



City of Sunnyvale

Agenda Item-No Attachments (PDF)

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REPORT TO COUNCIL

SUBJECT

Adopt a Resolution Declaring a Water Shortage Emergency Condition Calling for a 15 Percent Water Use Reduction through December 31, 2014 and Introduce an Ordinance to Amend Title 12 of the Sunnyvale Municipal Code

REPORT IN BRIEF

Sunnyvale residents and businesses use approximately 19.4 million gallons of potable water each day. The City purchases approximately half of its potable water from the San Francisco Public Utilities Commission (SFPUC), and half from the Santa Clara Valley Water District (SCVWD) which includes groundwater that is pumped from eight City-owned wells. California is in its third consecutive year of drought and 2013 was the driest year in recorded California history. The snow pack and water storage in the state's reservoirs are well below normal. In light of these conditions, the following actions were taken:

- On January 17, 2014 Governor Brown declared a state drought emergency
- On January 31, 2014 the SFPUC requested a reduction in water use of 10 percent
- On February 25, 2014 the SCVWD requested a reduction in water use of 20 percent

Staff is recommending that the City Council adopt a resolution declaring a water shortage emergency condition calling for a 15 percent water use reduction.

Sunnyvale has a commitment to water conservation and partners with SCVWD and Bay Area Water Conservation and Supply Agency (BAWSCA) to implement water conservation programs that provide assistance to residential and commercial customers. In addition, Municipal Code Chapter 12.34.020 currently defines several nonessential water uses that are prohibited at all times. Staff is recommending adding the following amendments to the Code:

(h) No person shall use, permit or allow the use of potable water to irrigate any outdoor landscaping at any time between the hours of 9 a.m. and 6:00 p.m., unless the person using, permitting or allowing the use of the water is using a bucket, hand-carried container, or a hose equipped with an automatic positive self-closing valve.

(i) No person shall use, permit or allow the use of potable water to irrigate any outdoor landscaping or other vegetated area more than fifteen minutes per day per station when using a landscape irrigation system or a watering device that is not continuously attended, except for landscape irrigation systems that exclusively use very low-flow drip-type irrigation systems when no emitter produces more than two gallons of water per hour and weather-based controllers or stream rotor sprinklers that meet a seventy-one percent efficiency standard.

Staff is proposing to increase public outreach and add temporary help to respond to water waste complaints during the summer months. Additional funding of up to \$90,000 is required. This could be funded in the current FY 2013-14 budget from savings as a result of reduced wholesale water purchases.

BACKGROUND

Potable Water Supply and Demand

The Environmental Services Department operates and maintains the City of Sunnyvale's potable water supply system. The City purchases approximately half of its potable water from the San Francisco Public Utilities Commission's (SFPUC) Hetch Hetchy Reservoir located in Yosemite National Park, and half from the Santa Clara Valley Water District (SCVWD), which imports its water from the State Water Project in the Sacramento Delta and the Federal Central Project San Luis Reservoir located on Hwy 152 southeast of Gilroy. The City also has eight wells that can produce 7 million gallons per day (mgd), and the wastewater plant can produce recycled water for irrigation applications.

There are approximately 29,300 connections to the City's potable water system. In FY 2012-13 potable water use averaged 19.4 mgd. Residential water use accounts for 61 percent of the total system demand, with the remainder used by commercial, industrial, institutional, and large landscape irrigation accounts.

Current Water Supply Conditions

As well-described by the media, California is currently heading into its third year of drought and 2013 was the driest year in recorded California history. On January 17, 2014, Governor Brown proclaimed a drought state of emergency and called on urban water suppliers to implement their water shortage contingency plans. In response to the Governor's declaration and local water supply conditions, the SFPUC is requesting that customers reduce water consumption by 10 percent.

While the water supply status in Santa Clara County is better than the status in some communities, the severe reduction in the amount of imported water available caused the Santa Clara Valley Water District Board to adopt a resolution on February 25th asking for a 20% reduction through December 31, 2014. The resolution also recommended "that retail water agencies, local municipalities and the County of Santa Clara implement mandatory measures as needed to achieve the 20 percent water use reduction target."

Sunnyvale residents and businesses have responded well to the request to save water and, for the last four months since the governor declared an emergency, water use in Sunnyvale was down on average 15% as compared to the same period in 2013 as shown in the table below:

<u>Month</u>	<u>2013 (AF)*</u>	<u>2014 (AF)</u>	<u>Reduction</u>
February	1,295	1,088	16%
March	1,467	1,262	14%

April	1,806	1,449	20%
May	2,304	2,035	12%
		Average:	15%

*AF: Acre Foot, 1 AF = 325,829 gallons

EXISTING POLICY

General Plan- Environmental Management Chapter

Goal EM-2 Water Conservation

Promote more efficient use of the City's water resources to reduce the demands placed on the City's water supplies

Policy EM-2.1 Lower overall water demand through the effective use of water conservation programs in the residential, commercial, industrial and landscaping arenas.

ENVIRONMENTAL REVIEW

The recommended action does not constitute a project under CEQA because it does not have a potential for resulting in direct or reasonably foreseeable indirect change in the physical environment

DISCUSSION

Water Shortage Declaration

In light of Governor Brown's proclamation of a drought state of emergency; The SFPUC's request to reduce water use by 10 percent; and The SCVWD's request to reduce water use by 20 percent, staff has drafted a proposed resolution for Council consideration that declares a water shortage emergency condition (Attachment 1).

Under California Water Code Section 350, the City Council may declare a water shortage emergency condition to prevail within Sunnyvale whenever it finds and determines that ordinary demands and requirements of water consumers cannot be satisfied without depleting water supply to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

The following are the basic procedures and legal impact as described under California Water Code Sections 350-359:

- Set a public hearing where customers can protest against the declaration of a water shortage emergency.
- Publish a notice of the public hearing in the newspaper at least seven days before the public hearing.
- Hold the public hearing and consider all protests and comments presented.
- After the public hearing, declare a water shortage emergency, and adopt water use regulations and restrictions that will conserve the water supply for the greatest public benefit with particular regard to domestic use, sanitation, and fire protection.

The legal impact of declaring a water emergency is that it empowers the City to impose emergency water use restrictions. (Water Code § 356.)

With SFPUC calling for a 10% reduction and the SCVWD calling for 20% reduction, and since Sunnyvale receives 50% of its water from each of those sources, an overall reduction target of 15% will satisfy the water savings goal the City needs to achieve.

Staff believes that the City can comply with the requests from both the SFPUC and SCVWD through City-wide conservation programs and operational changes; such that the City's treated water purchases from SCVWD remain below the 20 percent requested reduction. To ensure it can meet water demands from its own treatment plants, SCVWD also requested that water retailers reduce their take of treated water and use other supplies if possible. The City responded to the request by increasing pumping from the wells. For example in the months of March, April and May, the City pumped 598 acre-feet (195 million gallons) more than was planned. The City's goal is still to reduce water use by at least 15 percent regardless of the source. If, however, conservation measures are insufficient in achieving the desired reductions, or the City's wholesale water suppliers request higher levels of water conservation, staff will return to Council at a later date recommending implementation of additional measures.

The City's planned response to a water shortage for higher water reduction goals is outlined in the 2010 Urban Water Management Plan (UWMP), which was adopted by Council on June 28, 2011 (RTC 11-138). In anticipation of 25, 35, 45, and 50 percent or greater water supply reductions, a Water Shortage Contingency Plan was included as Section 5.3 of the UWMP and establishes the following restrictions and prohibitions:

Water Shortage Contingency- Mandatory Prohibitions

Stage No.	Prohibition
Stage 1 25%	<ul style="list-style-type: none">• Flooding or runoff on sidewalks, streets or gutters• Cleaning sidewalks, driveways, buildings, patios, parking lots or other paved/hard surfaced areas• Using a hose without a positive automatic self-closing valve for washing cars, buses, boats, or trailers• Use of decorative fountains• Water waste due to broken/defective plumbing, sprinkler, watering or irrigation systems• Restaurant water service unless requested• Landscape irrigation during daylight hours• Hydrant flushing (unless for public health or safety)

Stage 2 35%	• All of the above • New installations of plants, shrubs, trees, lawns other growing things • Landscape for mounds, hardscape okay but cannot include living plant materials • New swimming pool or pond construction • Filling or refilling swimming pools (can replace water loss due to evaporation) • Outdoor watering December through March.
Stage 3 45%	• All of the above • Watering turf, grass or dichondra lawns (can provide minimal water for sports playing fields) • Golf courses except for tees and greens
Stage 4 50% or greater	• All of the above • Landscape irrigation with potable water of any City-owned premises or businesses where recycled water is available for connection. • Utilization of potable water for any City operation where recycled water could be used.

The attached draft resolution (Attachment 1) sets a water use reduction goal of 15%, which is below the Stage 1 (25%) target outlined in the UWMP. To achieve the 15% goal, staff would continue to expand existing efforts to promote water conservation through public information and outreach programs. Also, amending the Municipal Code as described below to limit irrigation hours from 6:00 p.m. to 9:00 a.m. and duration of irrigation per station to 15 minutes will assist in exceeding the 15% water reduction target.

Ordinance Update

The Municipal Code Chapter 12.34.020 currently defines several nonessential water uses that are prohibited at all times, including:

- (a) Allowing or maintaining broken or defective plumbing, sprinklers, watering or irrigation systems which permit the escape or leakage of potable water.
- (b) Using potable water in any manner which causes, allows or permits the flooding of any premises, or any portion thereof, or which causes, allows or permits water to escape from any premises or any portion thereof and flow into gutters, streets, or any surface water drainage system.
- (c) Using any hose or similar device using potable water for washing automobiles, trucks, buses, boats, trailers, equipment, recreational vehicles, mobile homes or other vehicles or machinery, unless the hose or device is equipped with a positive automatic shutoff valve.
- (d) Using potable water to wash sidewalks, driveways, filling station aprons, patios, parking lots, porches or other paved or hard surfaced areas, unless there is a positive automatic shutoff valve on the outlet end of the hose.
- (e) The service of water by any restaurant or other eating or refreshment establishment to any patron, except upon the specific request by a patron for such services.
- (f) Installation of any single pass cooling process in new construction.
- (g) Any use of non-potable water not in compliance with all federal, state and local laws, rules and regulations. Use of reclaimed water from the city's water pollution control plant shall be subject to the

discretion of the director of public works. (Ord. 2433-93 § 1).

The attached proposed ordinance (Attachment 2) would define two additional prohibited non-essential water uses:

(h) No person shall use, permit or allow the use of potable water to irrigate any outdoor landscaping between the hours of 9 a.m. and 6:00 p.m., unless the person using, permitting or allowing the use of the water is using a bucket, hand-carried container, or a hose equipped with an automatic positive self-closing valve.

(i) No person shall use, permit or allow the use of potable water to irrigate any outdoor landscaping or other vegetated area more than fifteen minutes per day per station when using a landscape irrigation system or a watering device that is not continuously attended, except for landscape irrigation systems that exclusively use very low-flow drip-type irrigation systems when no emitter produces more than two gallons of water per hour and weather-based controllers or stream rotor sprinklers that meet a seventy-one percent efficiency standard

Water Conservation Programs

The City of Sunnyvale has a commitment to water conservation and to that end partners with SCVWD and Bay Area Water Conservation and Supply Agency (BAWSCA) to implement water conservation programs that provide assistance to residential and commercial customers. A series of classes promoting water efficient and sustainable landscaping practices was completed in the fall of 2013 at the Sunnyvale Community Center. These classes were hosted by the City and BAWSCA. For many years, Sunnyvale has partnered with BAWSCA to provide educational classes and hands-on opportunities to community members to promote water efficient landscaping and irrigation. The classes focus on educating residents and businesses on water-efficient alternatives to traditional turf landscaping and water-efficient irrigation in order to promote water conservation. Information on rebate programs and incentives for landscape and irrigation conversion and other water conservation programs offered by BAWSCA and the SCVWD is also provided. The classes are taught by local professionals specializing in Bay Friendly and water-efficient landscaping.

During the 2013 class series, class topics included water-efficient edible landscaping, water-efficient irrigation, planting with California natives, integrated pest management, creating healthy soils and benefits of trees and mulch. Sunnyvale hosted 8 classes during the spring and fall and attracted over 180 community members. The City partnered with Full Circle Farm during the spring for a hands-on workshop that gave participants the opportunity to actually plant a drought tolerant landscape.

The programs below are offered by the City and some are administered by SCVWD and are funded through water wholesale water rates:

- Water survey programs for residential customers
- Residential plumbing retrofit such as providing low-flow shower heads, bathroom and kitchen aerators.
- System water audits and leak detection.
- Large landscape conservation programs and incentives
- High-efficiency washing machine rebate programs
- Public information programs

- School education programs
- Conservation programs for commercial and industrial customers
- Conservation pricing
- Water waste prohibition, Muni Code 12.34.020
- Residential ultra-low-flush toilet rebate programs

Per capita water use continues to trend downward from a high of 241 gallons per capita per day (gpcd) in 1985 to 158 gpcd in 2000, and down to 133 gpcd in 2013. Attachment 3 provides a description of SCVWD rebate programs related to water conservation.

City Measures Taken to Conserve

City staff has implemented the following series of water conservation action plans for City departments, golf courses, parks and streetscape:

- Schedule regular irrigation between the hours of 9 p.m. and 7 a.m. (irrigation may be run during the day when staff are on duty for the purposes of troubleshooting and system repair)
- Use multiple start times for irrigation cycles to minimize water run-off.
- Regularly check, adjust and repair irrigation systems to minimize water waste due to broken or out of adjustment components.
- Monitor water use by means of flow meters and smart meter reading technology to detect defects in irrigation main lines and facilitate quick repair.
- Use a centralized computer irrigation control system that automatically adjusts irrigation scheduling of satellite controllers according to the daily reading of the evapotranspiration rate (ET) from three weather stations located in city open space.
- Irrigate athletic fields for optimum health of turf to promote maximum safety and usability without over-watering. Irrigate non-athletic field turf so it is stressed and is less attractive but still meets standards for safety and usability.
- Irrigate landscapes in medians at a minimal level.
- Reduce the amount of turf and replace with lower water use perennial plants.
- Mulch all bare soil to reduce evaporation.

Public Outreach/ Enforcement

The thrust of enforcement of Sunnyvale's conservation program is to solicit cooperation from water customers who are unaware of the restrictions or have failed to comply with the provisions of the ordinance. Customers who waste water are normally reported by concerned citizens via e-mail or a phone call. To inform these customers of the need to conserve water, letters are sent to remind them about the drought citing also the City ordinance in an effort to obtain their cooperation. Door hangers that provide drought related information to customers, are also being prepared and will be utilized by ESD staff should they observe water being wasted while they are on duty in the field. If discussions with a customer are unsuccessful in obtaining compliance, enforcement mechanisms are available as described in Municipal Code Chapter 12.34.040.

Sunnyvale residents and businesses have been very cooperative and have responded to written notices. Staff does not recommend any additional enforcement actions at this time.

The staff proposes to increase public outreach through direct mailing and site visits. If the volume of

complaints related to water waste increases, additional temporary assistance to respond to calls might be needed.

FISCAL IMPACT

Funding will be required for outreach material and temporary staffing. However, due to anticipated savings from the purchase of wholesale water, this cost can be absorbed within the current budget for the Water Supply and Distribution program. Rate recommendations for Fiscal Year 2014/15 take into consideration conservation efforts of 10 percent. The City's water supply contracts with the SFPUC and SCVWD include minimum purchase requirements which have been reduced by 10 percent and 20 percent respectively as a result of the ongoing drought.

PUBLIC CONTACT

A Public Hearing Notice was posted in the Sunnyvale Sun on June 6, 2014 as required under Water Code Section 352.

Public contact was also made by posting the Council agenda on the City's official-notice bulletin board outside City Hall, at the Sunnyvale Senior Center, Community Center and Department of Public Safety; and by making the agenda and report available at the Sunnyvale Public Library, the Office of the City Clerk and on the City's website.

ALTERNATIVES

1. Adopt a resolution, as presented in Attachment 1, declaring a water shortage emergency condition and calling for a 15 percent water use reduction through December 31, 2014.
2. Adopt the resolution, presented in Attachment 1, with modifications.
3. Introduce an ordinance, as presented in Attachment 2, to amend Title 12 of the Sunnyvale Municipal Code to include additional prohibited non-essential water uses.
4. Introduce the ordinance, presented in Attachment 2, with modifications.
5. Provide other direction to staff.

STAFF RECOMMENDATION

Alternatives 1 and 3: Adopt a resolution, as presented in Attachment 1, declaring a water shortage emergency condition and calling for a 15 percent water use reduction through December 31, 2014; and introduce an ordinance, as presented in Attachment 2, to amend Title 12 of the Sunnyvale Municipal Code to include additional prohibited non-essential water uses.

Prepared by: Mansour Nasser, Water & Sewer Systems Division Manager

Reviewed by: John Stufflebean, Director, Environmental Services Department

Approved by: Robert Walker, Assistant City Manager

ATTACHMENTS

1. Proposed Resolution declaring a water shortage emergency condition and calling for a fifteen percent water use reduction through December 31, 2014.
2. Proposed Ordinance amending chapter 12.34 (Water Conservation Restrictions) of Title 12 (Water and Sewers).
3. SCVWD Rebate Updates and New Programs