

**SUBMITTAL TO THE BOARD OF SUPERVISORS  
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**



**ITEM: 3.6  
(ID # 20069)**

**MEETING DATE:**  
Tuesday, September 20, 2022

**FROM :** EXECUTIVE OFFICE:

**SUBJECT:** EXECUTIVE OFFICE: Receive and File the Report on Statewide Drought and County Department Response. All Districts. [\$0]

**RECOMMENDED MOTION:** That the Board of Supervisors:

1. Receive and File the County Department Water Conservation Report, Provided as Attachment A; and
2. Receive a presentation on Drought Status and Water District Activities jointly provided by members of the Water Task Force; and
3. Direct the Executive Office to provide Annual Drought Updates on Department Water Conservation so long as State Emergency Drought Regulations remain in effect.

**ACTION:Policy**

Juan C. Perez, Chief Operating Officer 9/15/2022

---

**MINUTES OF THE BOARD OF SUPERVISORS**

On motion of Supervisor Hewitt, seconded by Supervisor Jeffries and duly carried, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Jeffries, Washington, Perez and Hewitt  
Nays: None  
Absent: Spiegel  
Date: September 20, 2022  
xc: E.O.

Kecia R. Harper  
Clerk of the Board  
By:   
Deputy



**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,  
STATE OF CALIFORNIA**

<b>FINANCIAL DATA</b>	<b>Current Fiscal Year:</b>	<b>Next Fiscal Year:</b>	<b>Total Cost:</b>	<b>Ongoing Cost</b>
<b>COST</b>	\$ 0	\$ 0	\$ 0	\$ 0
<b>NET COUNTY COST</b>	\$ 0	\$ 0	\$ 0	\$ 0
<b>SOURCE OF FUNDS: N/A</b>			<b>Budget Adjustment: N/A</b>	
			<b>For Fiscal Year: N/A</b>	

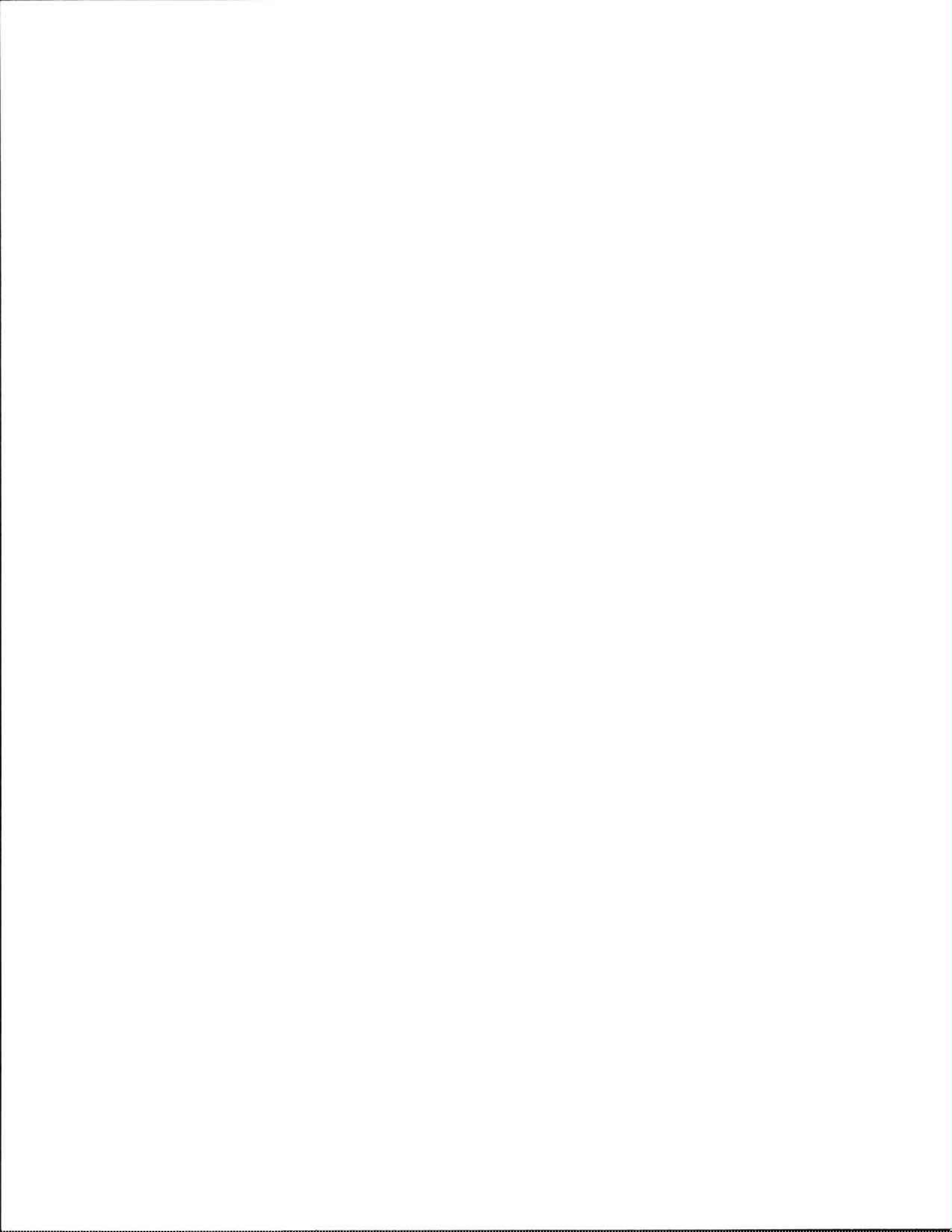
**C.E.O. RECOMMENDATION:** Approve

**BACKGROUND:**

**Summary**

California is currently entering its third year of prolonged and worsening drought conditions. This year our months of January, February and March had the least rain and snow on record. These unseasonably warm, dry months overshadowed gains in precipitation at the end of 2021. Snow melted faster than expected, reducing snowpack to just 38% of average by April 1.

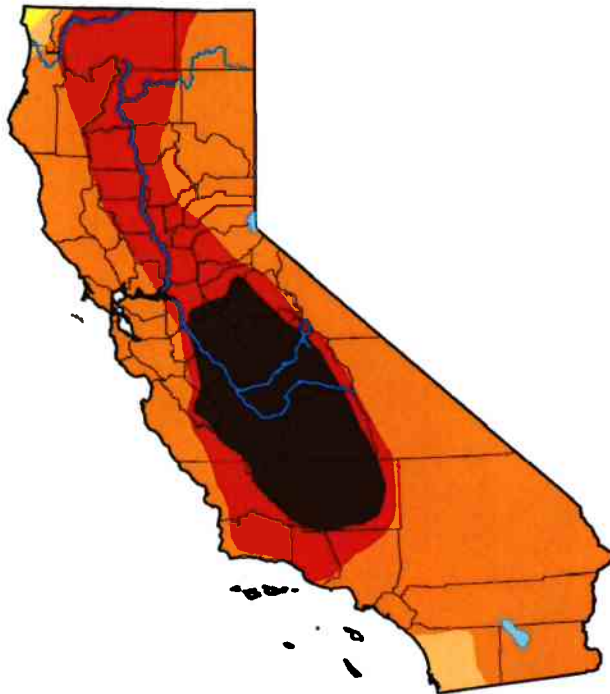
Taken together with the generally dry conditions of the last twenty years, this has resulted in most of the state, including Riverside County, being categorized as in severe drought or worse, as detailed in the graphic below:



**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,  
STATE OF CALIFORNIA**

**U.S. Drought Monitor  
California**

**September 6, 2022**  
*(Released Thursday, Sep. 8, 2022)*  
Valid 8 a.m. EDT



*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	0.00	100.00	99.76	97.52	40.16	16.57
<b>Last Week</b> <i>08-30-2022</i>	0.00	100.00	99.76	97.52	40.16	16.57
<b>3 Months Ago</b> <i>06-07-2022</i>	0.00	100.00	99.79	97.48	59.81	11.59
<b>Start of Calendar Year</b> <i>01-04-2022</i>	0.00	100.00	99.30	87.62	16.60	0.84
<b>Start of Water Year</b> <i>09-28-2021</i>	0.00	100.00	100.00	93.93	87.88	45.66
<b>One Year Ago</b> <i>09-07-2021</i>	0.00	100.00	100.00	93.93	87.94	45.66

*Intensity:*

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

*Author:*

David Simeral  
Western Regional Climate Center



[droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)

In an effort to mitigate potential public health, safety, economic and environmental impacts, and to relieve demand on regional resources and impoundments, Governor Gavin Newsome issued an Executive Order in October 2021 which led the State Water Resources Control Board (SWRCB) to adopt an emergency water conservation regulations that apply to all state residents, and prohibit use of potable water to:

- Irrigate outdoor landscapes in a manner that lets water run onto sidewalks and other areas
- Wash vehicles without an automatic shutoff nozzle
- Wash hard surfaces like driveways or sidewalks that do not absorb water
- Clean streets or prepare construction sites
- Fill decorative fountains, lakes, or ponds
- Irrigate outdoor landscapes within 48 hours after at least 1/4 inch of rainfall



**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,  
STATE OF CALIFORNIA**

- Irrigate ornamental turf on public medians

The Governor's subsequent Executive Order issued in March of this year, resulted in SWRCB adoption of additional requirements for commercial, industrial, homeowner's associations, and governmental entities - including the County - to comply with new prohibitions on irrigation of non-functional turf. On Aug. 11, 2022, Governor Newsom released "California's Water Supply Strategy: Adapting to a Hotter, Drier Future." The strategy centers on actions to stretch existing water supplies and adapt to more extreme weather patterns caused by climate change.

On June 7, 2022 (Agenda Item 3.48), the Board of Supervisors directed the Executive Office to work with Departments that own or manage facilities or property on behalf of the County to evaluate and implement efforts to reduce exterior water usage on non-functional landscaping at County facilities and in improved County right-of-way. As a result of California's climate and periodic droughts, and in compliance with conservation mandates, County Departments have continued to progressively develop, implement and refine various regional, local and facility-based conservation strategies. The attached report provides an update on County Departmental current and future efforts.

**Impact on Residents and Businesses**

By reducing its water usage, the County of Riverside can help mitigate impacts of the drought and demonstrate the necessity of conservation.

**ATTACHMENTS:**

- County of Riverside Water Conservation Report







# **COUNTY OF RIVERSIDE WATER CONSERVATION REPORT**

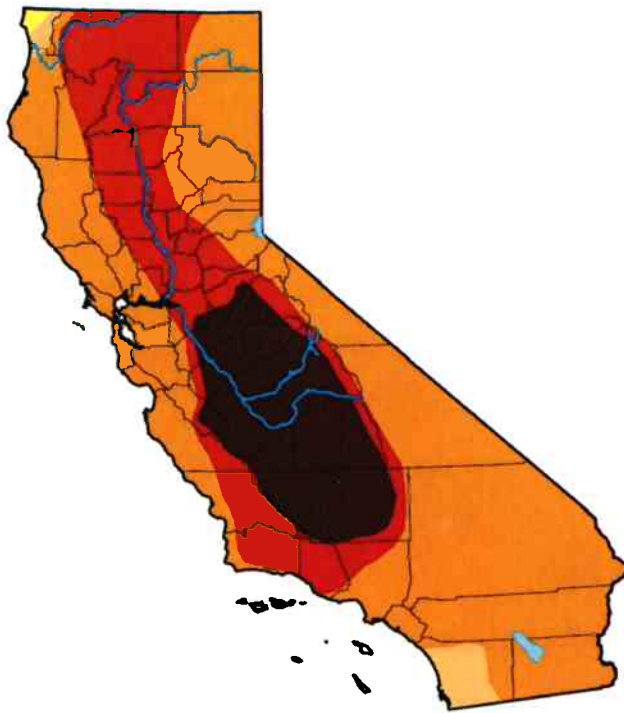
**September 20, 2022**



## County of Riverside Departmental Water Conservation Efforts

Drought is a recurring feature of California’s Mediterranean climate. In review of over 1,000 years of state paleoclimate records, California’s Department of Water Resources notes many significant historic dry periods. Recently, the state experienced the 5-year drought event of 2012-2016; however, other notable historical droughts occurred in 2007-09, the late 1980s, late 1970s, with off-and-on dry conditions also occurring during the 1920s and 1930s<sup>1</sup>. 2022 marks California’s third successive dry year; taken together with the generally dry conditions of the last twenty years, this has resulted in most of the state, including Riverside County, being categorized as in severe drought or worse, as detailed in the graphic below:

### **U.S. Drought Monitor California**



**September 6, 2022**  
(Released Thursday, Sep. 8, 2022)  
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	0.00	100.00	99.76	97.52	40.18	16.57
<b>Last Week</b> 08-30-2022	0.00	100.00	99.76	97.52	40.18	16.57
<b>3 Months Ago</b> 06-07-2022	0.00	100.00	99.79	97.48	59.81	11.59
<b>Start of Calendar Year</b> 01-04-2022	0.00	100.00	99.30	67.82	16.60	0.84
<b>Start of Water Year</b> 09-28-2021	0.00	100.00	100.00	93.93	87.88	45.86
<b>One Year Ago</b> 09-07-2021	0.00	100.00	100.00	93.93	87.84	45.86

**Intensity:**

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

**Author:**

David Simeral  
Western Regional Climate Center



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

In an effort to mitigate potential public health, safety, economic and environmental impacts, and to relieve demand on regional resources and impoundments, Governor Gavin Newsome issued an Executive Order in October 2021 which led to State Water Resources Control Board (SWRCB) adoption of emergency water conservation regulations that apply to all state residents, and prohibit use of potable water to:

- Irrigate outdoor landscapes in a manner that lets water run onto sidewalks and other areas
- Wash vehicles without an automatic shutoff nozzle
- Wash hard surfaces like driveways or sidewalks that do not absorb water

<sup>1</sup> <https://water.ca.gov/water-basics/drought>

- Clean streets or prepare construction sites
- Fill decorative fountains, lakes, or ponds
- Irrigate outdoor landscapes within 48 hours after at least 1/4 inch of rainfall
- Irrigate ornamental turf on public medians

The Governor's subsequent Executive Order issued in March of this year, resulted in SWRCB adoption of additional requirements for commercial, industrial, homeowner's associations, and governmental entities - including the County - to comply with new prohibitions on irrigation of non-functional turf.

As a result of California's climate and periodic droughts, and in compliance with conservation mandates, County Departments have continued to iteratively develop, implement and refine various regional, local and facility-based strategies to help mitigate drought impacts and demonstrate the necessity of conservation. This report provides an update on County Departmental current and future efforts.

### **Facilities Management (FM)**

Facilities Management is committed to providing safe, comfortable, efficiently operated and aesthetically pleasing facilities for all county employees and the public. FM supports over 400 diverse buildings with county departments occupying approximately 16 million square feet of county-owned and leased space.

#### **Current Conservation Strategies**

***LEED Certification Requirements at County Facilities*** - Riverside County Board of Supervisors Policy H-29 requires that all large county building projects initiated on or after March 1, 2009, achieve LEED certification. To attain this, a project earns points by adhering to prerequisites and credits that address carbon, energy, water, waste, transportation, materials, health and indoor environmental quality. Projects go through a verification and review process and are awarded points that correspond to an escalating level of LEED certification: Certified, Silver, Gold and Platinum. **FM manages a total of nine Public Private Partnership LEED certified facilities, along with a total of eleven county delivered LEED certified facilities.**

***Exterior Water Usage Reductions at County Facilities*** - FM manages capital projects which include landscaping that requires a rigorous plan review process with local water agencies to ensure that projects meet water efficiency standards.

In addition to planning phase measures, FM has implemented various post-development measures at County facilities including removal of non-functional turf at county buildings, conversion of landscaped planters to drip irrigation systems, replacement of irrigation controllers with Wi-Fi capable controllers and rain sensors, and installation of rotor nozzles to improve watering efficiencies. Altogether, FM Maintenance Division has **reduced water use at all county buildings by 15 - 20% since 2015.**

To further illustrate the efficacy of these strategies, turf removal, implementation of drip irrigation systems, and replacement of irrigation controllers and spray heads **at twelve County facilities in the Western Riverside Area alone has resulted in conservation of over 1.4 million gallons of potable water per year since 2015.**

***Partnerships*** - FM continues to seek partnerships with local water agencies for water efficiency opportunities, as well as opportunities to reduce use of potable water for irrigation. For example, in

2018 FM engaged Eastern Municipal Water District (EMWD) to fund the recycled water retrofit project for RUHS Medical Center’s landscape irrigation system. The project in its final stages with completion expected at the end of the calendar year.

### **Future Conservation Strategies**

As part of FM’s ongoing facility assessment, several County facilities, including County Administrative Center, Smith Correctional Facility, and Byrd Detention Center, among others, have been identified for upgrades in the form of turf removal, irrigation and landscaping upgrades, and implementation of interior water conserving plumbing fixtures. **It is expected that improvements at these facilities will translate to conservation of over 1.9 million gallons of potable water each year.**

Additionally, the County Farm area (County Circle) located in the City of Riverside is identified as a prime location for a large, **500,000 square foot turf removal project**. Estimated project costs range from \$10 - \$15 per square foot for removal, new irrigation, and planting of drought tolerant landscape. FM will develop a phased approach to transition site landscaping as funding becomes available.

### **Regional Park and Open-Space District (RivCo Parks)**

RivCo Parks currently manages 27,828 acres of active recreation lands. Within that area, only 86.5 acres of turf are irrigated for recreation use; this translates to roughly 0.3% of the Department’s total acres managed for active recreation. Notwithstanding, RivCo Parks staff have identified the following additional water saving opportunities without diminishing recreational use enjoyment.

### **Current Conservation Strategies**

As a result of the 2012-2016 drought, RivCo Parks identified strategic water use and water conservation strategies at County parks in the form of turf removal, increased use of artificial turf where applicable, irrigation retrofits, adjusting design standards toward drought tolerant landscaping, installation of permeable pavements, bio swales and runoff detention areas, and implementation of interior water conserving plumbing fixtures. **These practices led the Department to identify and eliminate over 10 acres of non-essential turf and reduce irrigation on over 11 acres of additional turf, conserving approximately 1.9 million gallons of potable water per year.**

### **Future Conservation Strategies**

Rivco Parks looks to implement the following measures:

- Research low use turf areas in parks, with the goal of potential repurpose with non-irrigated recreational areas such as off-leash pet areas (i.e., bark parks), pickle ball courts, corn hole courts, outdoor fitness areas, basketball courts etc. **Potential potable water savings are estimated at 0.75 gallons per square foot of turf area reduced.**
- Reduce evaporative loss by restricting splash pad water features to close after Labor Day weekend.
- Research and replace campus and parking lot planters at Parks Headquarters to drip irrigated drought tolerant native plants species. **Estimated reduction of 90 - 100% potable water usage in these areas.**

- Educate Park guests on current drought issues, and encourage reduction of personal water use while camping, with a goal of 25% compliance; **this would yield an estimated reduction of 5.3 million gallons of potable water per year.**

### **Office of Economic Development (OED)**

OED oversees the operation of 60 County Services Areas (CSAs), maintaining 22 county owned parks, and over 8 million square feet of landscaping. Additionally, the Department is responsible for 19 Community Facilities Districts (CFDs) countywide, which offer a range of services, including streetlight maintenance, stormwater facility maintenance, landscape, and streetscape maintenance. Since 2015, County maintained CSA and CFD areas meet the strictest irrigation requirements on new landscape.

#### **Current Conservation Strategies**

As a result of the 2012-2016 drought, OED implemented the following water conservation improvements within County communities:

- Removed over 20,000 square feet of non-functional turf along streetscapes in the Four Seasons community and converted to drought tolerant landscaping.
- Removed almost 38,000 square feet of non-functional turf along streetscapes in the Central Park community and converted to drought tolerant landscaping.
- Converted to non-potable reclaimed irrigation for almost 40,000 square feet of landscaping in the Morgan Hill community.
- Converted to non-potable reclaimed irrigation for over 431,000 square feet of landscaping in the Silverhawk community and reduced the number of meters from 5 to 2 meters through consolidation of irrigation systems.

**Together, the above improvements have resulted in conservation of over 10.2 million gallons of potable water per year.**

OED is currently converting 41 existing irrigation controllers in the Murrieta/Temecula area to upgraded water-smart controllers with cellular communication capabilities that allow for immediate shut down of irrigation and remote adjustment of watering schedules in event of inclement weather.

#### **Future Conservation Strategies**

The Department plans to convert an additional 40 irrigation controllers in the Temescal Canyon area to upgraded water-smart controllers and has additional plans to remove 25,000 square feet of non-functional turf at Willows Park, converting to drought tolerant landscaping.

### **Transportation Land Management Agency (TLMA)**

TLMA administers County Ordinance 859, which features requirements for water efficient landscapes for all County discretionary permits and/or approvals. Ordinance provisions include but are not limited to: requirements for development and approval of site water budgets, use of drip irrigation, smart irrigation controllers with rain shut off devices, and irrigation audit and inspection requirements. In addition, TLMA manages Landscaping and Lighting District No. 89-1-Consolidated and works with OED to perform landscape plan check and landscape inspections for new county-maintained areas related

to new Development. Since 2015, County maintained LMD areas meet the strictest irrigation requirements on new landscape.

### **Current Conservation Strategies**

**County Right of Way** –Typically, only drought tolerant plants are used within County maintained LMD landscaped areas, with the exception of turf grass within park sites. Additionally, County maintained LMD landscape areas required smart irrigation controllers, with a minimum of two-way communication, and landscape renovation projects incorporate point to point irrigation and low water use plant material.

Since 2015, TLMA has mandated the following requirements pursuant to County Ordinance 859:

**Residential Properties** – July 2015 updates to Ordinance 859 (.3) impacted new residential projects twofold: the 50% residential water budget requirement provides an **estimated savings of up to 695 gallons (or 28%) per 100 square feet for non turf related landscape areas annually**; the elimination of turf within new residential front yards of tract homes provides an **estimated savings of 2200 gallons (or 47%) per 100 square feet annually within those areas where historically turf would be placed in the front yard landscape.**

**Commercial Properties** - July 2015 updates to Ordinance 859 (.3) required commercial projects to meet a 45% commercial water budget requirement, for an **estimated savings of up to 875 gallons (or 35%) per 100 square feet of landscaping annually.**

### **Flood Control & Water Conservation District (RCFC&WCD)**

The District was created July 7, 1945 by an Act of the California State Legislature. The District (2700 sq. mi.) is located in the western portion of Riverside County (7200 sq. mi.). It extends from the County's western border easterly to the cities of Palm Springs, Cathedral City and Desert Hot Springs. The District is overseen by the Riverside County Board of Supervisors. In establishing the District, the Legislature not only formed an entity charged with keeping county residents safe from flood hazard but also an organization tasked with promoting the conservation of local water resources. The District operates over 700 miles of storm drains, channels and levees and operates over 60 dams and detention basins within western Riverside County. The District often partners with local water agencies to capture and recharge local and imported water supplies.

### **Current Conservation Strategies**

**District Headquarters Improvements** - In 2011-2012, RCFC&WCD renovated its headquarters in Riverside to create the Low Impact Development Testing and Demonstration Facility (Facility) for the demonstration and assessment of Low Impact Development (LID) water conservation and water quality features in semi-arid environments. LID methods serve to mimic predevelopment site hydrology using site design techniques that store, infiltrate, evaporate, and detain runoff. The Facility includes a variety of LID features to demonstrate the local application of these practices in contributing to basin water banking, stormwater capture and management, including hydromodification, and water conservation. The Facility includes permeable asphalt and concrete pavements, bioretention systems with underdrains, drought tolerant landscaping, and an integrated system to monitor hydrology and pollutant removal. **To date, RCFC&WCD has conducted over 100 educational walking tours of the**

Facility, which assist with educating local residents, builders, and leaders on LID design concepts. Moreover, RCFC&WCD estimates that the LID Testing and Demonstration Facility has reduced the site's average water use by approximately 40% during the dry season and 20% during the wet season, compared to pre-project conditions.

**Planning** - RCFC&WCD made it a goal to ensure that each RCFC&WCD plan proactively evaluate opportunities to incorporate stormwater capture or other forms of water conservation. Completed plans since 2015 include:

- City of Riverside Public Utilities Water Supply Enhancement Study evaluating Kansas, Columbia, and Marlborough basins for recharge opportunities
- West Desert Hot Springs Master Drainage Plan
- Woodcrest Dam recharge analysis

**Infrastructure & Maintenance Projects** - RCFC&WCD has been partnering with local water agencies to implement various projects to recharge groundwater basins using stormwater runoff or other available imported water supplies. **Since 2015, RCFC&WCD has invested over \$10 million in support of over \$40 million in water conservation projects capable of capturing over 3.25 billion gallons of stormwater or excess imported water supplies.** These projects include:

- Arlington Recharge Basin (WMWD Partnership)
- Beaumont Line 16 (BCVMWD Partnership)
- Bautista Recharge Basin Expansion (LHWD Partnership)
- Little Lake Recharge Basin Expansion (LHMD Partnership)
- Mockingbird Reservoir Dredging (Riverside Public Utilities Partnership)
- Noble Creek Recharge Basin Expansion (BCVMWD Partnership)
- Phoenix Avenue Storm Drain Diversion (Riverside Public Utilities Partnership)

**Grants** - RCFC&WCD has been a central player in the development of Integrated Regional Water Management (IRWM) Programs for the Santa Margarita Watershed and the San Geronio Pass Watershed. Working with partners at the County, Rancho California Water District, and City of Banning, among others, **approximately \$20 million in state grant funds supporting \$60 million in water resource projects were brought to the Santa Margarita and Banning Pass communities.** Projects funded included the Riverside County Parks turf conversion project in southwest Riverside County.

### **Future Conservation Strategies**

**Supporting Water Reuse Development Programs** – RCFC&WCD has been expanding its water conservation efforts to support the development of reclaimed water systems. **To date, RCFC&WCD has committed over \$20 million to development of reclaimed water systems in Corona, Norco, and Eastvale.** These systems will ultimately be capable of delivering up to 14 million gallons per day of highly treated wastewater from the Western Riverside County Regional Wastewater Authority Treatment Plant to end users in these communities for irrigation and other non-potable uses, thus conserving precious potable water supplies.

**Dry Weather Diversion to Sewer Programs** – RCFC&WCD is also beginning to work with local sewerage agencies to utilize available capacity in local wastewater treatment plants to treat dry weather runoff

from local storm drains. This strategy assists RCFC&WCD with meeting state and federal water quality standards while also recapturing wasted water for treatment and delivery through reclaimed water systems. RCFC&WCD's first diversion project was the recently completed Phoenix Storm Drain diversion project in the city of Riverside. Two additional diversion projects are proposed for Eastvale Lines D and E.

***Ongoing Project Development and Planning Efforts*** – RCFC&WCD continues to work with local water agencies to evaluate opportunities to capture, reuse, or enhance local water supplies. RCFC&WCD is continuing to conduct tests to evaluate its existing basins and dams for compatibility with potential future groundwater recharge efforts and to conduct broader studies in partnership with local water agencies to identify other opportunities to enhance local supplies through stormwater capture, conjunctive use of imported water supplies, or water reuse.

***Overall Impacts***

- In summary, water conservation efforts implemented collectively by the Riverside County departments since 2016, have resulted in 13.5 million gallons in water savings annually.
- Furthermore, Riverside County Flood Control and Water Conservation District (RCFCD) water discharge projects have resulted in 3.25 billion gallons in water savings annually.
- County Departments and Districts will continue their deployment of various water conservation strategies including, but not limited to:
  - Removal of non-functional turf
  - Installation of drought tolerant landscaping and artificial turf
  - Installation of water conserving plumbing features
  - Installation of irrigation retrofits and smart irrigation (drip systems, water-efficient nozzles, and remote sensors)
  - Incorporation of stormwater capture and water conservation into master planning
  - Development of additional water capture infrastructure