

City of Arts & Innovation

City Council Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL DATE: JULY 14, 2015

FROM: CITY MANAGER'S OFFICE WARDS: ALL

**SUBJECT: WATER CONSERVATION PRACTICES FOR TREES, PARKS, PLAYING
FIELDS, AND FOUNTAINS AND UPDATE ON LANDSCAPE MAINTENANCE
ORDINANCE**

ISSUES:

Approve staff recommendations for water conservation practices for city trees, parks, and playing fields, acknowledge City compliance with State Water Board regulations for water fountain play features, and receive an update on the landscape maintenance ordinance.

RECOMMENDATIONS:

That the City Council:

1. Approve staff recommendations for water conservation practices for city trees, parks, and playing fields.
2. Acknowledge the closure of six water fountain play features in the parks, per State mandate.
3. Receive an update on the landscape maintenance ordinance.

BACKGROUND:

After four years of significant drought resulting in severe impacts to California's water supplies and its ability to meet demands for water in the State, Governor Edmund G. Brown declared a Drought State of Emergency in April 2015, issuing mandatory reductions in potable water usage.

The mandatory reductions are a first in California's history, calling for a state-wide 25% reduction in potable water use for the period June 1, 2015 through February 28, 2016, compared to the same months in 2013 as a baseline. More than 400 local water supply agencies are impacted by this order. Each water agency is responsible for identifying restrictions to cut back on water use and for monitoring compliance.

Each water agency is allocated a target conservation tier between 8% and 36% based on their conservation efforts in 2014. Riverside has been placed in the 28% tier. Over the past several

months, City staff has identified options and developed plans to meet the mandated reductions.

DISCUSSION:

As we work to reduce water usage in response to the drought, the discussion has been largely framed as “brown vs. green” – as if we can only have brown or green and also as if significant water saving measures are for drought period only. When this drought might end is unknown; however, staff believes that we have entered a new normal for municipal water consumption practices and that brown is not the new green, but rather less water can mean more colors in our urban landscape. For example, as we take out the turf in our median strips we are replacing it with drought tolerant plants that need much less water and offer new colors and textures.

Less water, more color



Watering City Trees

Ensuring City trees will thrive is a challenge with the significant cut in water usage; at times, some trees may show signs of stress due to less-than-normal irrigation application. In cases of stress, the City will provide supplemental water to the trees.

Monitoring Tree Health

The City will monitor the health of the trees throughout the summer and make watering adjustments as needed; through its communications with the public, the City will ask the Riverside community to do the same. The City will be hiring an additional landscape inspector (as contained in the new budget) and has assigned a staff member from Street Maintenance to bolster the tree monitoring and maintenance program.

Trees in Median Strips

There are an estimated 150,000 street trees, the majority of which are irrigated by property owners or grow naturally without the need for irrigation. Fifteen thousand (15,000) of the trees are in median strips. These trees are irrigated by Public Works.

Updated City Medians



Van Buren Blvd. Before



Van Buren Blvd. After



Alessandro Blvd. Before



Alessandro Blvd. After

The state has prohibited watering turf in median strips. Consequently, the City has ceased such watering, yet continues to water trees in the medians. The City's median strips have either single or separate irrigation systems. In the medians with separate irrigation systems the trees will continue to be irrigated as needed. In medians with a single irrigation system the trees will be watered at least once a week or more often as needed, using only the spray heads near the trees; while the irrigation heads that only irrigate the turf have been turned off.

To replace medians with the single irrigation system, staff is seeking bids to install new drip lines to irrigate trees only. Once the remaining median turf can be removed and new drought tolerant plants planted, the drip lines will become part of a permanent water efficient irrigation system installed over the next couple of years. The cost is expected to be \$350,000. Staff will return to City Council for approval.

Trees in Parks

There are 35,000 trees in City parks. Trees that are in turf areas continue to get water as the turf is watered, and the turf watering has been reduced 25%. Trees outside the turf areas are within planter areas and are watered with the planter irrigation system. Some turf areas in several parks have recently been removed and replaced with drip irrigation and drought tolerant planting. Trees within these areas have benefited by the installation of drip irrigation applied directly to their root zone.



The Parks Department incurred costs in the amount of \$191,964 in FY 2014-15 to replace approximately 94,000 sq. ft. of turf and has submitted a request for reimbursement of this full amount to the Riverside Public Utilities Rebate Program. It is anticipated that the Department will be able to identify and prioritize an additional 100,000 sq. ft. of turf for replacement, at a cost of approximately \$250,000, by adjusting work effort and using existing resources and available rebate funding in FY 2015-16.

Public Utilities maintain trees at the former Riverside Golf Course and at its utility facilities. Golf course trees are being watered twice a week beginning the week of June 22. Staff is looking at new sources of non-potable water and preparing the application to the State Water Board to utilize recycled water for watering. Decorative trees at substations, reservoirs and other facilities will continue to be watered manually, twice a week, using a garden hose until these sites receive a new drip line installation this summer.

Parks and Playing Fields

There are three main turf areas to consider for watering in City parks – playing fields, picnic areas, and passive fields. The playing fields are being kept very healthy given their uses and for players' safety. The picnic areas are being kept moderately healthy for people to enjoy. And the passive fields are being allowed to stress and go dormant, but not to die. The passive areas will be considered for turf replacement.



Typical Park Irrigation Reductions

1

Irrigated healthy grass—active use, programmed sports fields.

Example:



Stressed grass from reduced irrigation—passive use areas, outside programmed sports fields.

2

Example:



Irrigation to turf in non recreational use areas, will be greatly reduced. Drought tolerant landscaping will be installed, trees will remain irrigated.

3

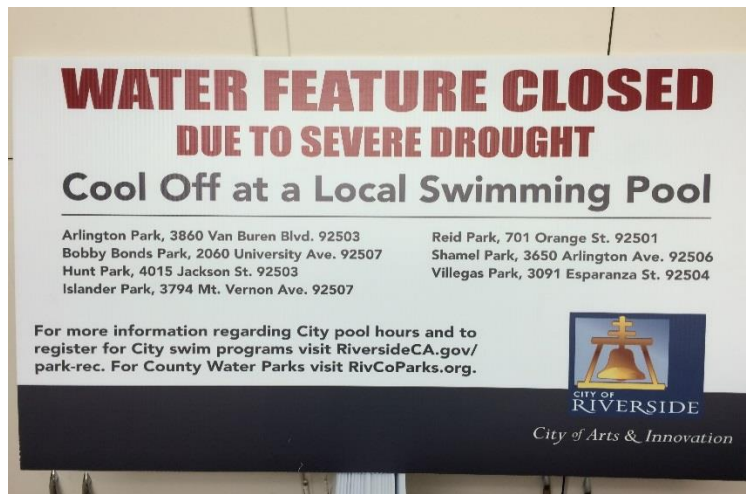
Example:



We are currently experiencing more stress in some parks than we desire and we continually make adjustments to the irrigation scheduling to minimize the excessive stress. Finally, the irrigation controllers at the parks are being updated with controllers that collect data daily to automatically adjust watering based on weather, temperature, and humidity.

Water Fountain Play Features

This summer, the six water play features in City parks are closed to meet the State's water reduction regulation, because they do not re-circulate water. They would use approximately 7.2 million gallons of water for the entire summer. Staff has posted signage at these play feature fountains redirecting residents to cool off for the summer at City swimming pools.



Six non-circulating water features closed

The water feature in the Main Street mall does re-circulate water and staff recommends it remain fully functional with a daily schedule of 11 a.m. to 7 p.m. from June through September. It will be manually shut off when the temperature is cold, windy or rainy, and resume when weather improves. Appropriate signage has been placed at this water play feature.



Sign indicates Main Street splash pad hours and that water is re-circulated

Using Water Trucks

Staff has reviewed whether the Public Works truck and the Fire trucks equipped with water tanks can obtain reclaimed water from the City's wastewater treatment plant to use for watering. The use of Fire trucks is not practical, as the vehicle would have to be taken out of service in order to conduct watering. Additionally, fire trucks do not have a backflow prevention assembly and they cannot connect directly to the potable system after using their vehicle for non-potable water use.

Public Works has one 2,000-gallon water truck that is used intermittently on various maintenance projects. Using the truck for spot watering is not recommended due to the truck's

limited size and that additional staff training would be necessary for foreseeable issues such as non-incidental runoff, over-watering and saturating areas, and excessive misting.

Other City Water Conservation Practices

Staff is taking the following additional measures to reduce water consumption:

1. Using pressure washing only for health and safety needs
2. Limiting pressure washing for graffiti abatement
3. Assuring repairs to water leaks within 72 hours
4. Reducing landscape watering at City facilities
5. Reducing washing of City vehicles
6. Replacing turf with water-wise landscape around City Hall and other facilities

Update on City Landscape Maintenance Ordinance

The City Council amended the landscape maintenance ordinance in July 2014. The ordinance created a range of water conservation and enforcement standards depending on the severity of a water shortage. The ordinance was drafted with assistance from Riverside Public Utilities, who reached out to turf and landscape experts to determine what residents can expect given the different levels of irrigation. The City's landscape ordinance is codified in Title 6 of the Riverside Municipal Code. Chapter 6.14 sets forth a water shortage contingency plan which identifies varied levels of water conservation and corresponding enforcement for water consumption and landscape maintenance. Section 6.14.040 established four stages of water contingency ranging from "Normal Conditions" in Stage 1 to "Severe Water Shortage" in Stage 4. Section 6.14.020(f) requires that the applicable water shortage contingency stage be declared by Resolution of the City Council. On June 23, 2015, the City Council adopted a resolution that declared a transition from the water shortage contingency Stage 2 to Stage 3.

Landscape Maintenance / Water Shortage Contingency Stage Enforcement

Water Shortage Contingency Stage	Water Conservation Level	Enforcement Level
Stage 1 Normal Conditions	Voluntary Conservation Measures	Standard - All subsections of Title 6.14.020 shall apply.
Stage 2 Minimum Water Shortage	Mandatory Conservation Measures - 15% water consumption reduction with 3-4 days per week watering (as determined by water service agency)	Modified - Courtesy Notice and educational materials with extended timeframes to comply. - All subsections of Title 6.14.020 shall apply.

Water Shortage Contingency Stage	Water Conservation Level	Enforcement Level
Stage 3 Moderate Water Shortage	Mandatory Conservation Measures <ul style="list-style-type: none"> - 15-20% water consumption reduction with 2-3 days per week watering (as determined by water service agency) 	Modified <ul style="list-style-type: none"> - Courtesy Notice and educational materials with compliance required after Stage 3 is upgraded to Stage 2 or better. - Enforcement of Title 6.14.020 C (2) shall be suspended with the exception of the requirement to continue to mow and trim plant materials and lawns. - All other subsections of Title 6.14.020 shall apply.
Stage 4 Severe Water Shortage	Mandatory Conservation Measures <ul style="list-style-type: none"> - 20-50% water consumption reduction with 1-2 day per week watering (as determined by water service agency) 	Modified <ul style="list-style-type: none"> - No response by Code Enforcement for violations of Title 6.14.020 C (2) (3) with the exception of the requirement to continue to mow and trim plant materials and lawns. - All other subsections of Title 6.14.020 shall apply.

The salient differences between Stage 2 and Stage 3 include the permitted levels of water consumption and minimal standards for landscape maintenance. Stage 2 permits a resident to water their lawn 3 to 4 days per week and sets the minimum standard to require regular maintenance but allowing lawns to be not be fully green. Stage 3 requires a resident to limit watering to 2 to 3 days per week and suspends enforcement of 6.14.020 C (2) thus allowing lawns to be fully brown, although continues to require regular maintenance “to mow and trim plant materials and lawns.” The images below provide a guideline to identify the acceptable levels of landscape maintenance of Stages 1, 2 and 3. Note that regardless of the color of the lawns, the landscape must be maintained and kept free of weeds and debris.

	Stage 1 – Normal Conditions	Stage 2 – Minimum Shortage	Stage 3 – Moderate Shortage	Never Acceptable
Acceptable Per Currently Adopted Riverside Municipal Code				

The City Council adopted the water shortage contingency provisions and amended Title 6 of the Riverside Municipal Code with the understanding that enforcement of brown lawns would be suspended, while requiring enforcement of mandatory water conservation measures. Council asked staff to review whether the adopted ordinance remains appropriate given current drought conditions, and recommend any needed updates. This request was specifically within the context of landscape maintenance and the acceptability of a “brown lawn.”

Landscape maintenance is enforced on a complaint only basis, which will continue. If the ordinance is amended to not allow for brown lawns, staff would need additional training as to what degree of “browning” would be acceptable and a level of field discretion. Note that such a change may be inconsistent with the overwhelming message of water conservation. Additionally, the City is served by three water agencies, each with different conservation rules, while the landscape maintenance ordinance is citywide.

As of the writing of this report, California Assembly Bill 1 (AB1) has passed State Assembly and Senate. The bill summary states that:

This bill prohibits, during a period for which the Governor has issued a proclamation of a state emergency based on drought conditions, a city, county, or city and county from imposing a fine under any ordinance for a failure to water a lawn or for having a brown lawn. This bill provides that a violation is not subject to the criminal penalties that are detailed in the Act, and declares that the matter is a statewide concern and not a municipal affair, thereby applying the bill's provisions to all cities, including charter cities.

The bill is on its way to the Governor’s office for signature, or veto. Any further amendment to the Riverside landscape maintenance ordinance should await the outcome of AB1.

FISCAL IMPACT:

There is no fiscal impact associated with this report. However, over the next couple of years, the Public Works Department is proposing to remove the remaining 500,000 square feet of turf in medians and install drought tolerant landscaping. The cost is estimated at \$2.5 million, of which an unknown amount may be funded thru the City’s and Western Municipal Water District’s turf removal program. To replace medians with the single irrigation system, staff is seeking bids to install new drip lines to irrigate trees only. Once the remaining median turf can be removed and new drought tolerant plants planted, the drip lines will become part of a permanent water efficient irrigation system installed. The cost is expected to be \$350,000. Funding for the drip system would come from the Public Works Department’s landscape budget, which at the end of the year would likely put the Division over budget. Staff will return to City Council for approval.

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