
Ventura River / Foster Park	4,200
Mound Groundwater Basin	4,000
Oxnard Plain Groundwater Basin	4,100
Santa Paula Groundwater Basin	1,600
Recycled Water	700
<b>Total</b>	<b>19,600</b>

[1] Demand within Casitas service area is approximately 5,000 AFY at this time.

### **C. Water System Status in October 2014**

Information in this section reflects the current 2014 Comprehensive Water Resource Report.

#### Customers and Commitments

The City of Ventura owns, operates and maintains a water distribution system that provides domestic water service to a population of approximately 113,500 persons and has approximately 32,000 service connections, as established by the June 2013 Comprehensive Water Resources Report (CWRR) and cited without revision in the May 1, 2014 CWRR update.

The City's existing water service area includes all areas within the City limits, as well as portions of unincorporated Ventura County that meet the City's policy for water connections outside City limits (Municipal Code Section 22.110.055). In 2014, about 7% of total water consumption is by customers outside City limits.

Baseline water demand established by the 2013 CWRR was 17,601 acre-feet per year (AFY). Demand for 2014 reported in the 2014 CWRR is 17,343 AFY. Demand for 2015 is projected by the 2014 CWRR to be 17,660 AFY; this quantity includes projected development of 350 new dwelling units.

Total 2014 supply from non-recycled sources is 18,900 AFY plus 700 AFY of recycled water from the Ventura Water treatment plant for a combined total supply of 19,600 AFY. Demand projected by the CWRR is 17,343 AFY, or 88.5% of supply representing an 11.5% buffer between supply available and demand.

Total 2015 supply calculated in the 2014 CWRR is 19,535 to 20,935 AFY. The 2014 CWRR also provides a "worst case drought conditions" projected 2015 supply of 14,824 to 16,824 AFY. The significant differences are potential loss of ability to extract water from Ventura River sources plus a potentially reduced supply from Lake Casitas as that agency implements its own water shortage contingency plan.

The City also has a 10,000 acre-foot per year entitlement of water from the California State Water Project based in a fifty year contract established in 1985. To date the City has not utilized this water source because there are no facilities to get the water to the City. The contract requires an annual payment by the City, which in some years is partly offset by re-selling the allocation to other water agencies. At significant capital outlay costs this source may be available during a drought. Other potential sources of additional water supply include annexing land with water rights, desalinization of brackish or ocean water to potable water standards, increased treatment of groundwater supplies to reduce amount of water used to blend high TDS water, rebuilding well fields in the Ventura River, and increased distribution and use of treated wastewater.

A new pipeline inter-tie connection between Oxnard and Ventura would make it more feasible for Ventura to access State Water during times of a water shortage emergency if state water were available.

Susan will add limitations section.

Mound Basin - Concerns with water quality in this basin may restrict use since it needs to be blended at this time and could get worse.

#### Storage Capacity

The City currently has 43.2 million gallons of operational storage citywide. This represents 132.5 acre feet of water, or 2.7 days of usage.

#### **D. Policy of Water Efficiency**

It is the policy of Ventura Water to promote water conservation. The water supply to the City of Ventura is a limited resource, and everyone shares in the responsibility for appropriately using and preserving this resource. All customers of the Ventura Water System are therefore encouraged to voluntarily reduce water usage by daily practicing water conservation, regardless of whether voluntary or mandatory water restrictions are implemented or certain water shortage rates are applied. There are many simple, cost-effective ways to lower water use and reduce strain on water resources and infrastructure without compromising Ventura's quality of life. Customers of the Ventura Water System are encouraged to follow at all times the water conservation measures found at [www.cityofventura.net/water/efficiency](http://www.cityofventura.net/water/efficiency).

This WSCP recognizes the many Ventura Water customers who have voluntarily implemented water-saving landscape, plumbing, and other changes to permanently conserve water. Actions in this WSCP acknowledge cutbacks already made and the difficulty in making additional significant cutbacks for customers who have already reduced water use and invested heavily in water conservation measures. Health and safety baseline allocation of 50 gallon per person consumption per day (gpcd), state recommended minimum. Customers would not be cutback further than this and those already at this level would not be impacted by drought rate structure to promote further reduction in water usage.

#### **E. Reduced Water Use during Water Shortage Events**

This WSCP and other legal actions by the City establish actions that may be imposed on water users during Water Shortage Events. Such events may be a lengthy drought that has limited groundwater and surface water supplies, or an emergency condition brought about by an earthquake, fire, or other interruption in water delivery to the system. These actions are discussed in later sections of this WSCP.

#### **F. Coordination with City Facilities and Departments**

Ventura Water will coordinate with the other City departments to assure that City facilities including parks are being operated in a water efficient manner and to assist Ventura Water in attaining conservation goals. City facilities have a strong program of water and energy efficiency. Ventura Water and Parks will partner to review and reduce the irrigation of City property, and Ventura Water and Environmental Sustainability staff have a strong working relationship with our schools by providing educational programs to teach students and school managers how to reduce water usage. At least once each quarter Community Development, Economic Development, Public Works, City Manager, and Ventura Water will share information on near term and long term changes in supply and demand for water supply and wastewater treatment, differentiated into areas within the Casitas Municipal Water District and non-Casitas areas of the Ventura Water service area, and additional sub-areas as determined by the Ventura Water General Manager.

Coordination should also include state and county agencies within the Ventura Water service area, such as County of Ventura, fairgrounds, Ventura College, state parks and others.

## **2. CAUSES FOR RESTRICTIONS**

### **A. Water Shortage Event**

A water shortage event can be anything from a single occurrence as short as twenty-four hours to a multi-year weather condition. If drought conditions cause a reduction in groundwater supplies or Ventura River flows to the extent that water demands within the Ventura Water System service area fall below predicted supply for that year in the most current Comprehensive Water Resources Report, the City may consider enacting voluntary or mandatory restrictions targeted primarily at reducing outdoor watering activities. Such restrictions would be based primarily on water supply availability and actual water use. Any such restrictions would be enacted pursuant to San Buenaventura Municipal Code, Chapter 22.170 Water Conservation, Section 22.170.010, Water Waste Prohibited, and enforced pursuant to applicable code provisions.

Other events, besides drought, that could trigger a water shortage event include an earthquake, water system failures, fire, contamination, state restrictions or other causes.

### **B. Definition of Drought**

The following definition was written by the California Department of Water Resources:

*Defining when drought occurs is a function of drought impacts to water users. Drought can best be thought of as a condition of water shortage for a particular user in a particular location. Hydrologic conditions constituting a drought for water users in one location may not constitute a drought for water users in a different part of California or for users with a different water supply. Individual water suppliers may use criteria such as rainfall/runoff, amount of water in storage, or expected supply from a water wholesaler to define their water supply conditions.*

*Drought is a gradual phenomenon. Although persistent drought may be characterized as an emergency, it differs from typical emergency events. Most natural disasters, such as floods or forest fires, occur relatively rapidly and afford little time for preparing for disaster response. Droughts occur slowly, over a period of time. There is no universal definition of when a drought begins or ends. Impacts of drought are typically felt first by those most reliant on annual rainfall – ranchers engaged in dryland grazing, rural residents relying on wells in low-yield rock formations, or small water systems lacking a reliable water source. Criteria used to identify statewide drought conditions do not address these localized impacts. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline.*

### Historical Droughts -

Measurements of California water conditions cover only a small slice of the past. Widespread collection of rainfall and streamflow information began around the turn of the 20th century. During our period of recorded hydrology, the most significant statewide droughts occurred during 1928-34, 1976-77, 1987-92, and 2007-09. The last significant regional drought occurred in parts of Southern California in 1999-2002. Historical data combined with estimates created from indirect indicators such as tree rings suggest that the 1928-34 event may have been the driest period in the Sacramento River watershed since about the mid-1550s.

Source: <http://www.water.ca.gov/waterconditions/background.cfm>

In addition, a local drought between 1944-1955, severely impacted Ventura's water supply.

### **C. Natural Disaster or Failure of Water System Facilities**

If a natural disaster, such as an earthquake, fire, toxic spill or flood, or catastrophic failure of Ventura Water System facilities occurs, the City will enact restrictions as addressed in Table 1 of this WSCP. Such restrictions would be based on the varying circumstances as determined necessary and appropriate to respond to the emergency conditions by the City Council or the City Manager in the event the City Council cannot act in a timely manner. Any restrictions would be enacted pursuant to San Buenaventura Municipal Code, Chapter 22.170 Water Conservation, Section 22.170.010, Water waste prohibited, and enforced pursuant to applicable code provisions.

Responses to a catastrophic interruption in water supply are part of the Emergency Response Plan (ERP) explained below in section 1.7.

### **3. STAGES OF ACTION TO RESPOND TO WATER SHORTAGES**

The City has developed a six-stage contingency plan to reduce demand up to 50 percent during a severe or extended water shortage event involving both voluntary and mandatory stages.

**TABLE 1 - WATER SHORTAGE STAGES  
TRIGGERS/DEMAND REDUCTION GOALS**

<b>Advisory</b>	<b>Trigger</b>	<b>Demand Reduction Goal</b>
Stage 1	Annual Supply Projection is 10% below Normal Year Supply Projection	10% Voluntary
<b>Moderate</b>		
Stage 2	Annual Supply Projection is between 10% and within 20% of Normal Year Supply Projection	10% Mandatory
Stage 3	Annual Supply Projection is between 20% and 30% of Normal Year Supply Projection	20% Mandatory
<b>Severe</b>		
Stage 4	Annual Supply Projection is between 30% and 40% of Normal Year Supply Projection	30% Mandatory
Stage 5	Annual Supply Projection is between 40% and 50% of Normal Year Supply Projection	40% Mandatory
<b>Critical</b>		
Stage 6	Annual Supply Projection is below 50% of Normal Year Supply Projection	50% Mandatory

**Notes to Table 1:**

1. The Annual Supply Projection is from Table 4.2 of the most recent Comprehensive Water Resources Report or Ventura Water Staff in emergency conditions.
2. When the Water Shortage Contingency Plan is activated, the Normal Year Supply Projected number (identified from the most recent Comprehensive Water Resources Report from Table 4-1) will be used to establish a baseline supply value to be used for comparison of drought response and stages of action. The baseline supply value will not change through the duration of the event.

## **A. Water Supply Conditions**

The water supply conditions in Table 1 are based on available water supply and demand will be used to initially consider if water shortage event restrictions shall be implemented. Other circumstances shall also be considered, including but not limited to the time of year, weather forecasts, river flow forecast, previous rainfall, temperature, past experience and economic feasibility, the volume of water available from Lake Casitas, volume available from groundwater wells, and quality of the water produced from each source.

## **B. Stages of water use restrictions**

Each stage shall remain in effect until conditions indicate a more or less restrictive stage is necessary and action is taken by the City Council based on supply criteria (see Table 1). The City Council shall have authority to enact any stage and need not proceed in order through the stages.

### (1) Enacting water use restrictions:

Stages 2-6 of the WSCP shall be enacted by declaring an emergency water restriction by the Ventura City Council that enacts this WSCP. Water supply conditions and goals for each restriction stage are outlined in Table 1.

### (2) Modifying and ending water use restrictions:

For each month that customer water use restrictions are in effect under this Water Shortage Contingency Plan the City Manager shall report to the City Council on the status of the shortage and water use changes in the Ventura Water system, ~~including a recommendation to maintain, decrease or end the water use restrictions.~~

## **C. Planning for additional water supply to meet future needs**

The City currently has a monitoring program to provide roughly five years advance warning of the need for a supplemental water supply, whether the need results from decrease supply due to drought or other factor or for long term increase in demand. This process will give the City sufficient time to implement a supplemental water supply project, from the feasibility study phase to completion of construction and startup of the facility. This program includes an annual report to the City Council of water supply conditions.

### Response to reduced water supply

The triggers for a seeking supplemental water supply in response to a water shortage event (including drought conditions) should be considered together. These include the condition of the Ventura River, Lake Casitas, the Fox Canyon GMA credits, and the groundwater basins. A supplemental water supply project should begin if the five year projection shows a reduction of ten percent or more in water supply from all the sources combined, excluding reclaimed water.

#### Response to increase future demand

The water demand trigger is met when increased annual demand within five years is projected to exceed 90% of available supply. This demand-based trigger should be considered independently of the triggers based on reduced supply. Alternatives available for consideration by the City Council include seawater desalination, importing state water, increased use of reclaimed water and other alternatives based on the actual circumstances at that future time.

Reductions should not limit a customer's "baseline" allocation below the health and safety supply of 50 gallons per person per day.

#### **4. MINIMUM WATER SUPPLY AVAILABLE DURING NEXT THREE YEARS**

The primary factor in limiting the City's existing water supplies is drought. In evaluating a three year worst-case rainfall scenario, the City assumed that severe drought conditions affecting supply of surface and groundwater sources would begin immediately and continue for three consecutive years (Table 2).

Available water sources reflecting capacity of current production facilities will be used as a "snapshot" of current conditions based on Table 4.2 of the 2014 Comprehensive Water Resources Report and corresponding tables in subsequent CWRR. These quantities must be evaluated each year and updated to reflect changing conditions, legal or regulatory changes, and system improvements.

As noted above in section 1.1B, water demand reported in the 2014 Comprehensive Water Resources Report was 17,343 Acre-Feet per Year (AFY).

Available water supplies during the three year period were projected considering:

- 1) The current status of each existing source and
- 2) The past response of each existing source to similar drought conditions.

Also, because of the complexities of the City's water sources, the specific numbers are only approximations.

**TABLE 2 -  
ESTIMATE OF MINIMUM SUPPLY FOR THE NEXT THREE YEARS**

<b>Source</b>	<b>Supply (AF)</b>		
	<b>2015</b>	<b>2016</b>	<b>2017</b>
Casitas Municipal Water District	4,600	4,600	4,600
Ventura River (Foster Park)	0-2,000	0-2,000	0-2,000
Mound Basin	4,000	4,000	4,000
Oxnard Plain Basin	3,918	3,918	3,918
Santa Paula Basin	1,606	1,606	1,606
Recycled Water	700	700	700
	14,824-	14,824-	14,824-
<b>Total Supplies</b>	<b>16,824</b>	<b>16,824</b>	<b>16,824</b>

Notes: None of these numbers preclude the City's water rights. Supply quantities are based on Table 4-2 Summary of Projected Future Water Supply from Existing Sources, from the City's 2014 Comprehensive Water Resources Report, May 1, 2014.

Note there could be challenges to these numbers as the drought persists.

## **5. PROHIBITIONS, PENALTIES, AND CONSUMPTION REDUCTION METHODS**

At each of the stages of action within the Water Shortage Contingency Plan shown in Table 1, Ventura Water and its customers each have certain actions they must undertake.

(1) Ventura Water actions involve increasing public awareness and education, adopting ordinances prohibiting water waste and establishing mandatory water conservation regulations, and periodically reviewing triggering events and stages.

(2) Water customer actions involve implementing water conservation measures and complying with water conservation ordinances.

### **A. Calculations of Allocation to implement mandatory reduction in water use**

This section needs to be revised based on the task force decision on which drought rate structure they select.

### **B. Surcharge**

This section needs to be revised based on the task force decision on which drought rate structure they select. Need to provide exemption to 50 gpdc customers.

### **C. Efficiency Tracking**

Certain aspects of water conservation can be readily monitored and evaluated, such as metered water use and production quantities. Other aspects such as public education are

more difficult to measure in terms of effectiveness. Additionally, weather patterns make it more difficult to compare one year's results with another.

When severe shortages occur and some degree of rationing is required, a program's effectiveness can be judged directly by water billings. In these cases, targeted results must be met and even reluctant customers will, on the whole, meet the goals. Specific methods to evaluate effectiveness of water conservation programs to be employed by the City are:

- Monitoring of Metered Water Usage – This will determine how much has been used. Compiling annual statistics to track usage of customer groups to determine trends is currently being done through the EnQuesta water billing computer system. Meter readings/billings can be compared and analyzed to determine the effectiveness of conservation for all customer classes.
- Monitoring Production Quantities – In normal water supply conditions, production figures are recorded daily by automation in the City's HACH Software System. The Water Production Supervisor and the Production Leadworker monitor the accuracy of the monthly production totals. The totals are incorporated into the monthly water supply report to the State Department of Health Services by the Water Treatment Supervisor.
  - (i) Transition current customer water meters to "smart meters" to allow timely monitoring by customers of water use patterns. Program should be implemented in manner that avoids sudden increases to customers for meter upgrades.  
eliminate extra space
  - (ii) Provide incentives to property owners to install submeters in multi-family structures to for resident/property owners to track water usage.

To verify that conservation reduction goals are being met, production and metered usage reports will be provided to the Ventura Water General Manager and Water Utility Manager during each stage of the conservation period. Water production figures will be compared to previous year production figures for the same time period to ascertain if conservation goals are being reached.

#### **D. Actions on Behalf of the City**

The City shall use best efforts to comply with the restrictions similar to those implemented for the public to the extent possible and not inconsistent with the restrictions provided for City in this section. City will encourage all water customers to cooperate with the water restrictions imposed by each stage.

The watering of newly planted street, park and/or golf course trees, street medians, and general irrigation, all on City property, should be limited. Non-potable water from wastewater treatment shall be used by City personnel if available for such purposes.

In stage 2 or 3 mandatory restrictions, ornamental fountains and waterfalls shall not be replenished unless connected to recycled water.

Reasonable effort to preserve permanent trees and shrubs on City property. City parks have three priorities for watering during a shortage:

- 1) No or little reduction in watering of sports fields that need turf for safety issues,
- 2) 20-30% reduction in watering for visitor areas of the City that need to look welcoming to visitors and
- 3) 30-40% reduction in passive use areas, these are the areas that will turn brown first.

The City Manager shall review city operations to identify possible water use reductions with the goal of matching allocation reductions imposed on residential customers.

Develop means to distribute reclaimed water to interested users for landscape and other non-potable uses.

Upon declaration of Stage 3 water shortage event Ventura Water will contact agencies to determine process to create emergency intertie to state project water via City of Oxnard should shortage conditions increase to become health or safety threat to Ventura Water customers.

During Stages 4-6, the decision to fill or refill the City swimming pools or continued operation of said pools shall be approved by the City Council with input from the Ventura Water General Manager or designees following written notice to all contracted user groups of the city pools in a manner that is safe and expeditious separate from the restrictions in the WSCP.

During Stage 5, hydrant flushing maintenance program shall be limited except as deemed necessary by the Ventura Water General Manager or designees to enhance water quality, fire flow tests, and large meter tests. Jet flushing of sanitary sewers, storm sewer flushing, and street sweeping shall be limited except as deemed necessary for health, safety, sanitation, or general welfare purposes.

## **6. CITY AND CUSTOMER ACTION PLAN**

There are actions that the City and Water Customers will be responsible to undertake at each stage to attain demand reduction goals. These measures of the five stages of the City's Water Shortage Contingency Plan include:

## **A. Stage 1 & 2: 0-10 Percent Reduction Goal (Voluntary/Mandatory)**

### City Actions

1. Monitor conservation levels and increase public awareness.
2. Notify customers of shortage conditions and disseminate literature.
3. Publish customer use goals.
4. Identify Water Shortage Contingency Plan stages and the possible actions per stage.
5. Distribute water conservation brochures, information.
6. Distribute water conservation kits.
7. Request voluntary water consumption reduction.
8. Maintain existing tiered rate structure to promote water conservation.
9. Enforce water waste ordinance.
10. Inform new development applications of water restrictions.
11. Encourage landscape changes to use less irrigation
12. Provide information on customer's bill as to what they should be using for the needed cutback.
13. Developers should be noticed that if conditions worsen there may not be water for their projects.
14. Provide ways to increase use of recycled water to reduce potable usage.

### Water Customer Actions

1. Monitor own meter for usage.
2. Implement conservation measures to reduce usage.
3. Comply with water waste ordinance.

## **B. Stage 3: 20 Percent Reduction Goal (Mandatory)**

### City Actions (In addition to actions established in previous Stage)

1. Prepare a resolution for City Council approval initiating the appropriate mandatory conservation stage addressed in the City's Municipal Code
2. Enforce mandatory water consumption goals and allocations for all customers.
3. Enact water rate surcharge for water consumption over the customer's allocation.
4. Enact surcharge review program, customers may appeal in writing for a waiver of penalties incurred due to a leak or break or hardship.
5. Give incentive for landscape changes to use less irrigation.
6. Where feasible, use non-potable water to perform dust control, irrigate street landscaping, parks, and other areas.
7. Stop accepting new development applications or require "hold harmless" from applicant.

Water Customer Actions (In addition to actions established in previous Stage)

1. Comply with mandatory water conservation regulations.
2. Do not allow water to run and be wasted during outdoor use. (Adjust or reduce your sprinklers so the water does not run off the grass and onto the pavement or street.)
3. Do not allow leaks to persist past 48 hours. Do not use a handheld hose to wash a vehicle unless it has an automatic shutoff nozzle.
4. Restaurant water service is by customer request only.
5. Do not operate fountains unless the water is recycled and/or recirculating.
6. No washing of sidewalks, walkways, driveways, parking lots or any other hard-surfaced areas by hose or flooding, except as otherwise necessary to prevent or eliminate conditions dangerous to the public health and safety or for other legitimate necessity;
7. Do not knowingly waste water in any way.
8. Comply with prohibited outdoor irrigation of ornamental landscape or turf with potable water through an irrigation system between the hours of 9:00 am and 6:00 pm and limiting the use of irrigation systems to two days a week.

**C. Stage 4: 30 Percent Reduction Goal (Mandatory)**

City Actions (In addition to actions established in previous Stage)

1. Prepare a resolution for City Council approval initiating the appropriate mandatory conservation stage addressed in the City's Municipal Code
2. Enforce mandatory water consumption goals and allocations for all customers.
3. Limit street sweeping, other activities that consume potable water (OK with nonpotable water)
4. Promote greywater use by education, incentives and other actions.
5. Suggested to change outdoor watering to specific days of the week at this stage to aid enforcement, using even-odd house numbering.
6. At Stage 3 implement ~~free or~~ low cost recycled water to consumers for irrigation and other non-potable uses if approved by regulatory agency, pick up on own using own containers.
7. Use recycled water on city parks and landscaping; use contract trucks, fire department equipment or whatever is available. Provide incentives to single metered multi-family units to install individual meters.
8. Implement baseline/use appeal process for hardship cases.
9. Any new development or new water demand must have mitigated water impact of new estimated demand.

Water Customer Actions (In addition to actions established in previous Stage)

1. Comply with mandatory water conservation regulations.

#### **D. Stage 5: 40 Percent Reduction Goal (Mandatory)**

City Actions (In addition to actions established in previous Stage)

1. Prepare a resolution for City Council approval initiating the appropriate mandatory conservation stage addressed in the City's Municipal Code.
2. Enforce mandatory water consumption goals and allocations for all customers.
3. Service to Municipal Irrigation Interruptible Rate Customers will be limited to health and safety and the public welfare – park by park or 20% over all park reduction.
4. Stop processing incomplete development applications and require "hold harmless" from applicant.
5. Limit outdoor watering to 1 day per week.
6. Cease accepting plan check submissions for any new constructions.

Water Customer Actions (In addition to actions established in previous Stage)

1. Comply with mandatory water conservation regulations.

#### **E. Stage 6: 50 Percent Reduction Goal (Mandatory)**

City Actions (In addition to actions established in previous Stage)

1. Prepare a resolution for City Council approval initiating the appropriate mandatory conservation stage addressed in the City's Municipal Code
2. Enforce mandatory water consumption goals and allocations for all customers.
3. No outdoor irrigation will be allowed.
4. All water use not required for health and safety is prohibited.
5. Suspend the issuance of new water connections other than those required to be processed by state law. Building permits for emergencies, public safety and water conservation may be exempted by the City Manager.

Water Customer Actions (In addition to actions established in previous Stage)

1. Comply with mandatory water conservation regulations.
2. Prohibition of all outside water use unless necessary for the preservation of health and safety and the public welfare.
3. Watering with hand-held five gallon maximum bucket, filled at exterior hose bib or interior faucet (not by hose) shall be allowed at any time. This will assist in preserving vegetable gardens or fruit trees.
4. Stage 3, 4 and 5: Outdoor use of bath water, dishwater, and laundry water for irrigation purposes is encouraged to the extent this practice is allowed under local health and safety regulations.
5. The filling or refilling of swimming and wading pools is prohibited.

The following priorities for use of available water, based on California Water Code Chapter 3 and community input were used in establishing consumption limits. In order of preference they are:

1. Health and Safety - interior residential use and firefighting.
2. Commercial, Industrial and Governmental Uses - maintain jobs and economic base.
3. Permanent Crops
4. Annual Crops. Existing Landscaping - especially trees and shrubs.
5. New Demand - projects without permits when shortage declared.

In a disaster, prior notice of allotment may not be possible; notice will be provided by other means. Appeals shall be processed as set forth in the established Mandatory Water Conservation Regulations.

In addition to the prohibitions above, the City also has a water waste ordinance.

## **Begin Revisions of Plan at this Point on Dec. 16<sup>th</sup> at Task Force Meeting:**

### **1.7 Catastrophic Interruption to water supply**

A catastrophic interruption may lead to a proclamation of a water shortage and could be any event (either natural or man-made) that causes a water shortage severe enough to classify as a Stage 3-5 water supply shortage condition.

In order to prepare for catastrophic events, the City has prepared an Emergency Response Plan (ERP) in accordance with other state and federal regulations. The purpose of the ERP is to design actions necessary to minimize the impacts of supply interruptions due to catastrophic events.

The ERP includes the City of San Buenaventura water system's standardized response and recovery procedures to prevent, minimize, and mitigate injury and damage resulting from emergencies or disasters of man-made or natural origin such as an earthquake, extended power outage, fire, biological or chemical contamination, and explosion.

The plan takes into account the various aspects of the City's Water System Protection Program pertaining to potential malevolent threats or actual terrorism. The information contained in the ERP is intended to guide staff and inform other emergency responding agencies and includes plans, procedures, lists, and identification of equipment, emergency contacts, etc.

In addition, the City's 2011 Water Master Plan analyzed seven different operational outage scenarios and provides an analysis of system impacts as well as long-term system improvements required to mitigate these impacts.

### **1.8 ENFORCEMENT**

Enforcement of these restrictions shall be in accordance with San Buenaventura Municipal Code, Chapter 22.170 Water Conservation, Section 22.170.010, Water waste prohibited. The provisions of the section apply to all persons using city water, both in and outside the city, and within the city water service areas. Sections 1.150.010 through 1.150.050 of the San Buenaventura Municipal Code shall only apply to water users within the City, while city water users outside the city shall be punishable as specifically provided in Section 1.150.030.

#### **A. Water Waste Prohibition**

Prohibited actions and penalties for violating the Water Waste Ordinance are specified in the Municipal Code.

#### **B. Mandatory Water Regulations**

The Ventura City Council may choose to take actions through ordinance and resolution that establish mandatory water regulations that may include enforcement actions such as those previously implemented which includes:

- (a) A customer who does not meet the mandatory cutback shall pay a surcharge;

(b) If a customer continues to exceed the mandatory cutback after three consecutive billing periods, the City may install flow restrictors, at the customer's expense, in the City's meter service connection which reduces water flow and pressure.

The Ventura Water General Manager, with the approval of the City Manager, may prescribe rules and regulations for the implementation of ordinance provisions.

### 1.9 CITY REVENUE IMPACTS OF REDUCED SALES

Consumption reduction will impact revenues by decreasing the amount of water sold to customers. Water shortages may also impact construction activities. A reduction in construction activities will reduce fees collected by the City such as water service connection fees.

As consumption decreases, some expenditures are expected to increase. Staff costs for community education, enforcement of ordinances, monitoring and evaluation of water use, drought planning, and dealing with customer questions and complaints are expected to rise. Operations and maintenance costs may also increase because of the need to identify and quickly repair all water losses. A shift to alternative sources would change pumping, purchase, and treatment costs as different water supplies incur different purchase, treatment, and distribution costs. A summary of impacts to revenues is provided in Table 2, current data is available only for January to March 2014, with the previous year data used to develop the annual revenue shortfall.

**TABLE 3- DRAFT SUBCOMMITTEE PROPOSED SIMPLIFIED TABLE  
REVENUE IMPACTS OF REDUCED WATER DEMAND**

<b>Demand Reduction</b>	<b>Annual Revenue Reduction (\$ million)</b>	<b>% of \$28m water Operating Budget</b>
10%	- \$2.7m	- 10%
20%	- \$5.3m	- 19%
30%	- \$7.9m	- 28%
40%	- \$10.4m	- 37%
50%	- \$12.8m	- 46%

Assumptions:

- Reductions are inside City customers only
- Reductions based on existing tiered rates only

A reduction in water revenue could be mitigated substantially through deferral or avoidance of capital fund expenditures. This would meet short-term cash flow needs, although it should only be considered on a short-term basis.

The water purchases, utility costs and chemical costs are *not* a linear function of the water usage reduction. However, in order to provide an estimate of the cost savings, it is assumed that if there is

a ten percent reduction in usage, there will also be a ten percent reduction in associated costs. It should also be noted that if the mandatory reductions are required from December through April the wastewater revenue will be impacted for the following fiscal year.

A summary of measures to overcome revenue and expenditure impacts is provided in Table 4.

[NOTE: former Table 4 was deleted]

**TABLE 4 -  
MEASURES TO OVERCOME REVENUE IMPACTS DURING SHORTAGE**

<b>Measure</b>	<b>Summary of Effects</b>
Use of Reserve Funds	Use of reserves may provide short-term rate stabilization, but would require delays in capital expenditures and rebuilding of reserves after the water shortage.
Decrease Capital Expenditures	Delay major construction projects for facilities as well as upgrades and replacements.
Shift Water Sources to Less Costly Supplies Possible	Reduce costs associated with purchase, treatment, and distribution of water.
Rate Increases	Increase revenue.

It should be noted that expenditure impacts could be reduced 2-10% during mandatory conservation efforts less than 50% because of the reduction in costs associated with the treatment and deliver of potable water. We will use the water rate model to predict the savings for the 10-50% water reductions. Rate adjustments could also be employed either solely or in conjunction with capital expenditure reductions.

**-- end --**

**ATTACHMENT B**

**ADMINISTRATIVE REPORT  
DATED 11/6/14-  
BUILDING/WATER CONNECTION  
MORATORIUM RESEARCH  
PROJECT UPDATE**

CITY OF VENTURA

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# ADMINISTRATIVE REPORT

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Date: November 6, 2014

Agenda Item No.: 11

Council Action Date: November 17, 2014

**To: Honorable Mayor and City Council**

**From: Mark D. Watkins, City Manager  
Shana Epstein, Ventura Water General Manager**

**Subject: Building/Water Connection Moratorium Research Project Update**

## **RECOMMENDATION**

It is recommended that the City Council receive information related to the potential implementation of a building permit and/or water connection moratorium triggered by persistent drought conditions.

## **COUNCIL PRIORITIES**

This program supports the City Council's goal of:

- Delivering Core Services; and
- Enhancing Public Trust.

## **PREVIOUS COUNCIL ACTION**

September 22, 2014, the City Council accepted recommendations for water use restrictions from the Water Shortage Task Force; adopted a resolution declaring a water shortage emergency condition prevails within the City's water service area; and adopted an emergency ordinance declaring a water shortage emergency and adopting water use regulations. In addition, the City Council directed staff to research a moratorium process and implications and report back to the City Council at the end of October.

On August 11, 2014 the City Council heard a presentation describing development projects at various stages of development: under construction, approved, pending entitlements, and recently submitted.

June 16, 2014, the City Council chose not to act on staff's recommendation to adopt a Water Dedication and In-Lieu Fee Ordinance and Resolution, but moved to direct staff to

make a recommendation on the formation of a task force and scope of work for the City Council's consideration.

March 10, 2014, the City Council received a presentation at a special workshop on the proposed Water Dedication and In-Lieu Fee Ordinance and Resolution and directed staff to re-examine the policy for out of service areas, specifically the Saticoy Area.

September 24, 2012, the City Council directed staff to prepare a draft water rights ordinance for new development inside or annexed into the City and to return to the City Council in January 2013 with options for a draft water rights ordinance for development outside of the City.

August 10, 1992 the City Council adopted Resolution 92-73 establishing a Water Demand Reduction Offset Program to allow new nonresidential development to move forward by offsetting their proposed new water demand through the replacement of high volume toilets. The resolution was repealed on June 28, 1993, with the declaration of the end of the 1990 water shortage emergency.

April 6, 1992, City Council adopted Ordinance 92-07 revising and readopting conservation regulations to deal with the ongoing water shortage emergency conditions. Provisions of the ordinance allowed for specific affordable housing projects to be built by the San Buenaventura Housing Authority, and under the City's affordable housing program, to receive new water connections.

March 12, 1990 the City Council adopted Ordinance 90-3 which outlined regulations to deal with the water shortage emergency conditions at the time. The ordinance included a section prohibiting new water service connections, increase in the size of existing connections and the increase in plumbing fixtures. On May 14, 1990, the ordinance was further refined with certain changes to be more effective and equitable to enforce (Ord. 90-8), which included exemptions and wells to the above prohibition section.

## **SUMMARY**

The City Council has asked staff to provide a list of pros and cons associated with a building permit and/or water connection moratorium and a list of other agencies close by and throughout the state that have such programs to provide context for the City Council's consideration. Staff has researched how other moratoriums are fashioned and what the pros and cons would be for Ventura to implement the process.

Building permits are issued for everything from a new water heater to construction of a new building. A building moratorium would stop the issuance of permits related to increased water demand. A water connection entails the installation or upgrade of a water meter. A water connection moratorium would stop the issuance of new or upgraded water meters.

It should be noted that within the Ventura city limits, water connections are a part of the permitting process and are provided after a project is approved by the City. Projects outside city limits require a water service agreement for a water connection prior to approval by City and/or County Planning. Therefore, a building permit moratorium would only apply to those projects within the City limits, while a water connection moratorium could impact projects both inside and outside the City limits within Ventura Water's service area.

Specifically, the City Council was interested in learning:

- if a building permit moratorium could be fashioned that would impact different geographical sections of the City or different uses (commercial vs residential);
- how many projects are in some type of contractual agreement with the City;
- how many developers have been issued building permits and how many have taken submitted plans to the City;
- what the legal ramifications of a moratorium on those projects and others like them would be; and
- an outline of what the process would look like to implement a building permit and/or water connection moratorium.

## **DISCUSSION**

### **Analysis**

#### **A. Building Permit Moratorium**

The process required to adopt a building permit moratorium would be the same process the City Council has followed in recent years to adopt moratoria on the establishment of medical marijuana dispensaries and the conversion of senior mobilehome parks. The purposes of those moratoria was to preserve the status quo by preventing changes to land uses while the City studied whether to adopt permanent changes to its laws regarding those uses. A building permit moratorium would need to be imposed for the same purpose, namely "prohibiting any uses that may be in conflict with a contemplated general plan, specific plan, or zoning proposal that the legislative body. . . is considering or studying or intends to study within a reasonable time." <sup>i</sup>

The process for adopting a building permit moratorium is dictated by Government Code Section 65858, which provides that the City may, by 4/5ths vote, adopt an emergency ordinance establishing a moratorium, effective immediately, that lasts 45 days. If that initial moratorium was imposed at a noticed Public Hearing, the City Council could extend the moratorium for a time period not exceeding an additional 22 months and 15 days, for a total of 2 years. If, on the other hand, the initial moratorium was not imposed after a noticed Public Hearing, the City Council could impose the moratorium for 10 months and

15 days, for a total of one year. It could then extend the moratorium for another year, which would also require a 4/5ths vote.

To impose a building permit moratorium, state law would require that the City Council make “legislative findings that there is a current and immediate threat to the public health, safety, or welfare, and that the approval of additional subdivisions, use permits, variances, building permits, or any other applicable entitlement for use which is required in order to comply with a zoning ordinance would result in that threat to public health, safety, or welfare.”<sup>ii</sup> The City Council would have to make the following additional findings to apply the moratorium to “projects with a significant component of multifamily housing.”

(1) The continued approval of the development of multifamily housing projects would have a specific, adverse impact upon the public health or safety. As used in this paragraph, a “specific, adverse impact” means a significant, quantifiable, direct, and unavoidable impact, based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date that the ordinance is adopted by the legislative body.

(2) The interim ordinance is necessary to mitigate or avoid the specific, adverse impact identified pursuant to paragraph (1).

(3) There is no feasible alternative to satisfactorily mitigate or avoid the specific, adverse impact identified pursuant to paragraph (1) as well or better, with a less burdensome or restrictive effect, than the adoption of the proposed interim ordinance.<sup>iii</sup>

The above findings would need to be supported by substantial evidence in the record.<sup>iv</sup> Were the moratorium challenged in court, the court should review the moratorium, including its legislative findings, under a deferential standard of review, under which courts uphold legislative findings unless they are “clearly and palpably wrong and the error appears beyond reasonable doubt from facts or evidence which cannot be controverted, and of which the courts may properly take notice.”<sup>v</sup> However, as mentioned above, courts have reviewed findings in moratoria to ensure they are supported by substantial evidence, so that professed deference would likely not be terribly deferential.

The requirements of substantial evidence and the standard of review would apply equally to a court’s review of a moratorium that differentiated between building permits based on some of the ideas mentioned at the previous City Council meeting. Put another way, sufficient evidence and findings would be necessary to support a differentiation between building permits to support different treatment. For instance, substantial evidence of differing water supplies and water use could support the imposition of a moratorium in some areas of the City and not others. Similarly, substantial evidence regarding differing water usage could support the application of a moratorium to residential versus commercial uses. Last, projects that would supply their own water would require analysis on a case-by-case basis to determine if they could be exempted from a moratorium. The

factual support for any of these options would of course require substantial research and development.

#### B. Water Connection Moratorium

The City Council could impose a moratorium on new water service connections under the State Water Code, the same state law that provided the basis for the City Council's recent declaration of a water shortage emergency and passage of an ordinance imposing restrictions on water usage. Under the Water Code, the City may adopt restrictions on water consumption "as will in the sound discretion of such governing body conserve the water supply for the greatest public benefit with particular regard to domestic use, sanitation, and fire protection."<sup>vi</sup>

The Water Code explicitly grants the authority to "deny applications for new or additional service connections."<sup>vii</sup> The imposition of a water connection moratorium would require the same public notice and hearing as was done for the water shortage emergency resolution and ordinance recently imposed by the City Council.<sup>viii</sup> The moratorium would be effective immediately and last as long as the water shortage emergency.<sup>ix</sup>

Under the State Water Code, the City may adopt restrictions on water consumption "as will in the sound discretion of such governing body conserve the water supply for the greatest public benefit with particular regard to domestic use, sanitation, and fire protection."<sup>x</sup> If challenged, a water connection moratorium would be reviewed by a court to ensure that it was not "fraudulent, arbitrary, or capricious" and that the City followed proper procedures and provided notices required by law.<sup>xi</sup> To ensure that a court would not find a moratorium arbitrary or capricious, the City would need to support a moratorium under the Water Code with substantial evidence and findings in essentially the same manner and to the same degree that it would have to provide support for a building permit moratorium under the Government Code, as discussed above.

There are also limitations on the ability of the City to prioritize uses of water under the Water Code, which states that "[a]fter allocating and setting aside the amount of water which in the opinion of the governing body will be necessary to supply water needed for domestic use, sanitation, and fire protection, the regulations may establish priorities in the use of water for other purposes and provide for the allocation, distribution, and delivery of water for such other purposes, without discrimination between consumers using water for the same purpose or purposes."<sup>xixiii</sup>

State housing law also limits the City's discretion in this area by prioritizing water and sewer services for affordable housing, requiring that "[e]ach public agency or private entity providing water or sewer services shall grant a priority for the provision of these services to proposed developments that include housing units affordable to lower income households."<sup>xiv</sup> For the City to deny a water connection to an affordable housing project, it would have to make one or more of the following findings:

- (1) The public agency or private entity providing water service does not have

“sufficient water supply,” as defined in paragraph (2) of subdivision (a) of Section 66473.7, or is operating under a water shortage emergency as defined in Section 350 of the Water Code, or does not have sufficient water treatment or distribution capacity, to serve the needs of the proposed development, as demonstrated by a written engineering analysis and report.

(2) The public agency or private entity providing water service is subject to a compliance order issued by the State Department of Health Services that prohibits new water connections.

(3) The public agency or private entity providing sewer service does not have sufficient treatment or collection capacity, as demonstrated by a written engineering analysis and report on the condition of the treatment or collection works, to serve the needs of the proposed development.

(4) The public agency or private entity providing sewer service is under an order issued by a regional water quality control board that prohibits new sewer connections.

(5) The applicant has failed to agree to reasonable terms and conditions relating to the provision of service generally applicable to development projects seeking service from the public agency or private entity, including, but not limited to, the requirements of local, state, or federal laws and regulations or payment of a fee or charge imposed pursuant to Section 66013.<sup>xv</sup>

### Timeline

Researching and developing the factual basis for the moratorium, and the crafting of the moratorium’s details to meet the City Council’s objectives within the constraints imposed by those facts, could take a significant amount of time, and would largely determine how long it would take to implement a moratorium. The above-described notice and hearing processes of implementing a moratorium are relatively straightforward, have been employed by the City recently, and could be accomplished were a moratorium developed. A moratorium under the Water Code requires 7 days’ notice in a newspaper prior to a Public Hearing. A moratorium under the Government Code requires two publicly noticed hearings for it to apply up to 2 years, versus one publicly noticed hearing for it to apply up to 1 year with the possibility of a later extension.

### Building Permit Moratorium Timing

The City Council also requested research on when in the building permit process a moratorium could and should apply: (1) prior to building permit issuance, (2) between filing a complete building permit application and the issuance of a building permit, (3) and after building permit issuance.

The general rule is that a builder must comply with the laws which are in effect at the time

a building permit is issued, including laws that were enacted after application for the permit.<sup>xvi</sup> In contrast, a property owner who has obtained a building permit and completed substantial work and incurred substantial liabilities based on that permit has a vested right to finish the work allowed by the permit.<sup>xvii</sup> Thus, a building permit moratorium could apply to all building permits prior to their issuance, even if they were currently being processed. Its application to permits that have already been issued could be done on a case-by-case basis to those permit holders that did not have vested rights by virtue of performing substantial work pursuant to that permit. Lastly, the general rule does not apply in the case of development agreements where a jurisdiction has granted the developer vested rights to develop under the regulations in effect at the time the development agreement was executed. The City has two active development agreements: Parklands and UC Hansen. Holders of rights to these development agreements might assert that they would be exempt from a water based moratorium.

Specifically, given the current activity in issuing construction permits, the following projects should be considered in this discussion: Projects with building permits and under construction: 59 Single Family, 111 Condos, 79 Apartments for a total of 259 would not be impacted by a building permit moratorium. Projects about to obtain building permits (within days/weeks): 91 Single Family, 15 Condos, 391 Apartments for a total of 497 units may be impacted by a building permit moratorium but perhaps not likely given the late stage in the process they are in. Permits in plan check that are expected in 3-6 months are: 9 Single Family, 23 Apartments for a total of 32 units may be impacted by a building permit moratorium.

### Legal Challenges

Any moratorium could be challenged for failure to comply with legally mandated procedures for notices, hearings, and adoption. Similarly, a moratorium could be challenged based on the standards discussed above that require findings supported by substantial evidence. A successful challenge would likely result in a court ordering the moratorium set aside and that the City conduct a new hearing and issue a new decision. The City could also be responsible for attorney fees.

In addition, moratoria have been challenged as violating provisions of the U.S. and California constitutions. For example, a moratorium on new water connections was challenged as a taking, a denial of equal protection, and a denial of substantive due process.<sup>xviii</sup> A building permit moratorium could be challenged on similar grounds.<sup>xix</sup> A challenger would likely be able to recover damages for a successful takings claim, as well as attorney fees.

**Pros vs Cons of a Moratorium**

<b>Issues</b>	<b>Pros</b>	<b>Cons</b>
<u>Evidence for Moratorium</u> – What findings or factual basis is required to adopt a water moratorium?	We are in a severe drought and relief is not anticipated at this time. City Council declared a water shortage emergency on Sept. 22, 2014	Substantial research and analysis would be required to develop a sufficient factual basis necessary to support a moratorium.
<u>Exemptions</u> – At what point in the process of development should the moratorium apply? Should the application of the moratorium be to building permits or water connections?	Projects issued building permits could move forward and those with development agreements or water service agreements (approximately 10 connections would qualify).	May not relieve the impact to water supply with the number of projects that would be exempt.
<u>Ease of Implementation</u> – How would the City implement a building moratorium and what would be the impacts to City services?	No permits would be issued and no connection fees would be collected.	Frustration in building community, so early and consistent communication is necessary.
<u>Water Efficiency</u> – What will be the water savings associated with building permit and/or water connection moratorium?	Promote water efficiency and send message to Ventura Water customers that water conserved is not going to new customers.	New buildings are constructed according to water efficient building codes so each unit uses less than older buildings.
<u>Legal Challenge</u> – What are the City’s legal risks and liabilities if a building permit and/or water connection moratorium is enacted?	The threat of a successful challenge to a moratorium would be reduced if the moratorium is supported by substantial evidence.	Could be challenged regardless, incurring significant legal costs even if the challenge is ultimately unsuccessful.
<u>Budget Impacts</u> – What are the financial impacts associated with a building permit and/or water connection moratorium.	Ventura Water’s current fiscal budget would not be significantly impact by the anticipated loss of revenue from connection fees.	It is assumed that non-water generating permits would continue; Community Development will experience a revenue shortfall but the extent is not yet determined. The City will also see a limit on private sector property investment which will limit growth in property and sales tax.

<b>Other Issues</b>	
<u>Type of Moratorium</u> – Should the application of the moratorium be to building permits or water connections?	A building permit moratorium would only apply to those projects within the City limits, while a water connection moratorium could impact project both inside and outside the City limits within Ventura Water’s service area. The process would differ depending on the type of moratorium instituted.
<u>Economic Development</u> – What is the short and long term impacts to economic development?	A Building Permit Moratorium (depending on how it is issued) could have substantial impact on the City’s economic development: (1) freeze revenues from building permit activity; (2) send a message that Ventura is not a reliable place to invest, (3) require employee layoffs, and (4) freeze improvements to buildings and properties Impact on Developments: Projects with building permits and under construction: 59 Single Family, 111 Condos, 79 Apartments for a total of 259 Projects about to obtain building permits (within days/weeks): 91 Single Family, 15 Condos, 391 Apartments for a total of 497 units Permits in plan check with permits expected in 3-6 months: 9 Single Family, 23 Apartments for a total of 32 units

Staff research identified several agencies throughout the state that have moratoriums associated with water supply or include a moratorium as part of their Water Shortage Contingency Plan. Moratorium provisions can include restrictions on the issuance of building permits, new potable water service connections and new annexations.

Few agencies have at this point in time imposed a moratorium in response to the ongoing drought. A list of agencies that have enacted such moratoria is included in Attachment A. While many agencies, including the City, include water connection or other moratoria in their plans for responding to water shortages, most have not yet reached the stage at which those moratoria have been triggered. A list of agencies that have such moratoria in their Water Shortage Contingency Plan that have not been implemented yet, is included in Attachment B.

The jurisdictions that have imposed moratoria include the Montecito Water District, which has imposed a moratorium on new water connections under the state Water Code, and the City of Sierra Madre, which has imposed both a water service connection and building permit moratorium. The factual basis for those moratoria that are summarized in the respective ordinances provide examples of the types of factual support that would be necessary to support a successful moratorium.

Those jurisdictions that do not reference a moratorium as a solution in their Water Shortage Contingency Plan, such as the Cities of Goleta and Santa Paula, and the Casitas Municipal Water District, have ordinances similar to Ventura's proposed water dedication and in-lieu fee.

## **Public Engagement**

Several members of the public spoke to the issue at the September 22, 2014 City Council meeting asking the City Council to consider a moratorium on the issuance of building permits because of persisting drought conditions. In addition, the topic has been discussed at several Water Shortage Task Force meetings, as well as at community council meetings. On September 24, 2014 those present at the College Area Community Council voted unanimously on the following resolution: "Whereas the water supply is critically limited in the city of Ventura—Now, be it resolved that the College Area Community Council (CACC) supports a moratorium as soon as legally possible on new construction, water hook-ups and connections in the city of Ventura until the water supply is assured." And on October 16, 2014, the East Ventura Community Council voted for a temporary ban on "new construction, water hookups and connections in Ventura until the water supply is assured".

## **IMPACTS**

No financial impacts are associated with the City Council's receiving this report. Short-term financial impact would be the loss of a funding source within the General Fund: Community Development Department and perhaps other departments such as Public Works that are involved in the development review process. The lasting effects to defer future economic development may have long-term financial impact: (1) freeze revenues and collection of fees from permit activity, (2) send a message that Ventura is not a reliable place to invest, and (3) halt improvements to buildings and properties within the City.

Ventura Water's Budget for fiscal year 2014-15 for water connection fees is \$100,000 and actuals reflect a total of \$98,058 as of October 29, 2014, therefore a moratorium would not significantly impact the revenue anticipated from the collection of connection fees for this year. However, for reference in fiscal year 2013-14 a total of \$266,286 was collected from water connection fees.

## **ALTERNATIVES**

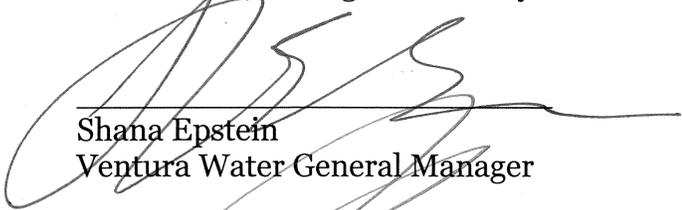
In addition to receiving the information contained in this administrative report, the City Council can choose to direct staff to take future steps towards the development of a building permit and/or water connection moratorium that distinguishes between:

- user classifications (i.e. commercial vs residential);

- geographical areas of service (i.e. inside vs outside city limits);
- distinguishes between residential customers (i.e. single vs multiple family residential);
- projects that do not generate expanded water use; and
- housing exemptions (i.e. affordable)

Since the building moratorium is being looked to as a short-term response to drought, and the public concern we are hearing appears to be based, at least in part, on long-term impacts of development on water supply, the City Council could select to bring back a water dedication and in-lieu fee ordinance and resolution to account for new water demand. This option would provide an avenue to collect funds to support new water resources, in contrast to a moratorium, which would provide no collection of funds to develop new water supplies. The purpose of a water dedication and in-lieu fee would be to ensure water rights are retained, monies are collected to building new water sources and extreme water efficiency is encouraged. This option, in contrast to a building and/or water connection moratorium, would be identified prior to approval of a project, which is often years before building permits are issued. In addition it would allow the City to invest in a reliable future water supply.

Karen Waln, Management Analyst II for



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Shana Epstein  
Ventura Water General Manager

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Jeffrey Lambert, AICP  
Community Development Director

Keith Bauerle, Assistant City Attorney for



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Gregory Diaz  
City Attorney

Reviewed as to fiscal impacts



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Rick Raives  
Acting Finance and Technology Director

FORWARDED TO THE CITY COUNCIL



Office of the City Manager

ATTACHMENTS

- A. Examples of Enacted Moratoria
- B. Examples of Other Moratoria

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- i Cal. Gov't Code § 65858(a).
  - ii Cal. Gov't Code § 65858(c).
  - iii Cal. Gov't Code § 65858(c).
  - iv *Hoffman Street, LLC v. City of West Hollywood*, (2009) 179 Cal.App.4th 754 (striking down city's moratorium on development in multi-family zoned area for failure to adequately make necessary findings).
  - v *Lockard v. City of Los Angeles*, (1949) 33 Cal.2d 453, 461, quoting *In re Miller* (1912) 162 Cal. 687.
  - vi Cal. Water Code § 353.
  - vii Cal. Water Code § 356.
  - viii Cal. Water Code § 352.
  - ix Cal. Water Code § 355.
  - x Cal. Water Code § 353.
  - xi *Building Industry Assn. v. Marin Mun. Water Dist.*, (1991) 235 Cal.App.3d 1641, 1646.
  - xii Cal. Water Code § 354 (emphasis added).
  - xiii The City has contractual relationships with a number of water customers that would have to be reviewed on a case-by-case basis to determine if they would be affected by a water connection moratorium.
  - xiv Cal. Gov't Code § 65589.7(a).
  - xv Cal. Gov't Code § 65589.7(c).
  - xvi *Avco Community Developers, Inc. v. South Coast Regional Com.* (1976) 17 Cal.3d 785, 795, cert denied (1977) 429 U.S. 1083.
  - xvii *Id.* at 793.
  - xviii *Lockary v. Kayfetz* (9th Cir. 1990) 917 F.2d 1150 (holding that triable issues of fact existed as to whether a water connection moratorium constituted a taking, a denial of equal protection, and a denial of substantive due process).
  - xix *Tahoe-Sierra Preservation Council, Inc. v. Tahoe Reg'l Planning Agency* (2002) 535 U.S. 302 (development moratorium challenged as a temporary takings of property).

**ATTACHMENT A**  
**EXAMPLES OF**  
**ENACTED MORATORIA**

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### Attachment A: Examples of Enacted Moratoria

City	Specific Resolution/ Ordinance	Part of Water Shortage Contingency Plan	% Conservation When Program Implemented	Limits on Building Permits	No New Potable Water Service	No New Annexations	Other	Comments
Sierra Madre	✓		30% Reduction Goal - Phase III	✓	✓			Moratorium on water service connections until Phase III recinded by Council
Monticito Water District	✓				✓			They do not allow new connections as adopted emergency measures
Camrosa Water District	✓				✓			Moratorium on water availability and water will serve letters on all new unmitigated demand.
Lincoln Ave. Water Co.	✓			✓	✓			Response to drought declaring water supply alert and moratorium on new connections

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**ATTACHMENT C(A)**

**WATER SHORTAGE  
CONTINGENCY PLAN  
(WSCP) GUIDELINES**

12/10/14

## **Water Shortage Contingency Plan (WSCP) Guidelines**

### **I. Guidelines of WSCP Outlined in 2010 Urban Water Management Plan (UWMP) Guidebook (Section 5 attached):**

- Actions to be undertaken to prepare for and implemented during a catastrophic interruption.
- Additional mandatory prohibitions against specific water practices during shortages including prohibiting the use of potable water for street cleaning.
- Consumption reduction methods in restrictive stages with up to 50 percent reduction in water supply.
- Penalties or charges for excessive use, where applicable.
- Inclusion of an analysis of the impacts to revenues and expenditures from implementation of the actions of the plan and proposed measures to overcome those impacts
- A draft water shortage contingency resolution or ordinance if an approved or adopted one is not included.

### **II. Notes from Association of California Water Agencies – Dec. 4, 2014:**

- Your plan needs to be effective, flexible and implementable.
- Need to have outlined what actions will be taken with 50% reduction in supply.
- Need to have outlined what actions will be taken at each identified Stage of reduction in the plan.
- Water Shortage Contingency Plan needs to be Adopted by Resolution.

### **III. Communication with DWR Staff – Dec. 10, 2014:**

Spoke with Gwen Huff of the Department of Water Resources on what revisions may be made to the 2015 UWMP requirements regarding the Water Shortage Contingency Plan. She said that if we follow what is in the Water Code, and this is what is outlined in the 2010 UWMP Guidebook, that we should be fine. There may be changes to the guidelines in the 2015 UWMP Guidebook, but that they would not be mandatory, only what is outlined in the Water Code can be required.

**ATTACHMENT C(B)**

**2010 UWMP GUIDEBOOK  
SECTION 5: WATER SUPPLY  
RELIABILITY AND WATER  
SHORTAGE CONTINGENCY  
PLANNING**

## Section 5: Water Supply Reliability and Water Shortage Contingency Planning

UWMP Section 5:

- Compares projected water supplies and demands
- Assesses the overall reliability of future supplies regardless of drought or emergency conditions
- Discusses how an urban water suppliers water sources can vary as a result of emergency or other external influences such as system or other limitations, as well as the water supplier’s planned response
- Describes the drought contingency plan—the water supplier’s response and planning for changes or shortages in water supplies.

Specific guidance an urban water supplier should consider in preparing this part of a UWMP include:

- DWRs Urban Drought Guidebook 2008 Updated Edition
- DWRs California Drought Contingency Plan (2010)
- DWRs State Water Project Delivery Reliability Report 2009

Drought planning is to consider water supplies during single-dry and multiple-dry years. Single-dry and multiple-dry year conditions are usually based on historical records of annual runoff from a particular watershed. A multiple-dry year period is generally three or more consecutive years with the lowest average annual runoff. Single-dry and multiple-dry periods should be determined for each watershed (including wholesale sources, the State Water Project, the Colorado River, and the Central Valley Project) from which the water supplier receives a water supply. The information is often presented as a probability of exceedance or probability of occurrence. Many water suppliers have multiple water supply sources. To show how the total supply would be impacted, document the single-dry and multiple-dry year effects for each individual supply. Weather information is available at the National Weather Service website <http://www.nws.noaa.gov/>. Runoff data are available from DWR (<http://cdec.water.ca.gov/>), US Geological Survey (<http://waterdata.usgs.gov/ca/nwis/sw>), and the operators of local dams.

Use the following guidelines for drought conditions:

- *Average Year*<sup>7</sup> — a year or an averaged range of years in the historical sequence that most closely represents median runoff levels and patterns. It is defined as the median runoff over the previous 30 years or more. This median is recalculated every 10 years.

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<sup>7</sup> The UWMP Act uses the term “normal.” The term “average” is more commonly used to describe “median” conditions. Within this guidebook the terms “normal” and “average” are used interchangeably.

- *Single-dry year* — generally considered to be the lowest annual runoff for a watershed since the water-year beginning in 1903. Suppliers should determine this for each watershed from which they receive supplies.
- *Multiple-dry year period* — generally considered to be the lowest average runoff for a consecutive multiple year period (three years or more) for a watershed since 1903. For example, 1928-1934 and 1987-1992 were the two multi-year periods of lowest average runoff during the 20th century in the Central Valley basin. Suppliers should determine this for each watershed from which they receive supplies.

## Required Elements — Water Supply Reliability

*#5. An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions (10620(f)).*

*#23. For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable (10631(c)(2)).*

- For each of the water supply sources identified in Table 16, identify the potential issues that could result in reduction of the amount of water supply. The urban water supplier may provide any additional name of the source being described (for example, if the water category is “supplier-produced surface water,” the urban water supplier may have multiple surface water sources that have different potential constraints). The urban water supplier may also provide information on the applicable amount of water, such as the volume of a reservoir or a river allocation. Additional information can also be provided on the nature of the limitation indicated in one of the preceding columns (Table 29).

## Required Elements — Water Shortage Contingency Planning

*#37. Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster (10632(c)).*

*#38. Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning (10632(d)).*

*#39. Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply (10632(e)).*

*#40. Penalties or charges for excessive use, where applicable (10632(f)).*

- Identify what actions will be taken by a water supplier if there is a catastrophic reduction in water supplies, as indicated in 10632(c). If the water supplier has other catastrophic reductions that it has considered in its planning, please identify those. Other catastrophic interruptions to consider could include flooding or fire.
- Indicate mandatory prohibitions in Table 36.
- Indicate consumption reduction methods in Table 37.
- Indicate penalties and charges for violating water shortage restrictions or prohibitions in Table 38.

*#41. An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments (10632(g)).*

- Assess how responding to water shortages affects revenues and expenditures. Indicate how the water supplier will address these potential impacts. Identify what actions will be taken by a water supplier if there is a catastrophic reduction in water supplies, as indicated in 10632(c). Identify any other catastrophic reductions the water supplier considered in planning the UWMP. Other catastrophic interruptions could include flooding or fire.

*#42. A draft water shortage contingency resolution or ordinance (10632(h)).*

- If the water supplier has an approved or adopted water shortage contingency resolution or ordinance, include it in the UWMP. If one has not been approved or adopted, provide a draft version. If there has been any action for or against adoption since the completion of the most recent UWMP, consider including the additional discussion in the 2010 UWMP.

## **Required Elements — Water Quality**

*#52. The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability (10634).*

- Identify known or potential water quality issues that could impact water supplies. Water quality impacts may include natural and human-induced water quality issues in both groundwater and surface water resources. The potential quantitative impacts are to be summarized (Table 30).
- Discuss how these water quality issues will be addressed. Methods can include treatment or identification of additional water supply resources.
- Maps may be helpful to include.

## Required Elements — Drought Planning

*#22. Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following: (A) an average water year, (B) a single dry water year, (C) multiple dry water years (10631(c)(1)).*

- Using above guidelines identifying average, single-dry, and multiple-dry water years, identify the specific years that meet the criteria for the urban water supplier (Table 27).
- Identify the actual water supply for each of the years identified in Table 27. Provide that information in Table 28. For each of the dry years, calculate what percentage the dry year water supply was, as compared to the “average/normal” year indicated in the first column of Table 28.

*#35. Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage (10632(a)).*

- A water supplier’s Drought Contingency or Water Supply Reliability Plan should identify the thresholds for implementation of various actions to support conservation. A water supplier may choose to attach its existing plan as an attachment to its 2010 UWMP. If so, briefly describe the different water emergency stages and the criteria for each stage, with a reference to the attachment. If a Drought Contingency or Water Supply Reliability Plan are not attached to the 2010 UWMP, provide sufficient information to describe each water emergency stage and the water conditions that occur for each stage (Table 35).
- Describe the actions a water supplier will perform if water supplies are reduced by 50 percent for a single year.

*#36. An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply (10632(b)).*

*#43. A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis 10632(i).*

- Discuss how the water supplier will measure and determine actual water savings by implementing the actions identified in the 2010 UWMP or in a separately prepared Drought Contingency or Water Supply Reliability Plan. If a separate plan is attached to the UWMP, the approach should be summarized in the UWMP.

*#53. Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its*

*customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier (10635(a)).*

- The urban water supplier is to determine water supplies and demands for normal (average), single-dry year, and multiple-dry years for 2010, 2015, 2020, 2025, and 2030. 2035 may be included. For the multiple-dry year sequences, the first year of the 3-year sequence should be the years ending in 0 or 5 (Tables 32, 33, and 34).
- The water supplier can determine these supplies and demands with their own analytical tools, if available. If analytical tools are used, then provide background information and a discussion of methodologies.
- If analytical tools are not available, then determine future demands (indicate methodologies) and use the percentage calculations determined in Table 28 and apply them to the supply estimates.
- Determine the difference between supply and demand. Show a negative value for years where demands are higher than supplies. The water supplier should calculate the supply/demand difference as a percentage of the estimated supply and then of the estimated demand.

## Other Helpful Information

- Consider including a discussion on how potential climate change issues could affect potential water supplies.

## Suggested Tables

*See Part II,  
Section N, for blank  
UWMP tables.*



Multiple tables (see Part II, Section N, for blank versions of the UWMP tables) are suggested for inclusion in UWMP Section 5:

- Table 27: Basis of water year data
- Table 28: Supply reliability — historic conditions
- Table 29: Factors resulting in inconsistency of supply
- Table 30: Water quality — current and projected water supply impacts
- Table 31: Supply reliability — current water sources
- Table 32: Supply and demand comparison — normal year
- Table 33: Supply and demand comparison — single dry year
- Table 34: Supply and demand comparison — multiple dry-year events
- Table 35: Water shortage contingency — rationing stages to address water supply shortages
- Table 36: Water shortage contingency — mandatory prohibitions

- Table 37: Water shortage contingency — consumptive reduction methods
- Table 38: Water shortage contingency — penalties and charges