



# ANNUAL REPORT

FY 2023/2024

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Riverside County Flood Control And Water Conservation District



# MISSION

*We responsibly manage stormwater in service of safe, sustainable and liveable communities.*

# VISION

*To be a leader in the field of stormwater management, achieve extraordinary results for our customers, be the home of high quality teams and return value to our community.*





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# MESSAGE FROM THE CHIEF ENGINEER

I am pleased to present the Fiscal Year 2023-24 Annual Report for the Riverside County Flood Control and Water Conservation District. As we continued our mission to be a leader in managing flood risk, protecting water resources and enhancing the quality of life for the residents of Riverside County in Fiscal Year 2023-24, we also look forward to launching or supporting several key initiatives in the upcoming year.

The following sections highlight some of our FY 2023-24 accomplishments and FY 2024-25 goals in alignment with our strategic objectives in key areas:

**1. Leadership in Managing Flood Risk:** The District drives to be a leader in the field of Flood Risk Management. This year, we published our first Hydraulic Design Manual in an effort to modernize and standardize the hydraulic analyses that are used by public and private engineers. In FY 2024-25, we will be partnering with the California Geological Survey to proactively identify and map areas of elevated debris flow risk within Riverside County to assist with prioritizing and managing future post-fire runoff risks to our communities. We are also proud of our partnership with the US Army Corps of Engineers to construct the \$54 million Phase 2B of the Murrieta Creek Flood Control, Environmental Restoration and Recreation project starting in FY 2024-25.

**2. Infrastructure Maintenance and Improvement:** We continue to prioritize the maintenance and improvement of our infrastructure to ensure its reliability and effectiveness in mitigating flood risks. Key achievements include the completion of the modernization of the Woodcrest Dam in FY 2023-24 and the pending advertisement of the Sycamore Dam modernization contract in FY 2024-25.

**3. Water Conservation Initiatives:** Recognizing the importance of enhancing local water supplies, we have partnered on various stormwater conservation initiatives. Our efforts include the first full year of operation of the Bautista and Beaumont Line 16 Recharge

Facilities, and our pending investment in the Calimesa Channel Recharge Basin in FY 2024-25 in partnership with the City of Calimesa and South Mesa Water Company.

**4. Environmental Stewardship:** We remain committed to preserving and enhancing the natural environment within Riverside County. Through collaborative partnerships and sustainable practices, we have worked to protect sensitive ecosystems, restore habitat and promote biodiversity in our region through projects like our ongoing effort to secure and restore floodplain in the Temescal Valley, and projects to improve water quality in the Santa Ana River, Goldenstar Creek and the Santa Margarita River.

**5. Financial Stewardship:** We have maintained prudent financial management practices to ensure the efficient allocation of resources and the long-term sustainability of our operations. By adhering to strict budgetary controls and leveraging available funding sources, we have maximized the impact of our investments while minimizing financial risks. We just received our 32nd consecutive Annual Comprehensive Financial Report award for excellence in financial reporting.

Looking ahead, we remain committed to advancing our mission and serving the needs of the Riverside County community. By continuing to innovate, collaborate and adapt to evolving challenges, we are confident in our ability to build a more resilient and sustainable future for all.

Thank you for your continued support and partnership.

Very truly yours,



**Jason E. Uhley**  
General Manager / Chief Engineer





# VALUES



## INTEGRITY

Speak honestly and follow through. We make commitments responsibly and honor them. We will be fair and consistent in our actions.

## EXCELLENCE



We deliver outstanding results and exceed expectations. We are dedicated to providing high quality, appropriate, professional and timely service. We provide proactive and innovative solutions, to go beyond and ask “What more can we do?” We support continuous learning and embrace change as it will enable us to quickly and effectively adapt to community needs and expectations.



## TRANSPARENCY

Our actions will be visible and understandable. We will share ideas and information freely, and promote a culture of openness and transparency in all our work. We will facilitate access to information and actively engage the community, partner agencies and stakeholders in our decisions and initiatives.

## ACCOUNTABILITY

We are responsible for results. We set goals, measure how we’re doing and seek feedback. We continuously use that data to inform decision-making, recognize successes and learn from mistakes. Focusing on results promotes initiative, individual responsibility and team effectiveness.



## TEAMWORK

Shared purpose, shared values, shared achievement. Collaboration between staff, community stakeholders and partner agencies leads to better results. Effective teamwork builds on and reinforces the shared values of integrity, trust, transparency and accountability. We value an atmosphere of honest communication, respect, support and encouragement.

## TRUST

We count on each other and others can count on us. Our community trusts us to deliver results with their tax dollars. We are committed to a workplace where honest communication fosters collaboration, competency and character. By creating trust, delegation and shared responsibility follow; this is critical to delivering and ensuring staff development.





# BOARD OF SUPERVISORS

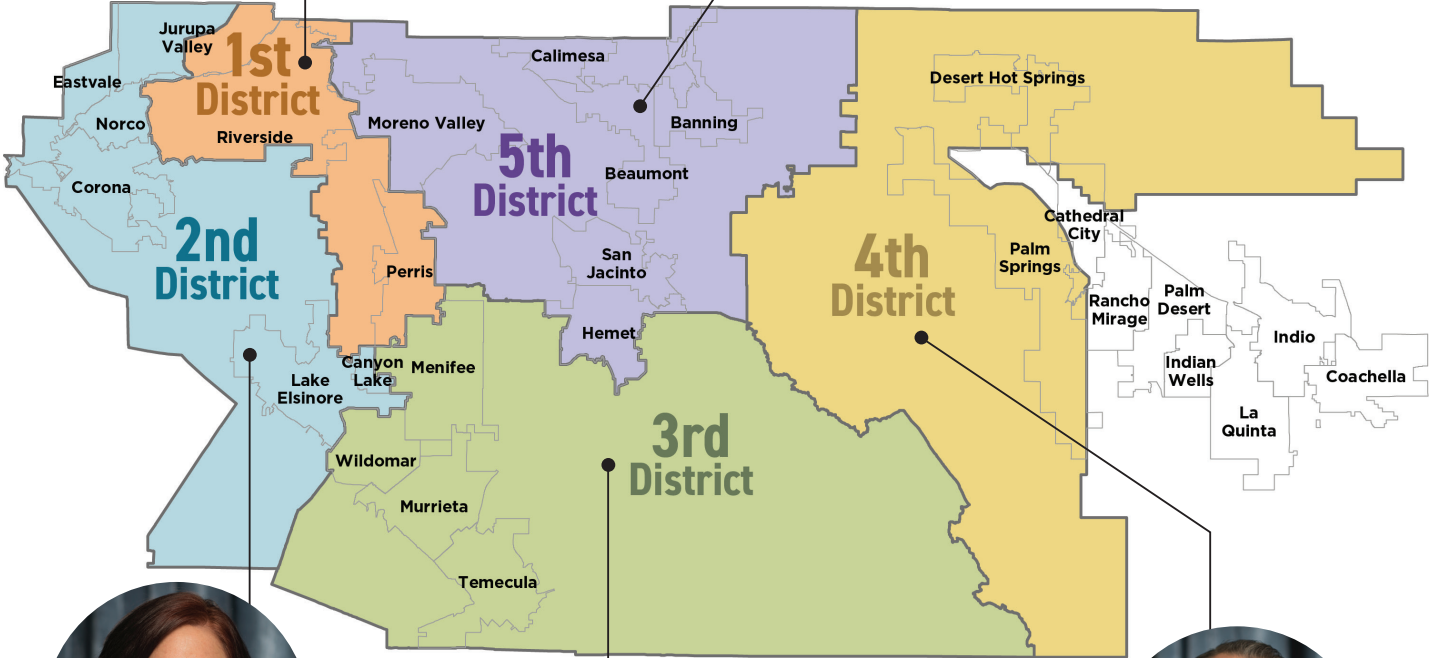
## RIVERSIDE COUNTY



**Kevin Jeffries**  
1st District



**Yxstian Gutierrez**  
5th District



**Karen Spiegel**  
2nd District



**Chuck Washington**  
3rd District



**V. Manuel Perez**  
4th District



# MANAGEMENT TEAM



## TOP ROW

**Rohini Mustafa**  
Chief of Planning

**Richard Boon**  
Chief of Watershed Protection

**Jim McNeill**  
Chief of Surveying & Mapping

**Darrylenn Prudholme-Brockington**  
Chief of Finance

**Jason Uhley**  
General Manager/Chief Engineer

## TOP ROW

**Joan Valle**  
Chief of Regulatory

**Albert Martinez**  
Chief of Developer Services

**Komy Ghods**  
Chief of Design

## BOTTOM ROW

**Beth DeHayes**  
Executive Assistant IV

**Edwin Quiñonez**  
Assistant Chief Engineer  
(Business Services)

**David Garcia**  
Chief of Construction & Maintenance

**John Carrillo**  
Chief of Watershed Analytics

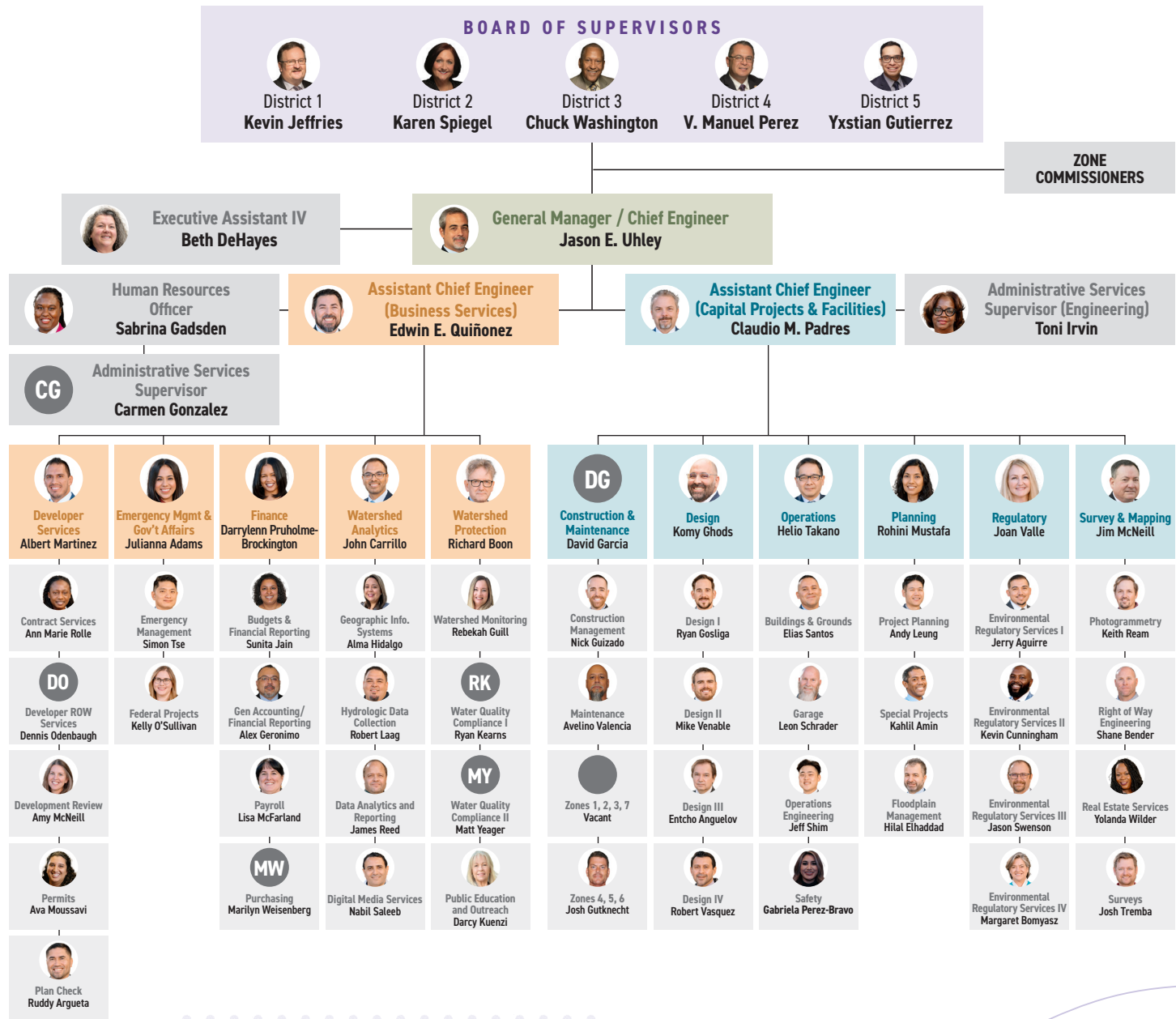
**Helio Takano**  
Chief of Operations

**Julianna Adams**  
Chief of Emergency Management &  
Government Affairs

## NOT PICTURED

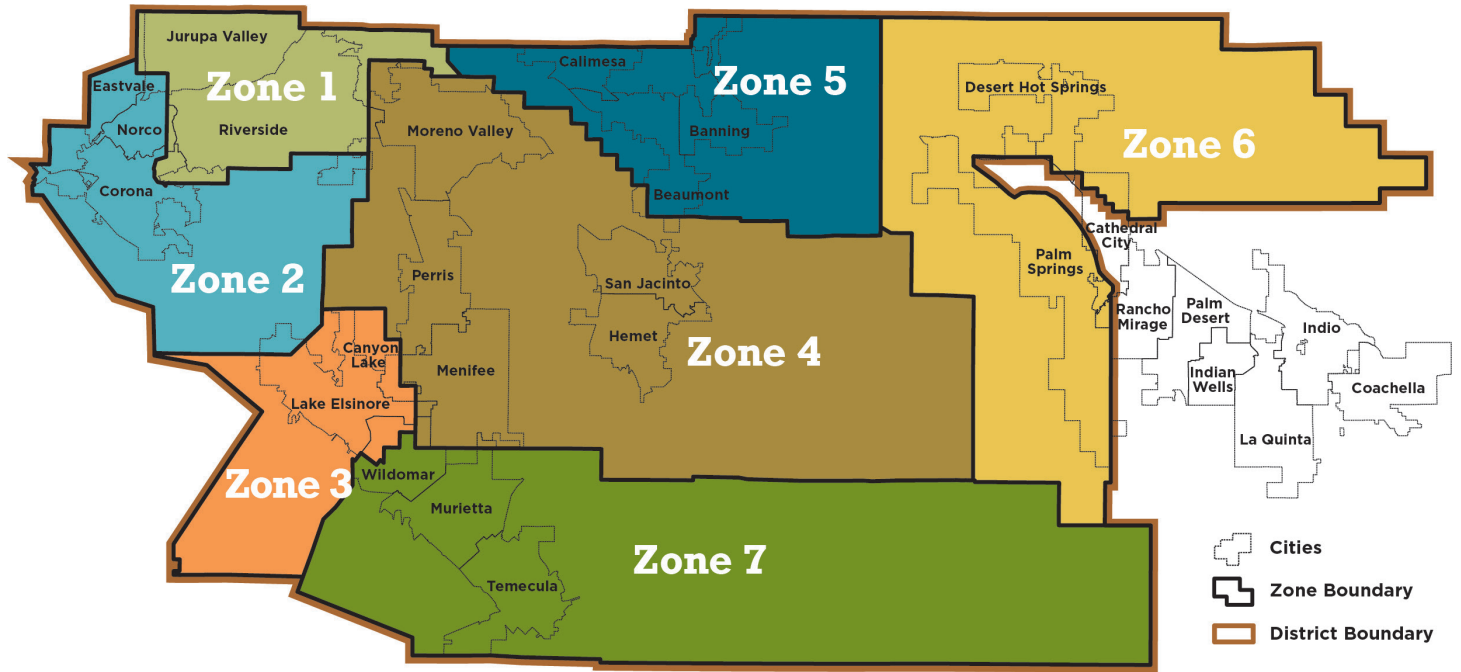
**Claudio Padres**  
Assistant Chief Engineer  
(Capital Projects & Facilities)

# ORGANIZATIONAL STRUCTURE





# ZONE COMMISSIONERS



## Zone 1

**Don Harriger** – 1<sup>st</sup> District  
**Chuck Krieger** – 2<sup>nd</sup> District  
**Sean Mill** – 1<sup>st</sup> District

## Zone 2

**Serena Burnett** – 2<sup>nd</sup> District  
**Baxter Miller** – 2<sup>nd</sup> District  
**Fred Myers** – 2<sup>nd</sup> District

## Zone 3

**Rich Bellante** – 2<sup>nd</sup> District  
**Barbara Dye** – 2<sup>nd</sup> District  
**Vacant** – 2<sup>nd</sup> District

## Zone 4

**Roy “Pete” Bleckert** – 5<sup>th</sup> District  
**Ken Graff** – 3<sup>rd</sup> District  
**Brad Scott** – 1<sup>st</sup> District

## Zone 5

**William “Bill” Davis** – 5<sup>th</sup> District  
**Debbie Franklin** – 5<sup>th</sup> District  
**Michael Valdivia** – 5<sup>th</sup> District

## Zone 6

**Ivan Sewell** – 4<sup>th</sup> District  
**Steven Stewart** – 4<sup>th</sup> District  
**Vacant** – 4<sup>th</sup> District

## Zone 7

**Erin Crouthers** – 3<sup>rd</sup> District  
**Vincent Scarpino** – 3<sup>rd</sup> District  
**Vacant** – 3<sup>rd</sup> District

# COMMUNITY LEADERSHIP > EVENTS > VOLUNTEERS

## PROTECTING OUR WATERSHED

Our primary objective is to safeguard the sustainability of the watershed, ensuring it remains free from pollution while fostering a community of dedicated water stewards. Our collective goal is to maintain waters within the Middle Santa Ana River Watershed that are safe for swimming, drinking and fishing.

In collaboration with Keep Riverside Clean & Beautiful, Riverside County Parks, Southern California Gas Company and CR&R Environmental Services, the District undertook a clean-up initiative that had a profound impact on one of Southern California's most extensive water systems. This effort not only helped preserve the ecosystem but also contributed to enhancing water quality, green spaces and flood control facilities in the region.



▲ This year's clean-up team!

## VOLUNTEER CHARITABLE EVENT COORDINATORS

### RIVERSIDE COUNTY EMPLOYEE CAMPAIGN

**Olivia Pearson and Enrique Del Cid** – District Coordinators

**Beth DeHayes and Ruth Goller** – Team Pink

As part of the Riverside County Employee Campaign, the District fundraises every October to support Breast Cancer Awareness. With the tremendous support of District staff, **over \$480 was raised for a local breast cancer resource center**, and a total of **over \$38,000 was raised for the Employee Campaign**, which benefits assorted charities in our communities.

### Additional Charitable Events & Coordinators

#### LifeStream Blood Drives

Beth DeHayes

#### Fill-A-Backpack School

#### Supply Drive

Rosa Lua and Jessica Bradley

#### Thanksgiving Food Drive

Melissa Munoz and  
Jessica Bradley

#### Snowflake Toy Drive

Melissa Munoz and  
Jessica Bradley

#### Youth In Government

Gracie Torres – Coordinator

11,360  
POUNDS OF  
TRASH

Trash Collected:  
**5.68 tons**  
(11,360 lbs.)

Graffiti Painted:  
**10,500 sq. ft.**

Gallons of Paint Used:  
**35 gallons**

339  
VOLUNTEERS

#DoBeautifulThings

During this year's event, a team of 339 volunteers were mobilized who were strategically positioned to actively gather litter and handle bulky waste. Simultaneously, their efforts were focused on eliminating the unsightly graffiti that has a negative impact on both the river and the communities nearby.





Our team painted over graffiti and cleared trash from riverbeds and waterways ▲

## LEADERSHIP IN OUR COMMUNITY

### National Association of Flood and Stormwater Management Agencies

Jason Uhley – Board of Directors, Secretary

Joan Valle – Flood Management Committee Co-Chair

### Riverside County Water Task Force

Jason Uhley – Vice-Chair

### Association of Environmental Professionals

Joan Valle – Legislative Committee

### Floodplain Management Association

Hilal Elhaddad – Southern California Public Director

### Western Municipal Water District

Gracie Torres – Member, Board of Directors

### California Stormwater Quality Association

Richard Boon – Treasurer, Director

Darcy Kuenzi – Legislative Co-Chair

### Southern California Water Coalition

Darcy Kuenzi – Legislative Taskforce & Stormwater Taskforce

### ALERT Users Group

Robert Laag – Treasurer

### Phi Sigma Rho

Ava Moussavi – Programming Director

## COMMUNITY INVOLVEMENT

### Inland SoCal United Way

Gracie Torres – 211+ Chair and Executive Committee Member

### SBVC GIS Industry Advisory Committee Member

Alma Hidalgo

### Adjunct Geography/GIS Faculty at San Bernardino Valley College

Alma Hidalgo

### Mount San Antonio College GIS Advisory Committee Member

Alma Hidalgo

### Cal Poly Pomona Department of Urban and Regional Planning Alumni Association

Kevin Cunningham – Vice President

### Association of Environmental Professionals, Inland Empire Chapter

John Kanlund – Vice President of Programs

### IEWORKS

Gracie Torres – Co-Founder/President

### Rubidoux Community Services District

Bernard Murphy – Board of Directors

### Center for Community Action and Environmental Justice

Gracie Torres – Board of Directors

### Hispanic Coalition for Small Businesses

Gracie Torres – Board of Directors

### Operation New Hope

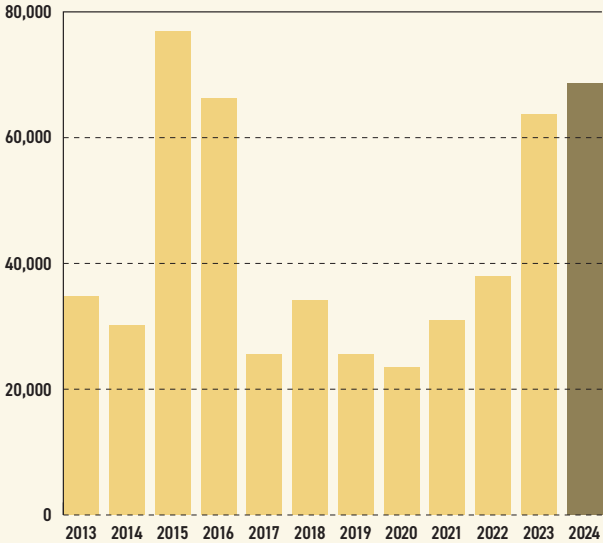
Gracie Torres – Board of Directors

### Riverside Alano Club

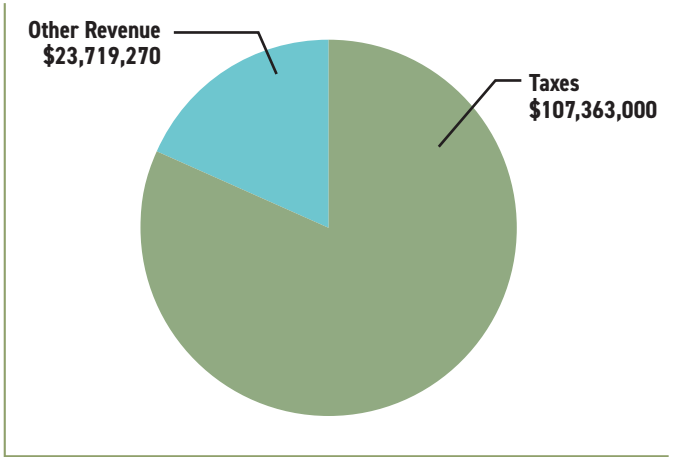
Bernard Murphy – Treasurer

# CIP FINANCIAL DASHBOARD 2023/2024

## CAPITAL PROJECT EXPENDITURES (\$1,000s)

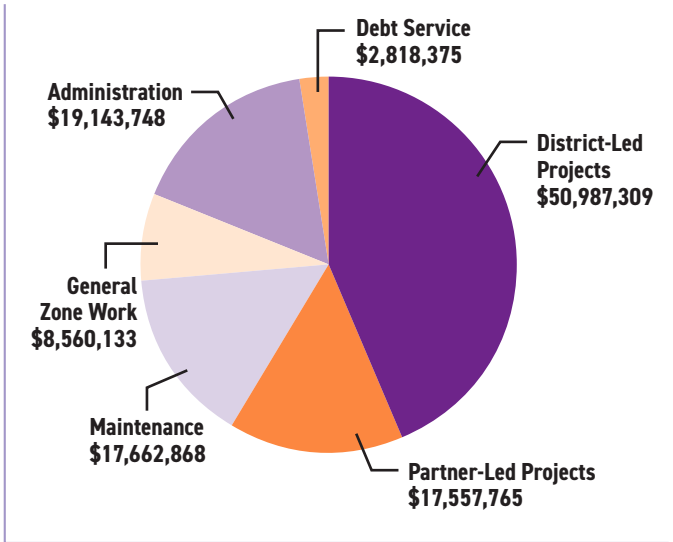


## ZONE REVENUE



**Total: \$131,082,270**

## ZONE EXPENSES



**Total: \$116,730,198**





# RAINFALL & RUNOFF

## RAINFALL AND RUNOFF

**Water Year 2024 (July 1, 2023 to June 30, 2024) marked a return to average conditions statewide, with nearly the entire state experiencing average to slightly above-average rainfall.** Southern California was affected in August by Post-Tropical Storm Hilary, which dropped a large amount of precipitation in the deserts, especially along the mountain slopes. Hilary started the water year off with above-average rainfall heading into the wet season. With the early rains from Hilary, and the expected El Niño conditions, Southern California appeared favorable to have a well above-average year. However, the fall started out very dry, and this, coupled with a fairly mild winter, made it apparent there wouldn't be any record setting totals. The coastal areas of Southern California, along with the LA Basin, had favorable atmospheric flow which led to above-average totals in those areas. The snowpack levels in the local mountains, as well as in the Sierras, were back to normal levels after the record-setting year before. The year concluded with the entire state being in good condition regarding water supply and in a drought-neutral stage.

During the winter season, four weak-to-moderate Atmospheric Rivers (AR) arrived in Southern California, which was similar to the five that occurred in 2023. This continued pattern made for very similar water years, with 2024 totals being slightly below the above-average totals of 2023. Drought conditions have been virtually nonexistent because of these consecutive years being average to above-average precipitation in Southern California and across the state.

**The snowpack, as of May 1, 2024, was 102% of the average compared to the prior year's 241%.** With two consecutive years of healthy snowpack, California's reservoirs have been at optimal levels, alleviating at least for now, the immediate worry about the state's water supply.

**The Statewide Reservoir Storage was 112% (i.e., ~23.8 million acre-feet) of the average through the end of September.** (Data Source: California Department of Water Resources)

## U.S. DROUGHT MONITOR CALIFORNIA (Sept. 2023 vs. Sept. 2024)

### Intensity:

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

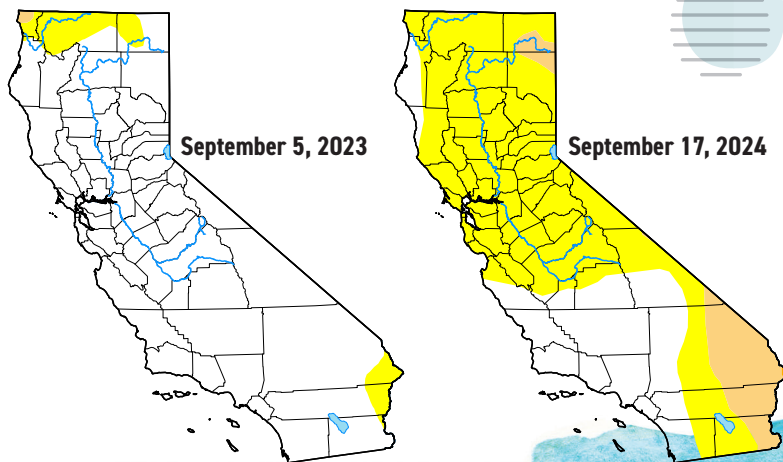
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

### Author:

Richard Tinker  
CPC/NOAA/NWS/NCEP



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

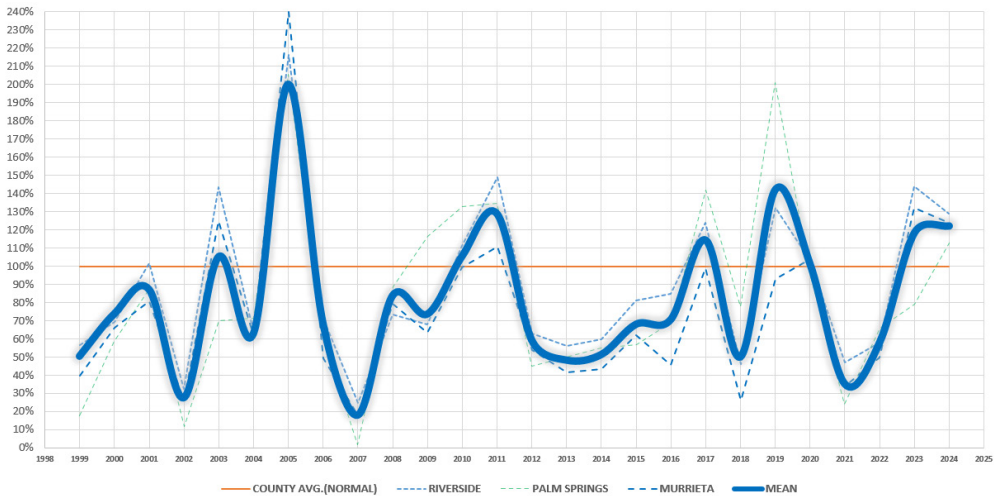


# RAINFALL & RUNOFF

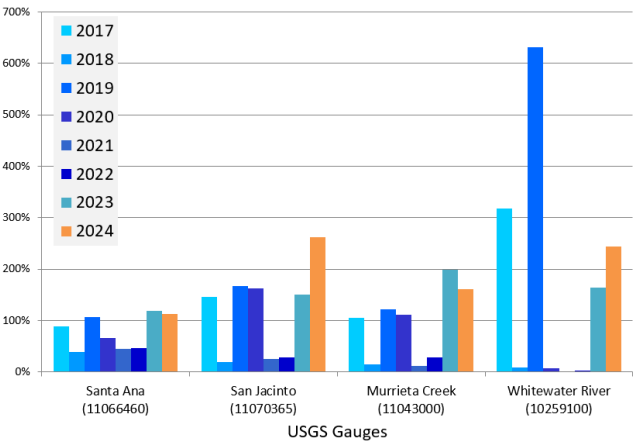
## PRECIPITATION

El Niño conditions in the Eastern Pacific during 2024 led many to believe it could be another stellar year for precipitation in Southern California. This year marked the second year in which Riverside County experienced an above-average year, with most areas receiving 120% or more of the normal average. The deserts, being the outlier, received only 90% of the average. It was a continuation of relief from dry conditions and provided a bit of a respite from the fires that Riverside County had recently experienced due to extremely dry vegetation.

1999-2024 Precipitation as a Percentage of the Average Year



WATER YEAR RUNOFF IN PERCENT OF AVERAGE



## RUNOFF

Throughout Riverside County, across all four watersheds, runoff continued to be above-average due to above-average rainfall and snowfall during winter 2024. The past year's runoff percentages show the recent persistence of drought patterns (e.g., dry years outnumber the wet years). A review of the graph to the left reveals that the County is experiencing what would be considered the "WhipLash" effect, with multiple years of low runoff followed by one year of significantly increased flows. The 2024 water year is the second year in a row in which all four watersheds exceeded their respective average flow. The figure to the left shows runoff as a percentage of the historical average during recent water years at four of the District's jointly funded USGS gauge stations: Santa Ana at the Metropolitan Water District crossing, San Jacinto River near Sun City, Murrieta Creek near Highway 79, and the Whitewater River at Rancho Mirage.



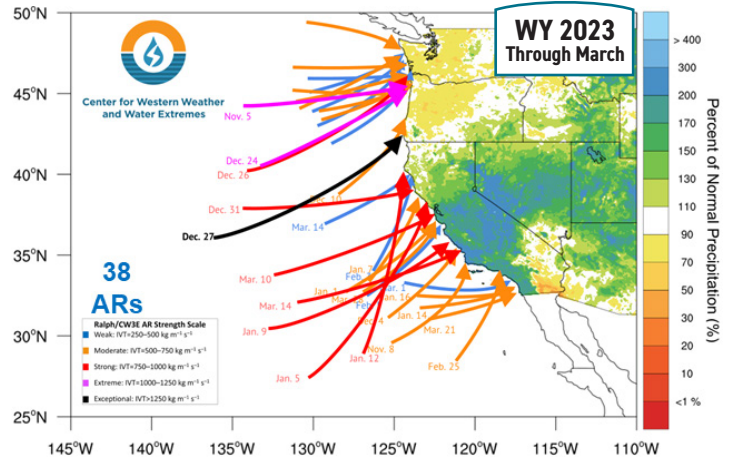
## ATMOSPHERIC RIVERS

**Definition:** An Atmospheric River (AR) is a long, narrow, and transient corridor of strong horizontal water vapor transport that is typically associated with a low-level jet stream ahead of the cold front of an extratropical cyclone.  
(Source: Center for Western Weather and Water Extremes)

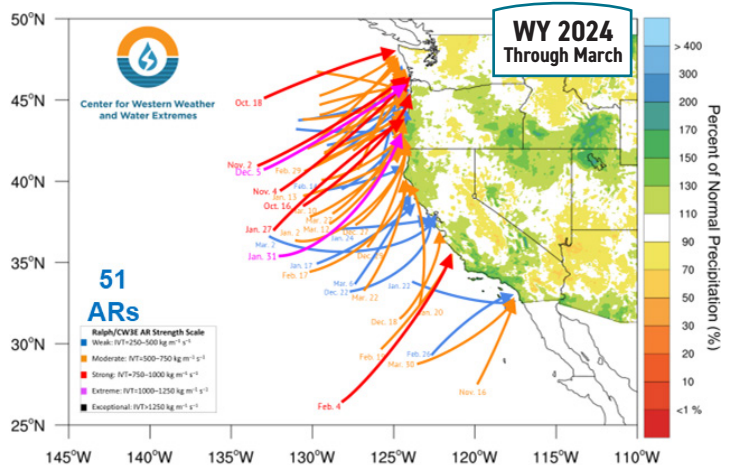
In recent years the term “atmospheric river” has been used in the news and other media outlets. It is evident that these phenomena are a sizable contributor of rainfall which would otherwise leave the West Coast much drier without them. It is important to realize that not every wet storm is attributed to an AR. In fact, less than 25% of storms that hit the West Coast are preceded by ARs. The fact that so few make landfall is interesting because in an average water year, 30% to 50% of the precipitation is attributed to ARs. Historically, nearly 80% of the years in which California has seen major storms and flooding, can be linked to Atmospheric River Events.

The figures on the right show the similarity in the number of ARs that contributed to the annual precipitation on the West Coast in the last two years. The rainfall totals for the 2024 winter season are similar, and in comparison, so are the number of ARs that directly affected southern California. A review of the graphs shows that, in 2024, the number of strong ARs increased but mainly impacted the Northwest. This left California in slightly drier conditions than in 2023, when the majority of strong ARs hit the state. The example of these two years reflects the fact that Atmospheric Rivers are directly connected to California's rainfall i.e., its water supply.

**Atmospheric River Events By Date & Strength  
Water Year 2023**

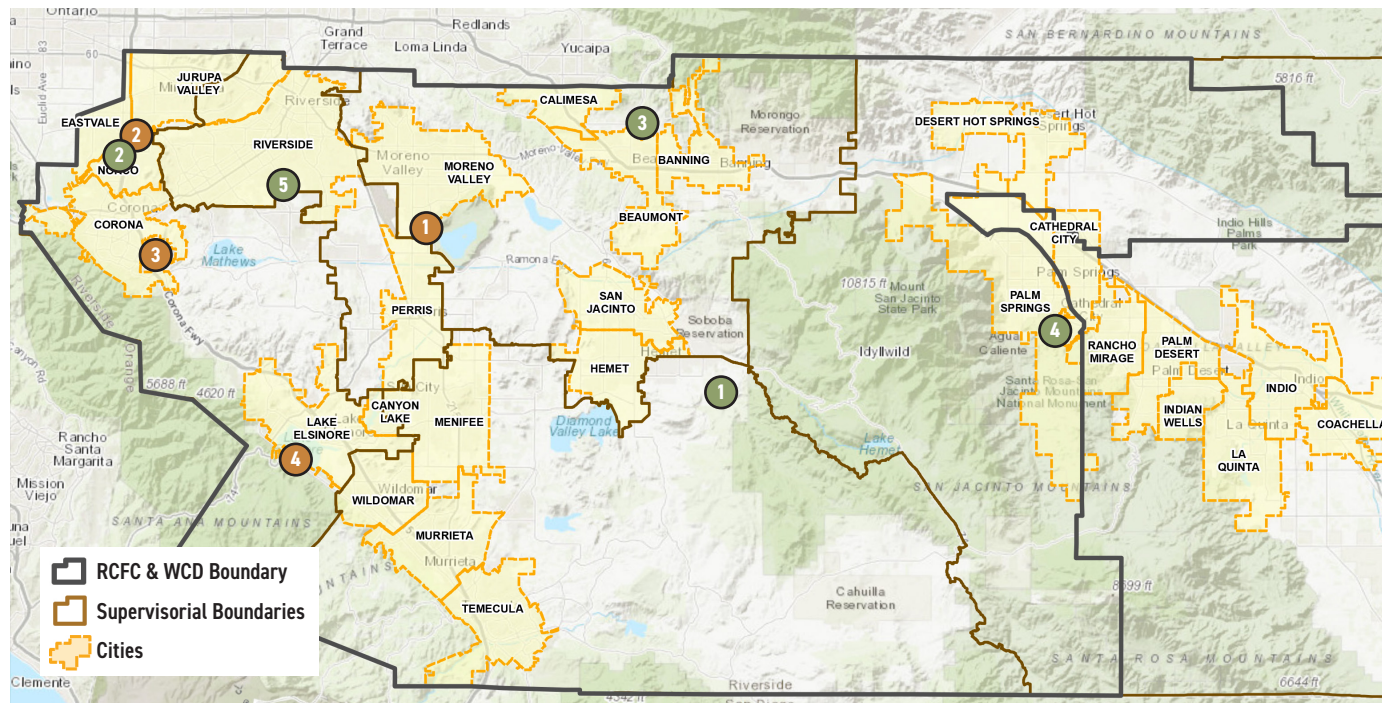


**Atmospheric River Events By Date & Strength  
Water Year 2024**



# CAPITAL PROJECTS *district*

## CIP PROJECTS BY SUPERVISORIAL DISTRICT FY 23/24



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), © OpenStreetMap contributors, and the GIS User Community.

### COMPLETED

- (1) Bautista Creek Channel, Basin-Sediment Removal, Stage 90
- (2) North Norco Channel Line NB, Stage 3
- (3) Beaumont MDP Line 16, Stage 50 Recharge Basin Feeder
- (4) Palm Springs MDP Line 41, Stage 3 and Stage 4
- (5) Woodcrest Dam Outlet Modification, Stage 90

### IN CONSTRUCTION

- (1) Perris Valley Channel Sediment Removal
- (2) North Norco Channel, Stage 11
- (3) El Cerrito Channel Restoration, Stage 90
- (4) Lakeland Village MDP Line H



## COMPLETED

**(1) Bautista Creek Channel Basin Sediment Removal, Stage 90:**

This was a District-led project that upgraded the safety and operation of Woodcrest Dam. The improvements included the replacement of the gate assembly and control system, replacement of the outlet structure with a new debris rack outlet structure to reduce clogging potential, and installed erosion control measures on the embankment slope.



▲ Bautista Creek Channel Basin Sediment Removal, Stage 90

**(2) North Norco Channel Line NB, Stage 3:** This District-led project replaced approximately 1,800 feet of existing interim earthen channel with an open concrete trapezoidal and rectangular channel that will provide 100-year flood protection to the community near the channel between Valley View Avenue and Sierra Avenue. The project now collects flows from the existing improved portion of Line NB upstream (east) of Valley View Avenue and convey them westerly in an upgraded channel until they are discharged into the existing North Norco Channel on the east side of Interstate 15. The project included the installation of a permeable paver lined invert at the downstream end of the project to promote infiltration of low flows.

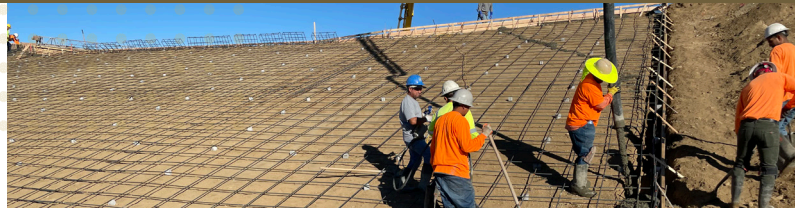


▲ North Norco Channel Line NB, Stage 3



# CAPITAL PROJECTS *district*

## COMPLETED



▲ Beaumont MDP Line 16

### (3) Beaumont MDP Line 16, Stage 50 Recharge Basin Feeder:

This District-led storm drain project featured water conservation elements and was a joint project with Beaumont-Cherry Valley Water District (BCVWD). The project consisted of 7,800 feet of pipe (54-inch to 84-inch) and recharge basin improvements. The primary objective of this project was to provide flood protection to residents near Grand Avenue in Cherry Valley and increase groundwater recharge within the project vicinity. Storm flows are generally collected in Bellflower Avenue, Winesap Avenue, Jonathan Avenue, Cherry Avenue, Nobel Street, and Grand Avenue and are safely conveyed westerly to an existing recharge basin owned and operated by BCVWD. Flows reaching the basins will help recharge the groundwater basin and become available for future pumping to meet the community's water needs.





**(4) Palm Springs MDP Line 41, Stage 3 and 4:**

- a. Stage 3 of the Line 41 system was a District-led project that installed approximately 5,450 feet of underground pipe ranging in size from 30-inch to 108-inch and constructed a 7-acre detention basin. The primary objective of this project was to remove the Federal Emergency Management Agency floodplain and provide 100-year flood protection to properties south of Highway 111 between Cherokee Way and Golf Club Drive. The project now collects flows at the Cherokee Way and Seminole Road intersection from the proposed Palm Springs MDP Line 41, Stage 4 project and convey them south easterly to the detention basin along Matthew Drive near Linden Way. Reduced flows exiting the basin are conveyed easterly along Highway 111 where they discharge into the existing Palm Springs MDP Line 41, Stage 2 storm drain system at Golf Club Drive.
- b. Stage 4 of the Line 41 system was a District-led storm drain improvement project that installed approximately 1,365 feet of 84-inch reinforced concrete pipe. The primary objective was to provide flood protection to residents located within the Safari Mobile Home Park and ultimately remove the existing Federal Emergency Management Agency floodplain by collecting runoff from the hills west of the community. The collected flows are conveyed easterly in the underground storm drain along Santa Monica Street until the flows reach the proposed Palm Springs MDP Line 41, Stage 3 system.

**(5) Woodcrest Dam Outlet Modification, Stage 90:**

This was a District-led project that upgraded the safety and operation of Woodcrest Dam. The improvements included the replacement of the gate assembly and control system, replacement of the outlet structure with a new debris rack outlet structure to reduce clogging potential, and installed erosion control measures on the embankment slope.



4



▲ Palm Springs MDP Line 41, Stage 3 and 4



# CAPITAL PROJECTS *district*

## IN CONSTRUCTION

### (1) Perris Valley Channel Sediment Removal:

Following a wetter than normal winter a significant amount of debris and sediment had washed into the segment of Perris Valley Channel between Laterals "A" and "B" and reduced the as-built capacity of the facility. The District awarded a contract to remove accumulated sediment and debris within the existing District-owned and maintained Perris Valley Channel between Laterals. "A" and "B". The project did not include any new construction and only returned the facility's capacity to as-built condition, improving its flood protection capability from its current state.

### (2) North Norco Channel, Stage 11:

This District-led project will replace an interim existing earthen channel with a higher capacity concrete-lined channel that can safely contain and convey the 100-year flow, thereby significantly reducing the floodplain along the channel. The mainline will include approximately 5,900 feet of trapezoidal and rectangular channel and will replace culverts under three street crossings (Corona Avenue, Valley View Avenue, and Sixth Street). Stage 11 collects flows from the existing North Norco Channel Line N-1 storm drain at the westerly end of Rose Court and conveys them southerly to the existing confluence with North Norco Channel Line NA northwest of Valley View Avenue and Fifth Street. The project will also construct two infiltration basins to reduce runoff pollutants from adjacent land.

### (3) El Cerrito Channel Restoration, Stage 90:

This District-led project replaces approximately 2,300 feet of existing concrete trapezoidal channel with higher capacity reinforced concrete box and concrete rectangular channel of varying dimensions. The primary objective is to provide 100-year flow capacity within the proposed facility and remove the existing Federal Emergency Management Agency (FEMA) floodplain. The project collects flows from two existing storm drain systems at the El Cerrito Road-Temescal Canyon Road/Ontario Avenue intersection and conveys the water northeasterly to Temescal Creek.



▲ El Cerrito Channel Restoration



3







3

**(4) Lakeland Village MDP Line H:** This is a District-led storm drain improvement project of approximately 6,123 feet of various size underground pipe and box storm drain and a 2- acre sediment basin. The project will provide flood protection to the residential area of Lakeland Village by capturing stormwater runoff from the Elsinore Mountains between Coleman Avenue and Landerville Boulevard and safely convey it in an underground storm drain along Cottrell Boulevard and Maiden Lane to Lake Elsinore. The existing Federal Emergency Management Agency (FEMA) floodplain will be removed following construction of this project, reducing flood insurance costs to property owners in the area. The sediment basin will help protect lake water quality by removing sediment and pollutants in runoff.

▼ Lakeland Village MDP Line H



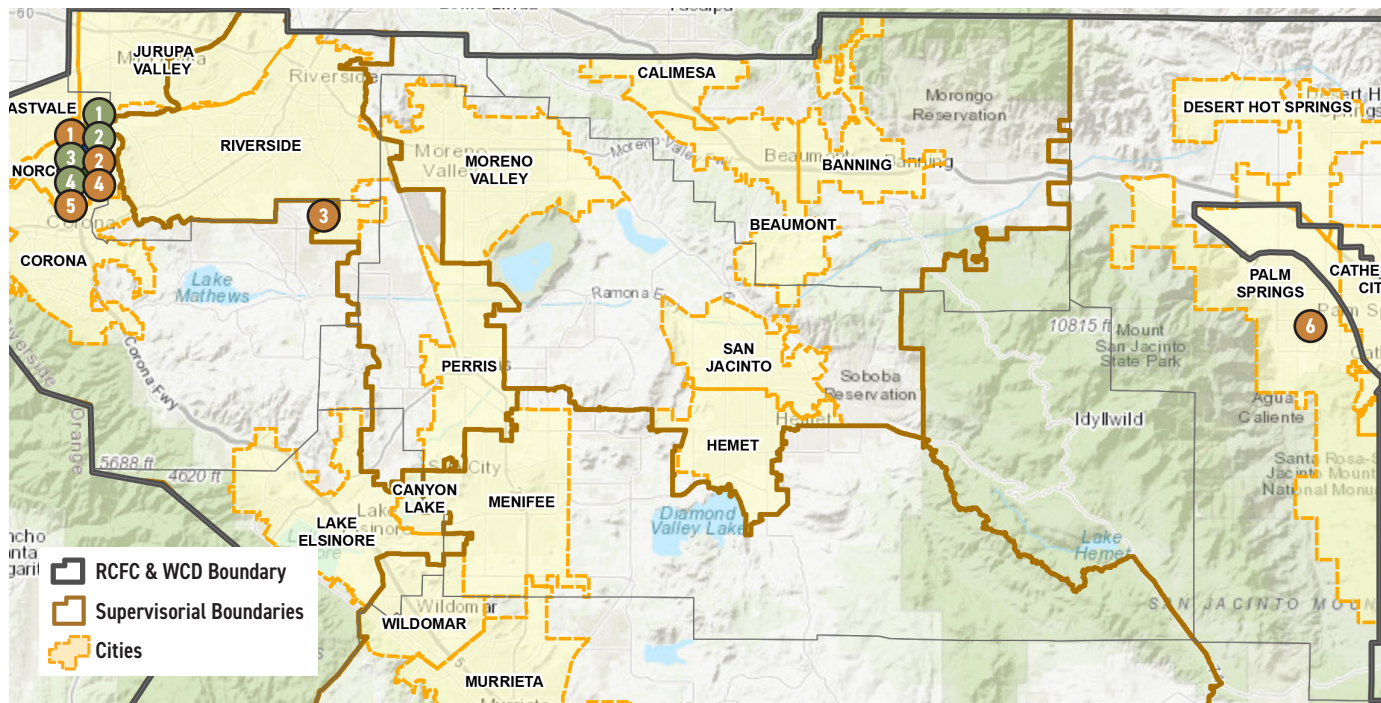
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# CAPITAL PROJECTS partner

## CIP PARTNER PROJECTS BY SUPERVISORIAL DISTRICT FY 23/24



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), © OpenStreetMap contributors, and the GIS User Community.

### COMPLETED

- (1) Norco Lateral N-1G
- (2) Norco MDP Line N-1C
- (3) Norco Elementary School Storm Drain
- (4) Norco MDP S-2

### IN CONSTRUCTION

- (1) Norco MDP Line N-4 Extension
- (2) Norco MDP Lateral N-5
- (3) Van Buren Sewer Improvement Project
- (4) Norco Lateral S-1B Extension
- (5) First Street Storm Drain
- (6) Palm Springs Line 20, Stage 3



## IN CONSTRUCTION

**(1) Norco MDP Line N-4 Extension:** This is a City of Norco-led project to construct 2,900 feet of storm drain ranging from 24 inches to 36 inches in diameter. The project will collect water along Valley View Avenue and 4th Street to convey it westerly toward Interstate 15, out-letting into the existing North Norco Channel. This project will reduce street and community flooding along 4th Street and Valley View Avenue.

**(2) Norco MDP Lateral N-5:** This City of Norco-led project will construct a master planned storm drain to provide flood protection to residences along Valley View Avenue. The project consists of approximately 2,600 feet of 30-inch to 42-inch diameter underground storm drain. The project will collect runoff along Valley View Avenue and convey it to the existing North Norco Channel at Third Street, west of Interstate 15.

**(3) Van Buren Sewer Improvement Project:** This is a District contribution to fund a joint project between the Riverside County Office of Economic Development and the City of Riverside Public Utilities (RPU) to extend the existing RPU sanitary sewer line within Van Buren Boulevard from Wood Road two miles westerly to King Avenue, including a sewer lift station on the northeast corner of Krameria Avenue and Washington Street. This project is anticipated to benefit surface water quality in the surrounding streams and rivers by bringing sewer service to a community that is currently on septic systems in a watershed that is known to have concerns about bacteria leaching into surface water runoff.

## COMPLETED

**(1) Norco Lateral N-1G:** This was a City of Norco-led project to reduce street flooding on California Avenue. The underground storm drain consisted of approximately 600 feet of 24-inch maximum diameter pipe to collect flows and convey them from north to south within California Avenue and outlet into the existing Line N-1 storm drain located within 7th Street.

**(2) Norco MDP Line N-1C:** Formerly known as Norco Lateral NA-8, this was a City of Norco (City)-led project that reduced street flooding on Pedley Avenue. The underground storm drain consisted of approximately 1,100 feet of 36-inch maximum diameter pipe to convey flows within Pedley Avenue south to the existing Norco MDP Line NA within 6th Street.

**(3) Norco Elementary School Storm Drain:** This was a City of Norco-led project to reduce street and community flooding. It consists of 1,500 feet of 24-inch to 36-inch storm drain pipe to collect flows along Temescal Avenue and Norco Elementary School and convey them to South Norco Channel Line SA.

**(4) Norco MDP Line S-2:** This was a City of Norco (City)-led project to provide flood protection to properties along Second Street. The project consisted of 30-inch to 48-inch reinforced concrete pipe from east of Temescal Avenue and conveys flows to the existing South Norco Channel, west of Corona Avenue.



# CAPITAL PROJECTS partner

## IN CONSTRUCTION

**(4) Norco Lateral S-1B Extension:** This is a City of Norco-led project to reduce street and community flooding. It consists of 600 feet of 30-inch diameter storm drain pipe within Golden West Lane to collect flows from the south end of the street and convey them north to an existing storm drain Line S-1.

**(5) First Street Storm Drain:** This is a City of Norco-led project to reduce street and community flooding. It consists of 900 feet of 30-inch diameter storm drain to collect flows within First Street and convey them west into an existing Interstate 15 Caltrans culvert.

**(6) Palm Springs Line 20, Stage 3:** The City of Palm Springs-led project proposes for construction of the 4,600 feet storm drain. The project will collect and convey flows from the intersection of Baristo Road and Farrell Drive and convey them south and east within Farrell Drive and Ramon Road where they will outlet into the existing District's Palm Springs Master Drainage Plan Line 20 storm drain. The project will alleviate the flooding affecting the streets and surrounding community.



## ACTIVE DESIGN PROJECTS



In addition to the **Completed** and **In-Construction** projects previously listed, the District is actively pursuing new projects in order to carry out our mission. There are two categories of projects that the District funds.

**District-Led projects** are projects that the District is designing and constructing.

**Partner-led projects** are projects led by local public agencies or federal agencies with District funding support.

The table lists the projects that were actively being designed in Fiscal Year 2023/2024.

ACTIVE DESIGN PROJECTS	CATEGORY	SUPERVISORAL DISTRICT	DISTRICT ZONE
Beaumont MDP Line 2, Stage 1	Partner	5	5
Bedford Canyon Channel	District	2	2
Box Springs MDP Line D	Partner	1	1
Butterfield Stage Road Storm Drain, Stage2	Partner	3	7
Calimesa Channel Stage 3	Partner	5	5
De Portola Drainage Channel	Partner	3	7
Good Hope-Olive Avenue Storm Drain	District	1	4
Green Acres Dam & Outlet	District	3	4
JCSD Recycled Water Distribution System	Partner	2	2
Lake Mathews - Cajalco Road Storm Drain	District	2	2
Lakeview-Nuevo MDP Laterals D and E	District	5	4
Little Lake MDP Line B, Stage 2	District	3	4
Marshall Creek, Stage 1	District	5	5
Mead Valley MDP Line A	District	1	4
Mockingbird Canyon Stabilization	District	2	2
Monroe MDP - Monroe Channel	Partner	1	1
Moreno MDP Line F-18	Partner	5	4
Murrieta Creek Channel Phase 2B (Channel)	Partner	3	7
Murrieta Creek Channel Phase 3 (Basin)	Partner	3	7
Norco Citation Drive Storm Drain	Partner	2	2
Norco Lateral S-1C Extension	Partner	2	2
Norco Lateral S-5E	Partner	2	2
Norco MDP Line N-3	Partner	2	2
Norco Minor Storm Drain Improvements Parkridge Avenue & North Drive	Partner	2	2
Norco North Drive & Grulla Storm Drain	Partner	2	2
Norco Town & Country Drive Storm Drain	Partner	2	2
Perris Valley Channel Lateral B, Stage 4	District	1	4
Romoland MDP Line A-3, Stages 4 & 5	District	3	4
San Sevaine - Dodd Street Storm Drain, Stage 1	District	2	1
Santa Ana River - Levee Rehabilitation (District Reach)	District	1	1
Smith Creek/Pershing Creek Study	District	5	5
South Norco Channel	Partner	2	2
Southwest Riverside MDP Line E-1 Stage 1	Partner	1	1
Sunnymead Indian Street Basin	District	5	4
Sunnymead MDP Line B-16A	Partner	5	4
Sunnyslope Channel Trash Retrofit, Stage 90	District	2	1
Sycamore Dam Outlet Modification	District	1	1
Temecula Creek - Morgan Valley Wash	District	3	7
Temecula Pechanga Creek Misc Slope Paving	District	3	7
Temescal Creek Flood Plain Acquisition	District	2	2
West Hemet MDP Line C, Stages 2 & 3	Partner	5	4
Whitewater River - Levee Restoration	District	4	6
Woodcrest - Rinehart Acres Drainage Plan Improvements	District	2	2



# TROPICAL STORM HILARY

On August 19, 2023, Tropical Storm Hilary brought unprecedented rainfall to Southern California, particularly to the eastern regions in Riverside County. The valleys experienced precipitation equivalent to a 10- to 50-year storm event, whereas the desert experienced precipitation up to the equivalent of a 1000-year storm event. The heavy rainfall led to widespread flooding and road closures. Riverside County showed its resilience shone through as emergency response efforts quickly shifted to recovery and rebuilding.

## WIDE CANYON

Wide Canyon Dam and Dike was constructed in 1966 to alleviate flood risks in the Desert Hot Springs Area by collecting surface runoff from West Wide Canyon and East Wide Canyon. The two watersheds confluence in a series of small basins that eventually flow into the main storage area behind the dam. While Wide Canyon Dam has not seen significant flows in recent years, heavy rainfall from Tropical Storm Hilary resulted Wide Canyon Dam performing as designed, detaining the heavy flows behind the dam to protect residents downstream.

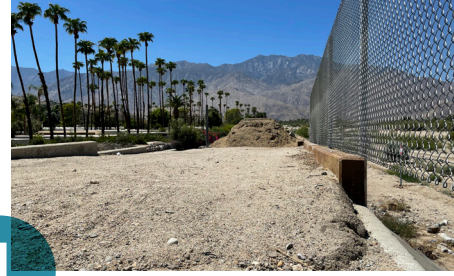




## (1) PALM CANYON WASH LEVEE

During Tropical Storm Hilary, flows from Gene Autry Trail and Palm Canyon Drive entered Palm Canyon Wash levee access road and eroded the backside of the levee. The District procured emergency inspection, soils testing, and construction services to reconstruct the levee. The scope of work included removing approximately 50-ft of the levee system, backfilling and compacting the earthen cross-section, reconstructing the concrete lining, and installing flap gates to improve local drainage into Palm Canyon Wash.

**Total cost of repair: \$214,819**



1

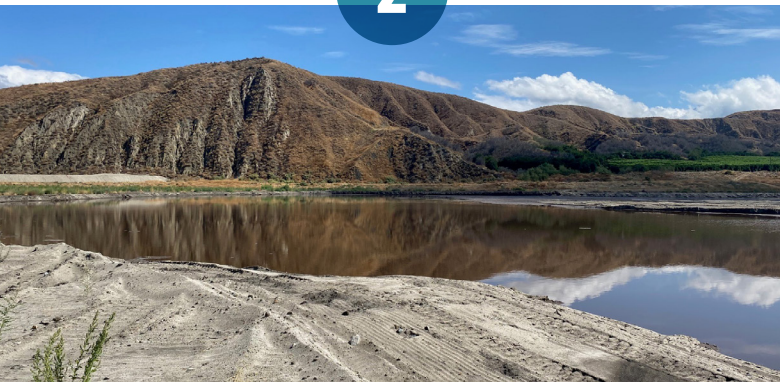


2

## (2) BAUTISTA CREEK CHANNEL BASIN SEDIMENT RESTORATION

An active construction project consisting of excavating and removing sediment from the project site to restore the facility to its original capacity. However, Tropical Storm Hilary introduced an additional 22,000 cubic yards of sediment into the project site. The emergency work for Bautista Creek Channel Basin Restoration included excavating, processing, and hauling the excess sediment offsite. Completion of the emergency work restored the project site to pre-storm conditions.

**Total cost of repair: \$21,525**





# TROPICAL STORM HILARY



▲ Palm Springs MDP Line, Stage 3

## (3) PALM SPRINGS MDP LINE 41, STAGE 3

An active construction project that included the recent completed construction of an earthen trapezoidal channel located adjacent to the heavily travelled Highway 111. Unfortunately, Tropical Storm Hilary significantly eroded approximately 1070 feet of the channel side slopes threatening to compromise the integrity of the highway. The District coordinated with Caltrans and mobilized our maintenance crews to fill in the eroded reaches and reestablish the grade of the earthen trapezoidal channel.

**Total cost of repair: \$31,307**

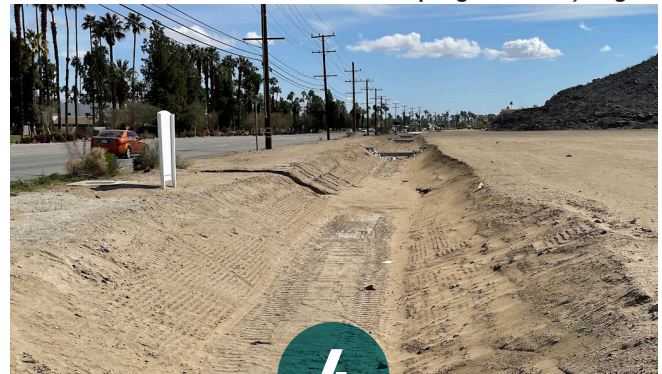
## (4) PALM SPRINGS MDP LINE 41, STAGE 4

An active construction project that includes the construction of a large inlet to an underground storm drain that, when completed, minimizes flooding impacts to the mobile home park located downstream. The Contractor took precautionary measures against to the threat of Tropical Storm Hilary by preparing the incomplete inlet to adequately convey the heavy storm runoff into the underground storm drain.

The Contractor restored the active project site to the pre-disaster condition by preparing the inlet, and excavating and hauling sediment accumulation, as well as reestablish grading for concrete structures and repairing the heavy side slope erosion of a nearby detention basin.

**Total cost of repair: \$18,219**

▼ Palm Springs MDP Line, Stage 4

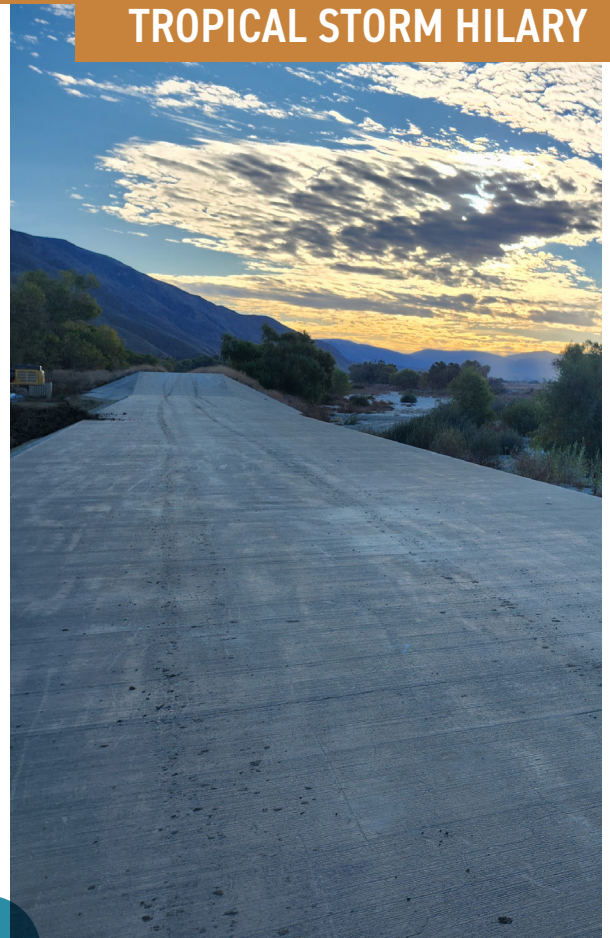




## (5) POTRERO CREEK DEBRIS BASIN RESTORATION

Capacity to this facility was recently restored in November 2022 as a capital improvement project. However, heavy flows from Tropical Storm Hilary deposited an estimated 28,000 cubic yards into the facility, consequently decreasing the overall capacity of the basin and increasing the risk of future storm events overtopping the basin spillway and damaging the adjacent channel and levee system. The District-led emergency project removed the accumulated sediment and restored the facility to pre-storm capacity.

**Total cost of repair: \$794,435**



5



# TROPICAL STORM HILARY

## (6) TAHQUITZ DAM RESTORATION

Tropical Storm Hilary deposited a substantial amount of sediment, decreased the dam's capacity, and caused flows to overtop the spillway. The District mobilized our maintenance crews to excavate the estimated 15,000 cubic yards of accumulated sediment and restore the original capacity of the dam. The District procured hauling services from a Contractor with a nearby active construction site.

**Total cost of repair: \$397,156**



6





# DISTRICT HIGHLIGHTS

## EMERGENCY MANAGEMENT & GOVERNMENT AFFAIRS



### EMERGENCY MANAGEMENT

#### Upper Norco Bluffs

The Santa Ana River Upper Norco Bluffs Project, originally constructed in 2003 by the U.S. Army Corps of Engineers (Corps), was designed to protect homes along River Road from bluff erosion caused by the Santa Ana River. Following a significant storm in early 2024, a bluff behind the stabilization project began eroding from the top, threatening the project and River Drive. The City of Norco contacted the California Office of Emergency Services (CalOES), Riverside County Emergency Management Department (EMD), the Corps, and the Riverside County Flood Control and Water Conservation District (District) for assistance. After an assessment by local, state, and federal agencies, and with the support of Congressman Ken Calvert, the Corps allocated \$3 million in emergency funding, with the District providing an additional \$1 million, to stabilize the eroding hillslope.

The emergency repair efforts are critical to further stabilizing the bluffs and ensuring long-term protection for the local community. The project will be completed in two phases. Phase 1, which has already been completed, focused on clearing debris from existing drainage features to improve water flow. Phase 2, set to begin after the groundbreaking, will concentrate on repairing the eroded bluff and reinforcing essential structures to better manage runoff down the bluffs. The project is scheduled for completion by December 2024.





# DISTRICT HIGHLIGHTS



▲ Murrieta Creek Phases 1 & 2A through Old Town Temecula

## FEDERAL PROJECTS - ACCOMPLISHMENTS

### Murrieta Creek

The continued partnership between the District and the U.S. Army Corps of Engineers resulted in a notable milestone in the development of Phase 2B. Thanks to funding levels provided by Congress, the Corps received \$39,334,000 in FY24 funding for Phase 2B. This project benchmark exemplifies the type of collaboration between Congressional leaders, the Corps, and the District necessary for Federal projects like this one. This Federal funding would not be possible without the hard work of the late Senator Dianne Feinstein, Senator Laphonza Butler, Senator Alex Padilla, Representative Ken Calvert, and Representative Darrell Issa.

With the Federal contribution, the Corps initiated work to award a construction contract, and the District continues to take the steps it needs to as the local sponsor to clear the way for construction advertisement this calendar year. Since Phases 1 and 2A have completed construction, construction of Phase 2B will substantially complete the channel construction downstream of the Phase 3 basin site within the City of Temecula. Phase 2B will provide mostly 50-year level protection once constructed, which will be increased to 100-year level protection when the Phase 3 basin is constructed.



### Santa Ana River Levee

Construction of the U.S. Army Corps of Engineers-led project began in September 2022 and will rehabilitate approximately 13,000 linear feet of damaged portions of the federally constructed reach of the Santa Ana River levee system. Due to unforeseen dewatering issues in 2023, construction was paused, and the project was redesigned. Levee rehabilitation will include replacing and grouting the existing levee rock slope protection and the protection of the existing levee toe using launchable stone. The project is expected to take approximately six years to complete.

◀ Santa Ana River Levee



## DISTRICT HIGHLIGHTS



## GOVERNMENT AFFAIRS

The District and the Beaumont – Cherry Valley Water District (BCVWD) celebrated completion of the Beaumont Line 16 Water Conservation and Flood Protection Project, a pioneering storm drain that conserves water and safeguards against flooding through innovative water capture mechanisms. This unique combination of pipes and enhancements to recharge basins will capture enough stormwater to supply up to 900 families a year, while also minimizing flooding in a portion of Cherry Valley.

In recognition of this truly remarkable project, the District and BCVWD held a ribbon-cutting ceremony featuring community leaders and stakeholders representing the wide array of interests that made this project a success. The event celebrated the collaboration that leveraged the expertise of both the District and BCVWD for the benefit of the communities both agencies serve.





## DISTRICT HIGHLIGHTS

### FINANCE DIVISION

**The Finance Division is responsible for the control of all financial activities of the District. Our division consists of Accounts Payable, Accounts Receivable, Budgets, Financial Reporting, Payroll, and Purchasing. We strive to provide excellent fiscal support, oversight, and internal control to ensure proper fiscal management, budgeting, and financial reporting.**



The Finance Division provides timely and useful financial information for decision-making through reports such as the District's Annual Budget and the Annual Comprehensive Financial Report (ACFR).

For the fiscal year ended June 30, 2023, the Finance Division was awarded their 33rd consecutive Certificate of Achievement for Excellence in Financial Reporting for the Annual Comprehensive Financial Report (ACFR) from the Government Finance Officers Association (GFOA). This is the highest form of recognition in the area of governmental accounting and financial reporting, and its attainment represents a significant accomplishment by a government and its management.

The Finance Division was also awarded the Distinguished Budget Presentation Award from the GFOA for the District's FY23/24 Annual Budget. This was the District's first time applying for the award program and marks the first win for the award. The Distinguished Budget Presentation Award is evidence of the District's ability to produce a high-quality budget document that reflects both the guidelines established by the National Advisory Council on State and Local Budgeting and the GFOA's best practices on budgeting. The District's budget document excels as a policy document, financial plan, operations guide, and communication tool for Riverside County citizens.

### ENVIRONMENTAL PROTECTION

**The Regulatory Division develops compliance strategies that balance protecting the natural environment with protecting our residents and businesses from stormwater.**

The Regulatory Division oversees the District's compliance with applicable environmental laws such as CEQA, FESA, CESA, Porter Cologne, California Fish and Game Code, Clean Water Act Sections 401 and 404, and the Western Riverside County and the Coachella Valley Multiple Species Habitat Conservation Plans.

The Regulatory Division provides support for most District actions such as constructing new flood control facilities, maintaining existing facilities, developing master drainage plans, and issuing encroachment permits to developers or other public agencies. In the past year the Regulatory Division:

- ▶ Led and managed the environmental review process and negotiated the regulatory permits for the Woodcrest Rinehart interdepartmental infrastructure project. The District and the Riverside County Transportation Department have teamed up to provide flood protection and a new roadway configuration to this traditionally underserved community. The interdepartmental partnership provides an economy of scale saving the County time, money and staff resources.
- ▶ Worked closely with the Rivers and Land Conservancy, USFWS, and CDFW to establish a conservation easement over a portion of Palm Canyon Wash. The conservation easement is somewhat unique in that it allows for the District to operate and maintain the conserved lands. This is a relatively new approach in that the Wildlife Agencies do not typically allow for any maintenance within a conservation area. However, the District's track record and strategic and creative approach has proven successful for the coexistence of both stormwater management and habitat protection.

- ▶ Completed the effort with the USFWS to finalize the Programmatic Biological Opinion (PBO) for the federally endangered Casey's June Beetle (CJB). The CJB is limited to a 600-acre range primarily within Palm Canyon Wash and Tahquitz Creek. The PBO is a habitat protection plan that will allow the District to conduct maintenance within Palm Canyon Wash for 30+ years! The District has received recognition throughout the industry for securing the PBO in record time.
- ▶ Managed the regulatory compliance and demolition of multiple structures within a 12-acre property within the Temescal Floodplain Buyout area. The site contained multiple structures that were deemed unsafe for use and occupancy. The demolition of the dilapidated structures was highly time sensitive and required substantial coordination with multiple stakeholders and various County agencies.
- ▶ Secured and managed the permits for the emergency response to Tropical Storm Hillary for Mission Creek, Tahquitz Dam, and Potrero Basin.
- ▶ Created a new section dedicated to supporting the District's Development Services Division, which oversees the development community's flood control infrastructure, including plan checks, agreements and encroachment permits.



### FEATURED PROJECT

The Regulatory Division has been working closely with several of our local Cities, including Moreno Valley, Norco and Calimesa, to ensure that our Project Partners are being good stewards of the environment on behalf of the District. Thru these partnerships, the Regulatory Division reviews the technical studies, CEQA document and the Regulatory permits prepared by the Cities and their consultants. The close collaboration between agencies ensures adequate scope and analysis of potential environmental impacts, and that mitigation measures and permit conditions are applicable, effective and feasible for both construction and maintenance.





# DISTRICT HIGHLIGHTS

## PLANNING DIVISION

The District's Planning Division includes Floodplain Management Section (FPM), Project Planning Section and Special Projects Section.

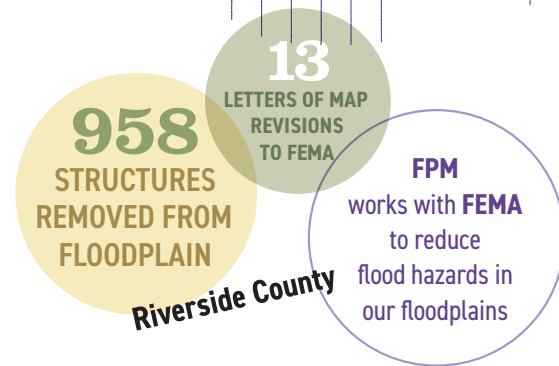
### FLOODPLAIN MANAGEMENT

FPM implements the National Flood Insurance Program through County Ordinance No. 458. FPM prepares floodplain maps and coordinates with the Federal Emergency Management Agency (FEMA) to remove Special Flood Hazard Area designations when stormwater management structures are constructed that reduce flood hazards. FPM works hard to update and revise the floodplains to benefit County residents in multiple ways. This fiscal year FPM submitted 13 Letters of Map Revision (LOMR) to FEMA and 9 previously submitted LOMRs approved. These efforts resulted in the removal of 958 structures, 529 parcels, and 1051 acres of harmful floodplain. FPM's efforts also aid in the County's economic development by formally reducing regulated floodplains.

In addition, FPM currently maintains a Community Rating System (CRS) Level 6 on behalf of Riverside County which provides residents within unincorporated Riverside County a 20% discount on flood insurance premiums via FEMA's NFIP CRS program. The CRS program provides discount for residents located within a community such as Riverside County that goes above and beyond the minimum floodplain requirements.

### PROJECT PLANNING

Project Planning prepares Master Drainage Plans and associated Area Drainage fees. Project Planning assists in the District's budget hearing/workshop process for requested projects. They also handle flood complaints. Master Drainage Plans currently being updated include Northside Specific Plan (western boundary of University MDP), Jurupa Valley (combine Jurupa-Pyrite and Glen Avon), Hemet Valley (combine Hemet, W. Hemet and S.W.

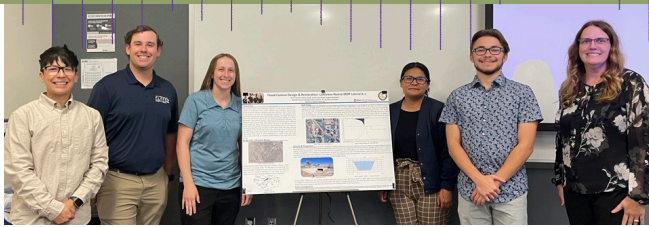


Hemet), Good Hope and West Desert Hot Springs. For Northside Specific Plan, the District and City of Riverside are collaborating to look for alternatives to increase Highgrove channel capacity and improve the inlet within the existing right of way. To align with the proposed Winchester Community Plan, the District is looking for alternatives including upsizing existing Hemet Channel in the Hemet Vally MDP to carry flows and amending the contract with city of Hemet to pay toward updates and environmental analysis costs. For Good Hope, the District is assessing feasibility of the proposed facilities based on geotechnical assessment as the area has bedrock. Project Planning addressed 112 flood complaint inquiries during this reporting period. Project Planning is also preparing design plans for culvert project for Transportation to help alleviate flooding concerns for the community that uses Hostettler Road as its major commute path.

Project Planning has also assisted as advisors for the Cal Baptist University (CBU) Capstone Project. Planning staff guided CBU students to develop a drainage study and preliminary plans for the District's Lakeview-Nuevo Lateral A project. The Capstone project presentation was held on April 15 at the CBU campus where the District was in attendance and support of the student project.

#### ▼ Mead Valley resident site visit





## SPECIAL PROJECTS

Special Projects partners with other agencies and developers to design and construct drainage facilities, water quality, and water conservation projects. Special Projects manages partnered projects which are projects led by local public agencies with District funding support. Currently, Special Projects is managing 91 such projects actively – 85% of which are to resolve drainage issues, and 15% are for improving water quality and promote water conservation. The District considers 42 of those projects to be regional flood control projects and plans to operate and maintain them. The District will contribute funds to the lead agencies for the remainder projects. In addition, Special Projects assists Design by preparing project charters which will identify project goals, objectives, and potential alternatives.

On June 4, 2024, Jurupa Community Services District, one of the District's partners, held a groundbreaking ceremony to mark the start of construction for the JCSD Regional Recycled Water Project. The project plans to deliver 350 million gallons of recycled water – enough to offset the local drinking water supply for more than 3,000 homes annually.

## DISTRICT HIGHLIGHTS



Maintenance team hard at work ▲

### MAINTENANCE



**101,823**

Cubic Yards of Sediment Removed



**239,550**

Square Feet of Graffiti Removed



**1,807**

Feet of New Fence Installed



**1713**

Locations of Fences Repaired



**71**

Miles Graded



**3,136**

Hours for Homeless Encampment Cleanup



**853**

Acres Mowed



# DISTRICT HIGHLIGHTS

## SURVEYING & MAPPING

The Surveying and Mapping Division is integral to Riverside County, ensuring precise land surveying and mapping services that support land development, infrastructure planning, and land-use regulation. Our work underpins the county's ability to maintain accurate land records and guide informed decision-making for the community's benefit.

### KEY ACHIEVEMENTS

#### Enhanced Geographic Information Systems (GIS)

- **GIS Infrastructure Upgrade:** We have refined our GIS Parcel Fabric Layer, significantly improving the county's asset management capabilities and data accessibility.
- **Interactive Web Maps:** We introduced interactive web maps for public use, providing residents and businesses with easy access to vital land information and spatial data.

#### Modernized Surveying Techniques

- **LIDAR Technology:** By implementing LiDAR technology, we have enhanced the accuracy and efficiency of land surveys, leading to greater precision in our work.
- **Drone Mapping:** The adoption of drone technology for aerial mapping has reduced both costs and survey time, while improving data accuracy and coverage.

#### Community Outreach

- **Enhanced Customer Service:** We've streamlined our customer service processes by leveraging digital data, which has led to faster and more efficient responses to land survey requests.
- **Real Estate Services:** Our RES section has conducted outreach programs to engage the community in property acquisition and development initiatives, promoting transparency and fostering community involvement.

- **Floodplain Protection:** We strategically acquired several parcels of land this year, positioning them for future floodplain protection efforts.

#### Projects and Initiatives

- **Parcel Boundary Mapping:** Ongoing efforts to update and maintain parcel boundary data have continued to improve the accuracy of land ownership information, facilitating smoother property transactions.
- **Floodplain/Debris Mapping:** We have enhanced our mapping efforts, bolstering flood risk assessments and disaster preparedness for the county's residents and agencies.



### TECHNOLOGY AND INNOVATION

Our Division continues to invest in state-of-the-art technologies, including GIS, LiDAR, and drone mapping, ensuring that we remain at the forefront of the industry. These innovations have cemented our reputation as a regional leader in land surveying and mapping.

### CHALLENGES AND MITIGATIONS

In 2023, we faced resource constraints and the ongoing need for staff training. To overcome these challenges, we implemented resource optimization strategies and expanded training programs to ensure our team remains skilled in the latest industry practices.

### FUTURE GOALS

Looking ahead, the Survey and Mapping Division is committed to:

- ▶ Expanding public access to land survey and mapping data through user-friendly online platforms.
- ▶ Enhancing disaster response capabilities by integrating real-time data updates into emergency management systems.
- ▶ Continuously improving the accuracy and timeliness of our surveying services.
- ▶ Fostering partnerships with academic institutions for research and development in geospatial technologies.
- ▶ Continuing to acquire strategic land parcels to support floodplain protection efforts.

Our Division remains dedicated to delivering high-quality land surveying and mapping services that support Riverside County's growth and development. We are committed to embracing innovation, fostering collaboration, and addressing the evolving needs of our community in the years ahead.





# DISTRICT HIGHLIGHTS

## WATERSHED PROTECTION DIVISION

The Watershed Protection Division (WPD) is a multidisciplinary team that works to reduce stormwater pollution in our waterways and thereby ensure District, County and city compliance with the state and federal permits that authorize municipal storm drain system operation.

### KEY ACHIEVEMENTS

- We provide Riverside County's municipalities with training, policy and programmatic guidance and technical expertise for watercourse protection and regulatory compliance;
- Regionally, we work closely with adjacent counties to advocate for an environmental regulatory framework that will enable sustainable compliance programs;
- At the watershed-scale, we collaborate with special districts to develop and implement multi-benefit water resource management projects;
- We coordinate closely with other District divisions, to collect, manage, and analyze chemical, meteorological and biological quality data and assess the condition of the County's streams, rivers, creeks and lakes;
- On our District's own campus, we research the efficacy of best practices for parcel-scale stormwater management, and
- We engage with our local communities to empower residents with information about pollution prevention and implement tactics that keep our watersheds healthy.



▲ WPD is working to reduce residential over-irrigation and backyard discharge



### Program Support

WPD has created a series of training modules that are available to District, County, and city staff through the County's on-line learning management system. The modules enable staff from across the region to remotely acquire the knowledge necessary to implement the environmental regulatory requirements associated with the municipal "stormwater mandate" including Construction Site Inspection - 454 attendees; Municipal Facility Inspection - 428 attendees; Inspecting Commercial and Industrial Sites - 71 attendees, and Preparing Project Water Quality Management Plans - 164 attendees.

### Representation And Regional Collaboration

Discharges from the region's municipal storm drain systems are authorized by National Pollutant Discharge Elimination System (NPDES) permits. In close coordination with San Bernardino and Orange counties, WPD commenced negotiations with the Santa Ana River Regional Water Quality Control Board (RWQCB) regarding NPDES permit renewal. Concurrently, permit renewal negotiations continued with the Colorado River RWQCB. The permits are anticipated to be adopted in early 2025.

Field staff dry weather sampling at Santa Ana River ▶



## Working At The Watershed Scale

A major focus of water quality protection efforts in the Santa Margarita River Watershed Management Area is reducing residential non stormwater discharges. WPD conducted continuous flow monitoring studies to monitor dry weather non-stormwater discharges from municipal outfalls. Follow-up investigations were targeted during higher flows “Sprinkler Spruce-Up” public education materials were provided to residences where residential dry weather runoff was observed. Since May 2022 through August 2024, 67 targeted outfall drainage investigations have been conducted, 268 residential sources identified and over 4,300 public education materials were distributed.

Protecting recreational beneficial uses is a priority of water quality management in the Middle Santa Ana River Watershed Management Area. Following the success of the Phoenix Storm Drain Dry Weather Flow Diversion Project, WPD has commenced additional outfall monitoring and consultation with several sanitation agencies and completed a dry weather flow abatement feasibility study. The study identifies additional opportunities for dry weather flow diversion, capture and treatment.

## Environmental Monitoring

District monitoring teams mobilized on fifteen (15) occasions for both dry and wet weather water quality monitoring across all three watersheds of the County.

Over 5,700 points of unique analytical and field data were generated and assessed, providing insights on surface water quality conditions across the County. Reports presenting detailed analyses of these data are now available online with summaries prepared for wider audiences (available here <https://rcwatershed.org/programs/monitoring>).

The District also actively participates in the Southern California Stormwater Monitoring Coalition (SMC). The SMC is a regional monitoring consortium of southern California agency members. This unique partnership of regulated and regulatory stormwater management agencies was formed to develop actionable solutions to regional stormwater management challenges.

More information on specific SMC projects and the Research Agenda is available here <https://socalsmc.org/research/>.

## Community Engagement

Administered in cooperation with the Western Riverside Council of Governments, the Love Your Neighborhood program is an “action-ready” stormwater pollution prevention initiative that aims to increase pollution awareness and its impact on the environment. It enables cities, community groups, and residents to conduct their own cleanup events to help minimize pollution in our watersheds. The program also helps obtain real-time data to track the number of pollutants removed from communities in support of stormwater mandates.





# DISTRICT HIGHLIGHTS

## DEVELOPER SERVICES

The District's Developer Services team includes Development Review, Plan Check, and Contract Services. Over the past year, this team has worked together to provide technical assistance to the County of Riverside and Cities with the review and approval of new development proposals.

**Development Review** staff reviewed over 290 entitlement case submittals including 135 new projects, answered over 1,350 inquiry calls, provided feedback on the District's interest of almost 500 development cases in incorporated cities, and reviewed approximately 320 submittals including 60 new projects to protect single family residential and accessory structures proposed in a floodplain.

**Plan Check** reviewed over 90 projects and approved 29 sets of Storm Drain Improvement Plans for proposed facilities to be maintained by the District. In addition, Plan Check reviewed, issued, and inspected about 47 encroachment permits for use, access, trails, and connections within District right of way. In addition, the team prepared the right of way documentation for acceptance for operation and maintenance of 81 developer-constructed projects over approximately 46 entitlement cases.

**Contract Services** prepared over 105 agreements, and successfully negotiated and executed 65 agreements this past year. Additionally, Contract Services issued 33 administrative clearances for developer projects and professional services. Contract Services also continues to collaborate with County Counsel to revise master agreement language to meet District business needs.

**290**  
Entitlement Case  
Submittals Reviewed  
by Development  
Review Staff

**29**  
Sets of  
Storm Drain  
Improvement Plans  
Approved

**105**  
Agreements  
Prepared  
by Contract  
Services

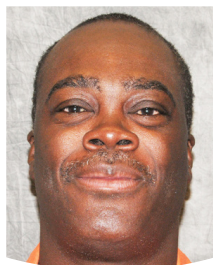
**81**  
Projects  
Accepted for  
Maintenance



# CELEBRATING SERVICE



**Jose Espinoza**  
Equipment  
Operator I  
**17 Years**



**Eugene Alls, Jr.**  
Equipment  
Operator II  
**21 Years**



**Christy Yu**  
IT Supervising  
Database Administrator  
**22 Years**



**Miguel Negrete**  
Operations and  
Maintenance Superintendent  
**29 Years**



**Edward Moore**  
Equipment  
Operator II  
**17 Years**



**Michael Picazo**  
Equipment  
Operator I  
**21 Years**



**Angel Salazar**  
Equipment  
Operator I  
**23 Years**



**Deborah de Chambeau**  
Chief of  
Planning Division  
**14 Years**

## IN MEMORIAM



**HECTOR VALDEZ**  
**(11/17/23)**

Hector Valdez started at the District in 1992 as a Garage Attendant and retired in 2022 as an Equipment Operator II. Hector's tremendous experience and consistently good attitude made him invaluable to the maintenance team and he will be missed.





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▲ Potrero Creek Debris Basin



**Riverside County Flood Control And Water Conservation District**

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