

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

**FY 2021/2022**

# Annual Report





# 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.

# Contents

Message from the Chief Engineer	02
Values	03
Districts of The Riverside County Board of Supervisors	04
Management Team	05
Organizational Structure	06
Zone Commissioners	07
Community Contribution & Leadership	08
Financial Dashboard	10
Rainfall & Runoff	11
Capital Projects Overview	16
Capital Projects Completed	17
Capital Projects In Construction	19
Active Design Projects	22
District Highlights	23
Celebrating Service	31
FEMA Recognition	32
In Memoriam	33

Workers at Lakeland Village MDP Line H





# Message

From The General Manager | Chief Engineer

I would just like to lead off by thanking our staff for doing an incredible job of delivering projects and protecting our communities, while also adjusting to unprecedented challenges caused by COVID-19 and the changing economy.

Despite the challenges, we had an incredible year. The District prepared for and responded to the damaging mud flows from the second year of the Apple/El Dorado Fires. The County's floodplain management program was recognized by the Federal Emergency Management Agency (FEMA) as ranking in the top 1% nationally. That recognition by FEMA, as part of their Community Rating System program, demonstrates the proven effectiveness of our stormwater management programs and rewards our unincorporated county residents with 20% discounts on their federal flood insurance premiums. The District also received its thirtieth consecutive Certificate for Achievement in Excellence in Financial Reporting from the Government Finance Officers Association. We had ribbon cuttings for two important federal projects: the \$120 million Santa Ana River BNSF Bridge Protection Project downstream of Prado Dam in Corona, and the \$25 million Murrieta Creek Flood Control, Environmental Restoration and Recreation Project, Phase 2A.

The District is not done facing challenges though. The impacts of the COVID-19 pandemic on the availability of construction workers, construction materials, and inflation are impacting our project costs and schedules. Recent bids have been up to 30% over our historic averages for similar work. We are also not immune from the increased mobility and opportunities for our workforce and the impacts of the 'Great Retirement'. At the same time, there is a significant increase in available

infrastructure funding, truly a once-in-a-generation opportunity, that we must leverage to the benefit of our communities.

To address these issues, the District is working with staff to build and reinforce our team-based culture, we are in the process of reorganizing our workforce to maximize project delivery, and we are continuing to develop strong mentoring and training programs necessary to build and retain an industry-leading workforce. We are also working closely with our state and federal legislators to leverage federal infrastructure funding for important projects, including the Murrieta Creek Phase 2B project and the Santa Ana River Levees, Phase 2 project. Finally, we continue to work with our sister agencies to build partnerships that can help deliver projects faster.

We are incredibly proud of our staff and their commitment to pursue the District's mission with integrity, excellence, and teamwork. I'd like to close by thanking the Board for their continued support of our mission and our teams. We look forward to demonstrating our commitment to delivering safe, sustainable, and livable communities through the effective management of stormwater in the year ahead.

Very truly yours,



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



**JASON E. UHLEY**

# 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.



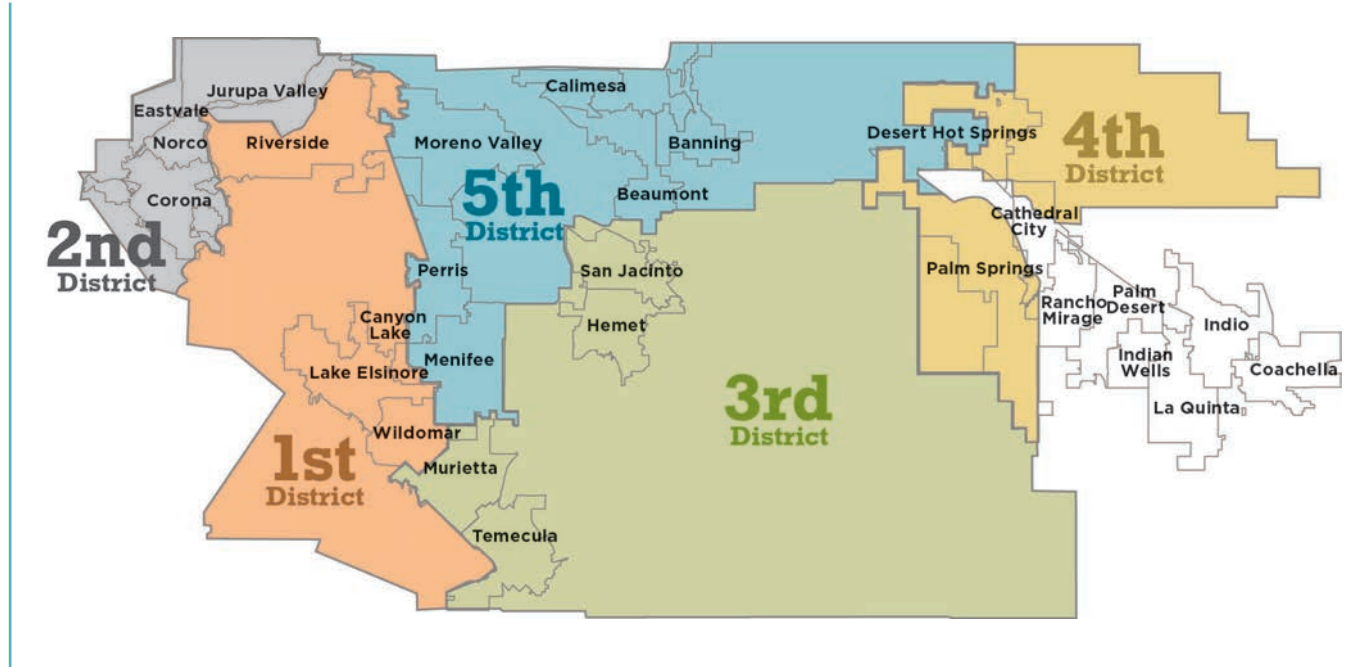
## TEAMWORK

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.

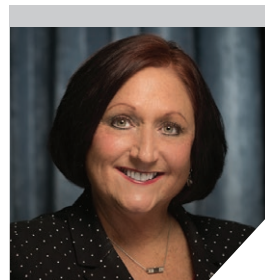


## TRUST

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.



**Kevin Jeffries**  
1st District



**Karen Spiegel**  
2nd District



**Chuck Washington**  
3rd District



**V. Manuel Perez**  
4th District



**Jeff Hewitt**  
5th District



**FRONT ROW SITTING (L-R)**

- Beth DeHayes**  
Executive Assistant II
- Edwin Quinonez**  
Assistant Chief Engineer (Business)
- Robert Cullen (Outgoing)**  
Assistant Chief Engineer
- Jason Uhley**  
General Manager/Chief Engineer
- Claudio Padres**  
Assistant Chief Engineer (Engineering)
- John Carrillo**  
Chief of Watershed Analytics
- Deborah de Chambeau**  
Chief of Planning

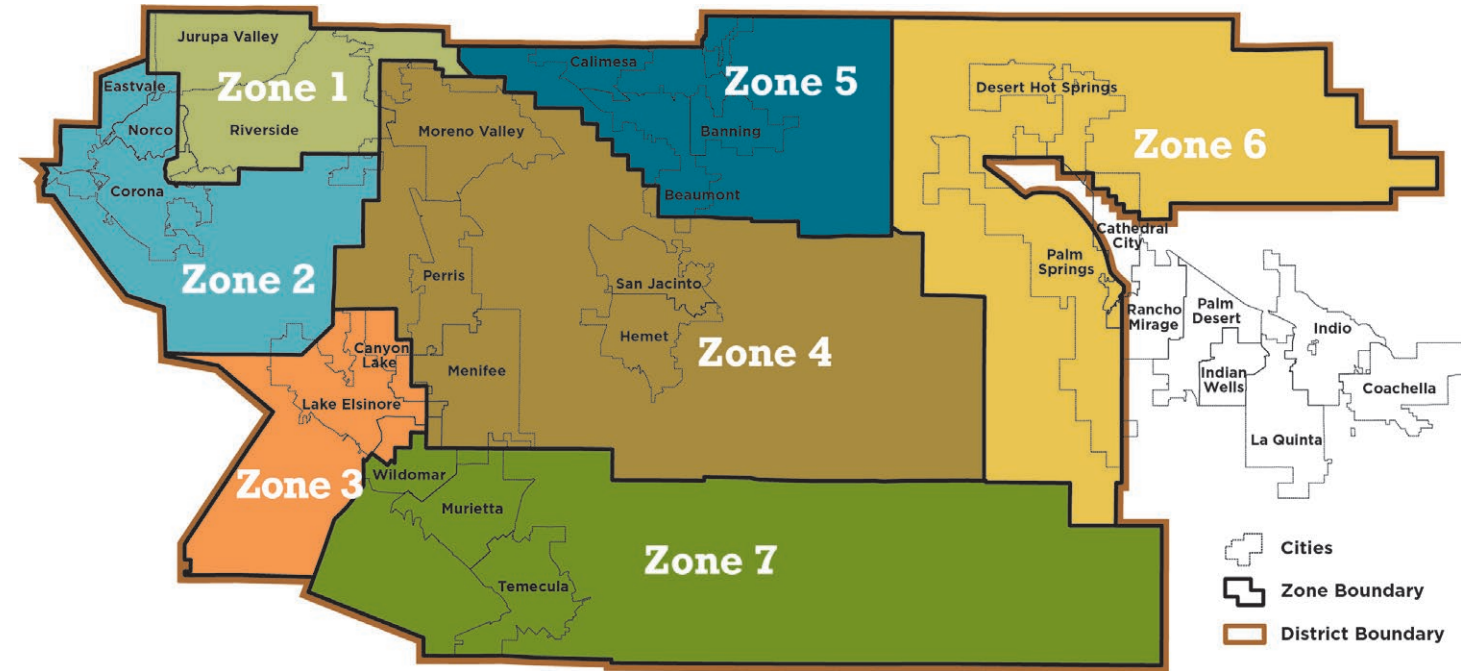
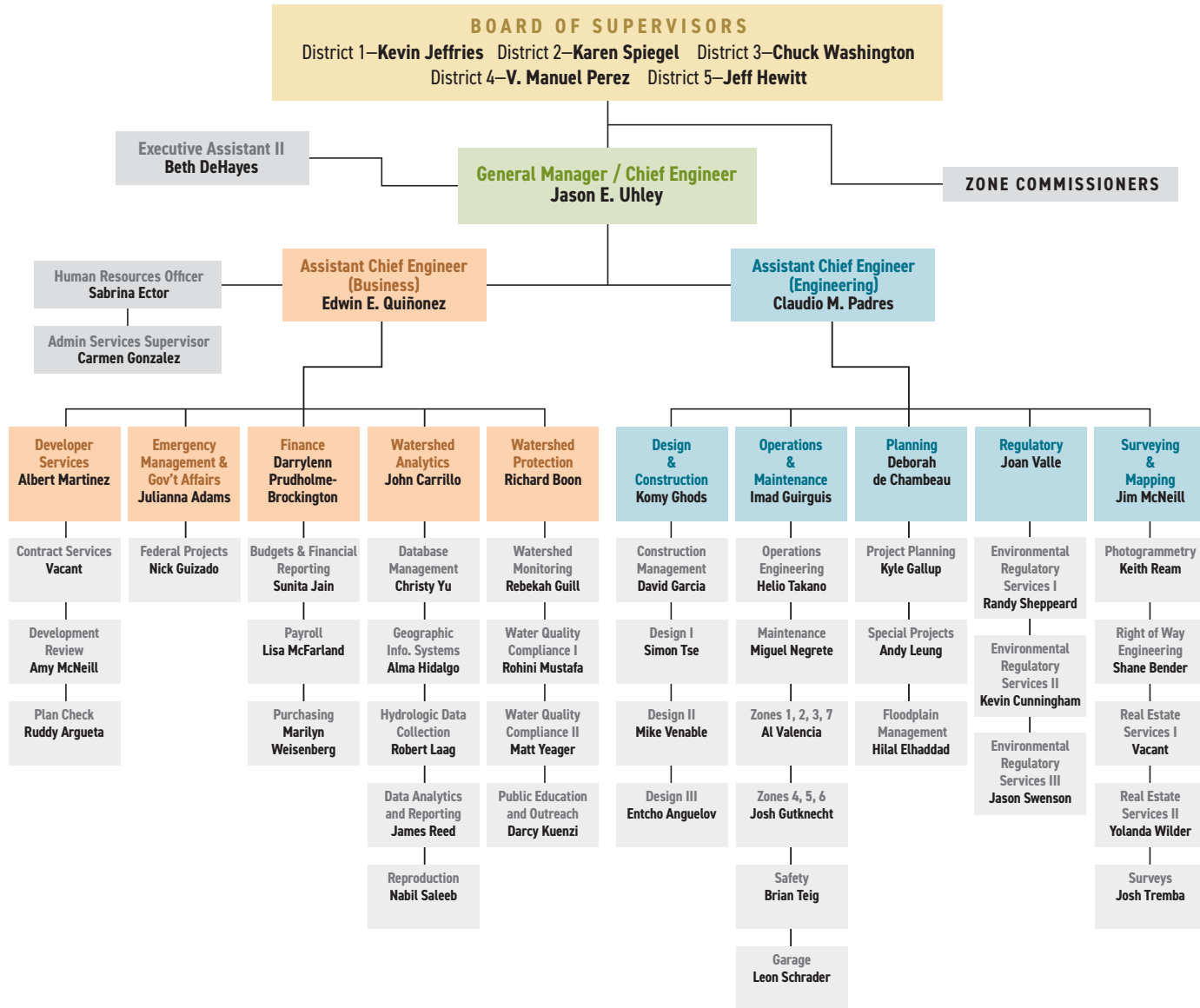
**BACK ROW STANDING (L-R)**

- Jim McNeill**  
Chief of Surveying and Mapping
- Imad Guirguis**  
Chief of Operations and Maintenance
- Julianna Adams**  
Chief of Emergency Management & Government Affairs
- Darrylenn Prudholme-Brockington**  
Chief of Finance
- Joan Valle**  
Chief of Regulatory
- Komy Ghods**  
Chief of Design and Construction
- Albert Martinez**  
Chief of Developer Services
- Richard Boon**  
Chief of Watershed Protection



# Organizational Structure

# Zone Commissioners



**Zone 1**  
 Don Harriger, 1st District  
 Chuck Krieger, 2nd District  
 Vacant, 1st District

**Zone 2**  
 Serena Burnett, 1st District  
 Ted Hoffman, 2nd District  
 Baxter Miller, 2nd District

**Zone 3**  
 Rich Bellante, 1st District  
 Cris Gibson, 1st District  
 Jack Wamsley, 1st District

**Zone 4**  
 Roy "Pete" Bleckert, 5th District  
 Ken Graff, 3rd District  
 Brad Scott, Split 3rd/5th District

**Zone 5**  
 Debbie Franklin, 5th District  
 Kerri Mariner, 5th District  
 Paul St. Martin, 5th District

**Zone 6**  
 Ivan Sewell, 4th District  
 Steven Stewart, 4th District  
 Vacant, 4th District

**Zone 7**  
 Erin Crouthers, 3rd District  
 Vincent Scarpino, 1st District  
 Steven Busch, 3rd District



# Community

Leadership | Events | Volunteers

## CELEBRATING LEADERSHIP IN OUR COMMUNITIES

### 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*

### American Public Works Association, Inland Empire Branch

Claudio Padres, *Board Member*

### Association of Environmental Professionals

Joan Valle, *Legislative Committee*

### Floodplain Management Association

Kyle Gallup, *South California Public Director*

### Western Municipal Water District

Gracie Torres, *Vice-President Board of Directors*

### California Stormwater Quality Association

Richard Boon, *Treasurer, Director*  
Matt Yeager, *BMP Effectiveness Subcommittee Co-Chair*  
Rebekah Guill, *Monitoring and Science Co-Chair*

### Southern California Stormwater Monitoring Coalition

Rebekah Guill, *Chair*

### Southern California Water Coalition

Darcy Kuenzi, *Legislative Taskforce*

### American Society of Civil Engineers - Young Member Forum San Bernardino/Riverside Branch

Olivia Pearson, *Secretary*

### ALERT Users Group

Robert Laag, *Treasurer*

### Phi Sigma Rho

Ava Moussavi, *Programming Director*

### Inland SoCal United Way

Julianna Adams, *Board of Directors*  
Gracie Torres, *Board of Directors*

### SBVC GIS Industry Advisory Committee Member

Alma Hidalgo

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

Alma Hidalgo

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

Kevin Cunningham, *Vice-President*

### IEWORKS

Gracie Torres, *Co-Founder/Secretary/Treasurer*

### 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*

## THE SANTA ANA RIVER & TRAIL CLEANUP

We strive to maintain a sustainable watershed free of pollution and a community of motivated water stewards to ensure swimmable, drinkable, fishable waters within the Middle Santa Ana River Watershed.

Working together with **Keep Riverside Clean & Beautiful, Riverside County Parks** and **CR&R Environmental Services**, the cleanup helped preserve one of Southern California's largest waterways and improve the ecosystem, water quality, green spaces, and flood control facilities.



Our Santa Ana River cleanup team

This year's event exceeded all expectations by removing 144,000 pounds of trash, tires and appliances. Volunteers were mobilized to five sites to collect litter and bulky waste, and eradicate graffiti that impacts the river and surrounding communities.

**#DoBeautifulThings**

**230 Volunteers! We Cleaned Up  
72 Tons of Trash (144,000 pounds!)  
24,000 sq. ft. of Graffiti  
Painted Over (64 gallons of paint used)**

## VOLUNTEER CHARITABLE EVENT COORDINATORS

### Event Spotlight

#### Breast Cancer Awareness

As part of the Riverside County Employee Campaign, the District fundraises every October to support Breast Cancer Awareness. Team Pink hosted several raffles and a thank you breakfast. With the tremendous support of District staff, the District raised over \$1,300 for a local breast cancer resource center.

**District Coordinators**—Jeff Shim and Sam Saldivar  
**Team Pink**—LeAnn Cleveland, Beth DeHayes and Ruth Goller

#### Additional Events & Coordinators

**LifeStream Blood Drives**—Beth DeHayes

**Thanksgiving Food Drive**—Jessica Urena and Jill Sossaman

**Fill-A-Backpack School Supply Drive**—Jessica Urena and Jill Sossaman

**Snowflake Toy Drive**—Jessica Urena and Jill Sossaman

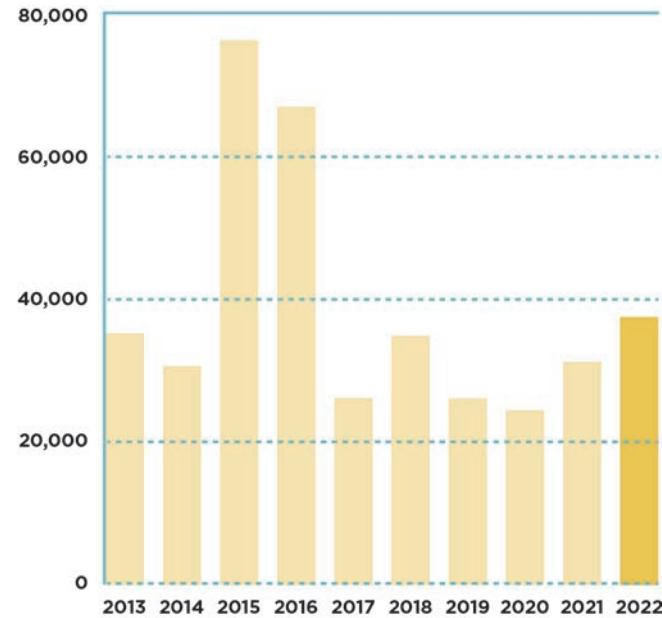
**Youth In Government**—Gracie Torres, Coordinator •



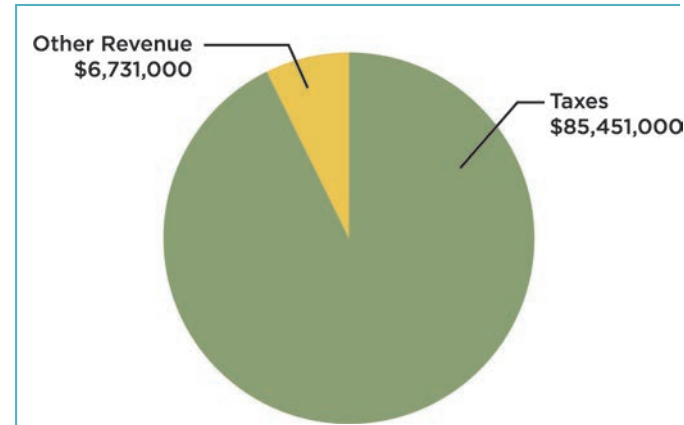
# Financial Dashboard

2021 | 2022

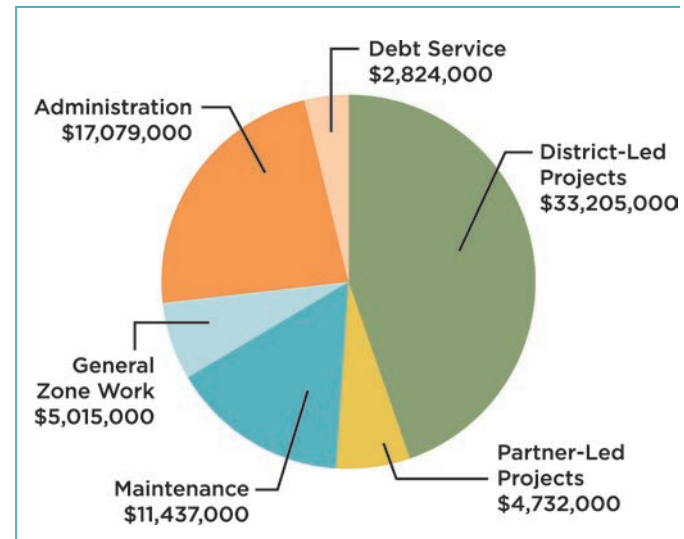
## CAPITAL PROJECT EXPENDITURES (\$1,000s)



## REVENUE: \$92,182,000



## EXPENSES: \$74,292,000



Bautista Basin Channel Recharge Basin expansion

# Rainfall & Runoff

Water Year 2022 (October 1, 2021 to September 30, 2022) marked a continuation of dry conditions across the state, with nearly the entire state having received only 50 percent or less of the average annual rainfall.

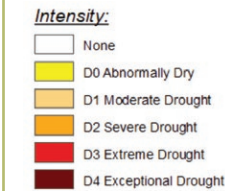
Southern California was no exception with most areas showing below average annual precipitation during the second half of the water year. During the month of October, the entire state received well over the average rainfall for the month. This led many to believe that it would be an above average year for rainfall statewide, as well as Sierra snowpack. Little did we know that as fast as the rain began, it would stop just as abruptly. The remainder of the winter was one of the driest seen in California.

During the winter season, only one weak to moderate Atmospheric River (AR) arrived in Southern California compared to the two occurring in winter 2021 and the

five experienced in 2020. The continued absence of large-scale rain events has been driven by the multiyear drought conditions, not only in Southern California but across the state.

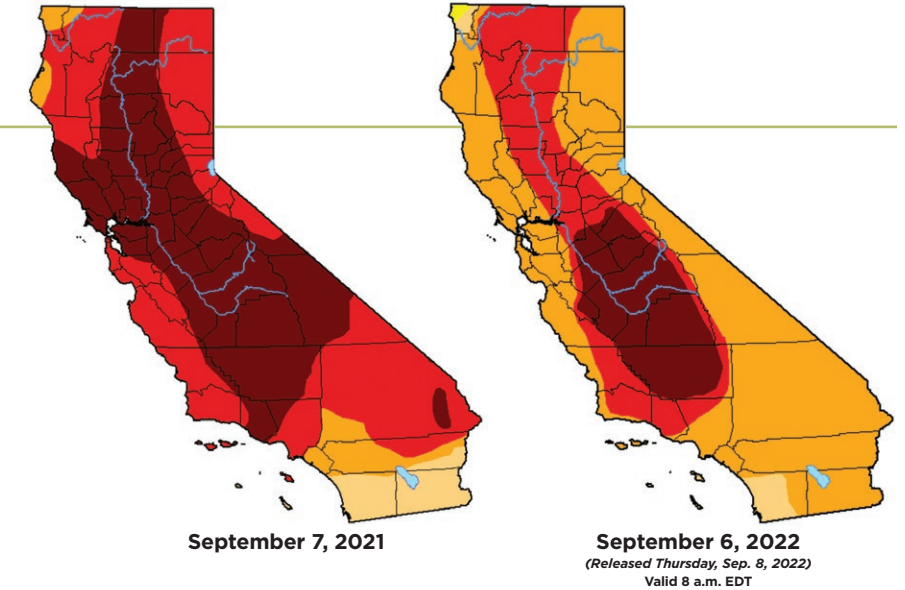
The snowpack as of May 1, 2022 was 35% of the average as compared to the prior year's 60% of the average. The low percentage of snowpack is in stark contrast to how the season began with a category 5 AR in October 2021 that set the stage for a season that quickly disappointed. The Statewide Reservoir Storage was 69% (i.e., -14.7 million acre-feet) of the average through the end of September. (Data Source: California Department of Water Resources)

## U.S. DROUGHT MONITOR CALIFORNIA SEPT. 2021 VS. SEPT. 2022



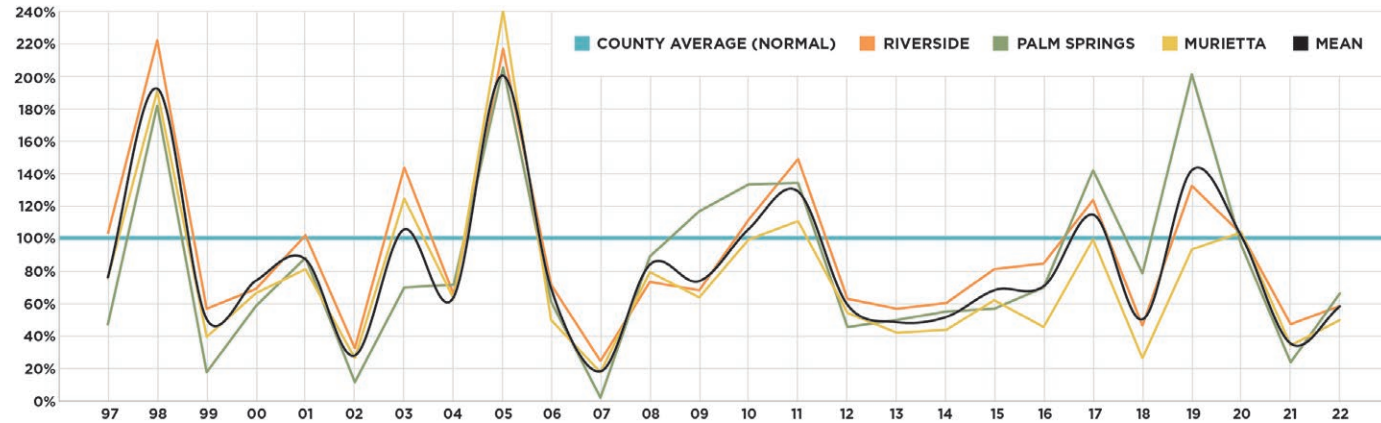
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

**Author:**  
David Simeral  
Western Regional Climate Center





1996-2022 Precipitation as a Percentage of the Average Year



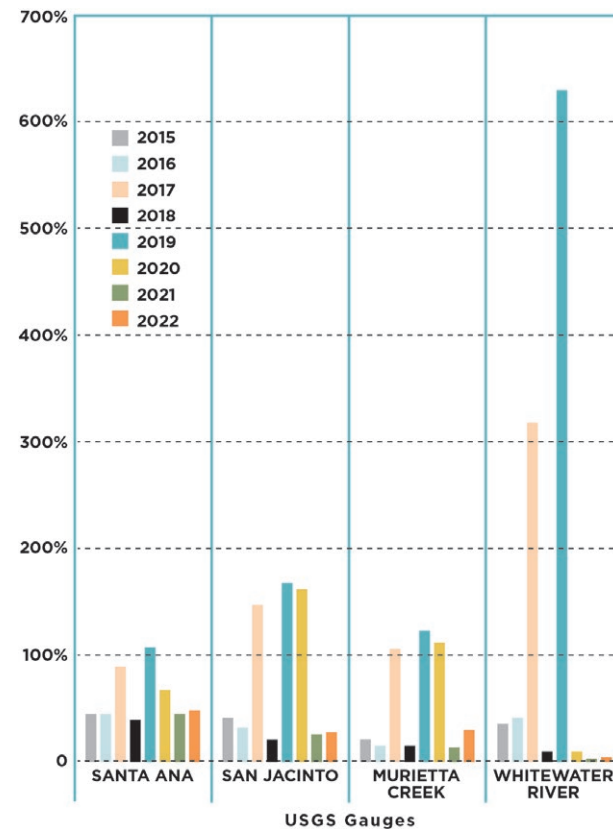
PRECIPITATION

Riverside County experienced another well below average year, in which most areas received 60% or less of the normal average rainfall. With precipitation low across the majority of the state, it was evident that any relief from the drought would not arrive this water year. A La Niña condition in the Eastern Pacific for the past three years has propagated the state's drought conditions. La Niña conditions can most often lead to drier winters across California, and 2022 would be no exception.

RUNOFF

Runoff throughout Riverside County has been in steady decline since water year 2019. Runoff percentages throughout the county show the recent persistence of drought patterns (e.g., dry years outnumber the wet years). When reviewing the graph to the right, it is evident that Riverside County is experiencing the "Whip Lash" effect where typically you see prolonged periods of low runoff; instead we observe one year which is prevalently above average and bookmarked by the drier years. The graph shows runoff as a percent of the historical average during recent water years at four of our 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.

2015-2022 Water Year Runoff Summary Percent of Average



ATMOSPHERIC RIVERS

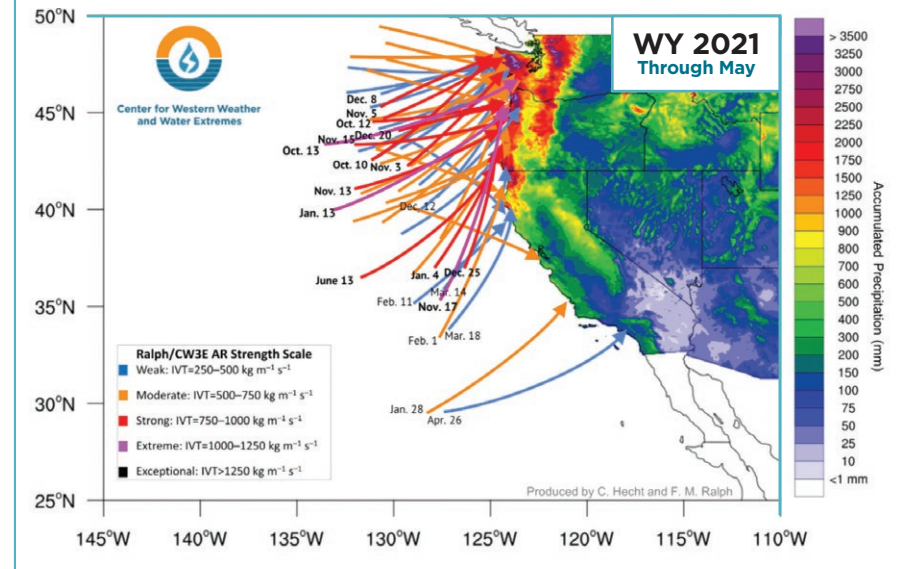
An Atmospheric River (AR) is a long, narrow, and transient corridor of strong horizontal water vapor transport that is typically associated with a low-level jet stream ahead of the cold front of an extratropical cyclone.

In recent years, this term has been used in the news and other media outlets. It is evident that these phenomena are a sizable contributor of rainfall to what might be a much drier West Coast 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.

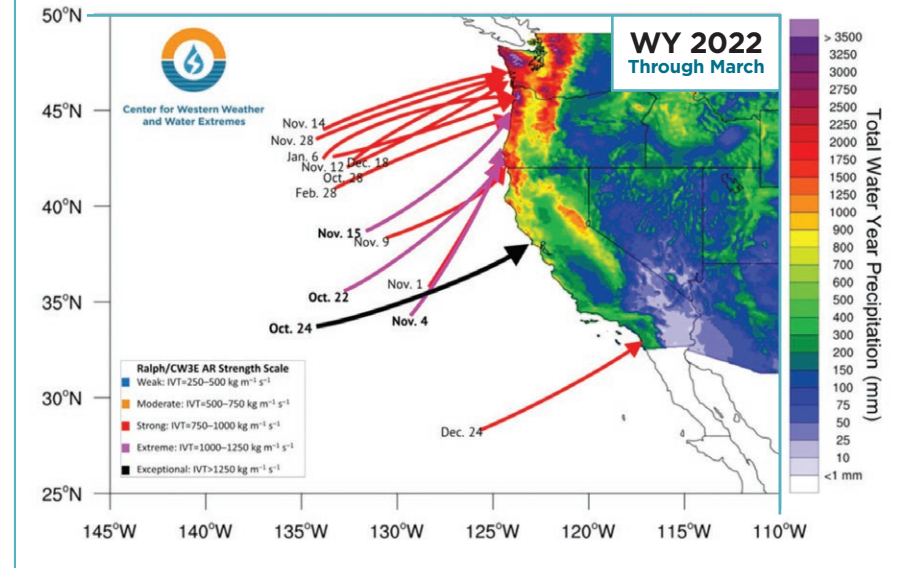
These maps show the difference in the number of ARs that contributed to the annual precipitation on the west coast in the last two years. The rainfall totals for the last two years were 50% or less statewide. In looking at the maps, it becomes obvious that both the small number and minimal strength of the ARs that affected California contributed to the low rainfall totals, especially in Southern California.

(Source: Center for Western Weather and Water Extremes)

Atmospheric River Events By Date & Strength Water Year 2021



Atmospheric River Events By Date & Strength Water Year 2022





## POST-FIRE HYDROLOGIC HAZARD WARNING SYSTEM

In August 2020, the Apple and El Dorado Fires destroyed the vegetation along the southern slopes of the San Bernardino National Forest. They also devastated the foothills immediately upstream from the cities of Beaumont and Banning, as well as the Morongo Indian Reservation. These fires created a substantial flood and debris flow risk for downstream properties.

One year in, the District's Post Fire Debris Flow Monitoring System is still operational. It has also aided in warning and documenting the events that impacted two of the facilities at risk, which are directly downstream of the burn scar.

Photo 1 shows the telemetered real-time rain gauges that reported the higher intensity rainfall in the upper end of the watersheds.

Photo 2 is a screenshot of the dashboard used by Riverside County Public Safety and District staff.



Real-time telemetered rain gauge installation (ALERT gauges): Calimesa at Singleton Road

**Apple / El Dorado Fire Dashboard**

[Rain Rates Grid / Webcams View](#)
[Map / Webcams View](#)
[Rain Rates Grid / Map View](#)

Below 4000 ft.							
Site - Duration	Minutes			Hour(s)			Day
	15	30	1	3	6	24	7
<b>Threshold: Level 3 (Red)</b>	<b>≥ 0.30</b>	<b>≥ 0.60</b>	<b>≥ 0.80</b>	n/a	n/a	n/a	n/a
Beaumont City	0.16 in.	0.24 in.	0.39 in.	0.63 in.	0.83 in.	1.69 in.	0.00 in.
Banning Bench	0.12 in.	0.20 in.	0.31 in.	0.55 in.	0.83 in.	2.32 in.	0.00 in.
Cabazon North	0.12 in.	0.20 in.	0.31 in.	0.51 in.	0.71 in.	1.38 in.	0.00 in.
Calimesa	0.12 in.	0.20 in.	0.35 in.	0.63 in.	0.87 in.	1.89 in.	0.00 in.
Bogart Park	0.20 in.	0.28 in.	0.39 in.	0.75 in.	1.02 in.	2.64 in.	0.00 in.
Morongo Reservation	0.12 in.	0.16 in.	0.24 in.	0.63 in.	0.87 in.	2.28 in.	0.00 in.
Tick Ridge	0.16 in.	0.24 in.	0.35 in.	0.83 in.	1.26 in.	3.50 in.	0.00 in.
Whitewater Trout Farm	0.20 in.	0.35 in.	0.47 in.	0.79 in.	1.14 in.	2.76 in.	0.00 in.

Above 4000 ft.							
Site - Duration	Minutes			Hour(s)			Day
	15	30	1	3	6	24	7
<b>Threshold: Level 3 (Red)</b>	<b>≥ 0.30</b>	<b>≥ 0.40</b>	<b>≥ 0.60</b>	n/a	n/a	n/a	n/a
Oak Glen Conservation Camp	0.16 in.	0.24 in.	0.43 in.	0.87 in.	1.54 in.	3.82 in.	0.00 in.
Oak Glen Fire (SBC)	0.16 in.	0.24 in.	0.35 in.	0.55 in.	0.79 in.	1.89 in.	0.00 in.
Raywood Flats	0.24 in.	0.39 in.	0.71 in.	1.54 in.	2.32 in.	5.16 in.	0.00 in.
Yucaipa Ridge (SBC)	0.16 in.	0.24 in.	0.39 in.	0.87 in.	1.34 in.	2.64 in.	0.00 in.
Camp Angelus (SBC)	0.12 in.	0.20 in.	0.35 in.	0.71 in.	1.22 in.	3.19 in.	0.00 in.

Online dashboard showing the morning of December 24, 2021 rainfall event intensities



Little San Gorgonio Creek/Noble Creek camera site

Once the debris flows reached Cherry Valley Boulevard, it could be seen by two of the debris flow cameras as seen in Photo 3.

Photos 4 and 5 are two images of the debris flows seen on December 24th along the Little San Gorgonio Creek and Noble Creek at Cherry Valley Boulevard.

Aside from the two December storm events, the year was overall uneventful, and the second half of the winter season was almost completely dry.



Noble Creek debris flow 12/24/2021 - 7:19am



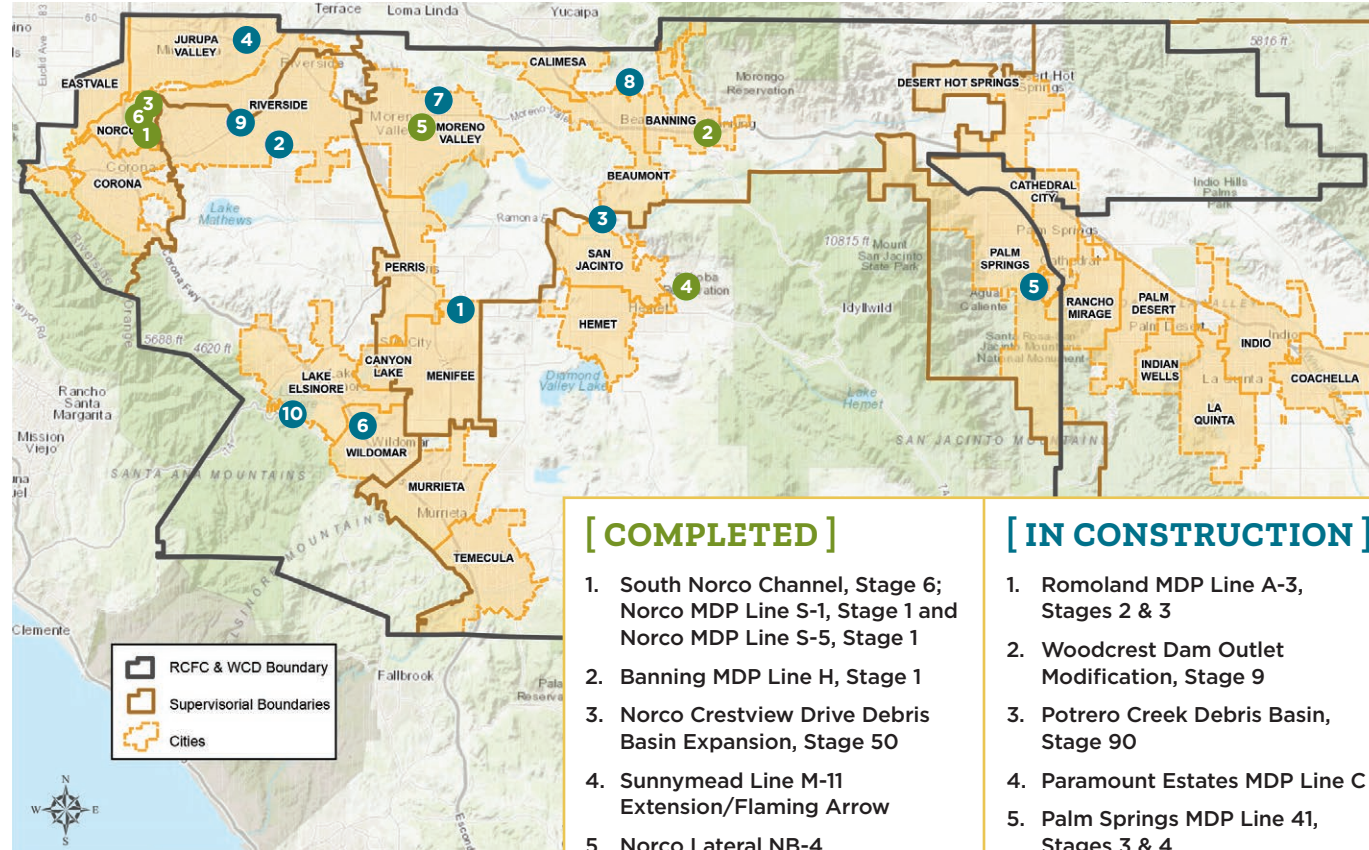
Little San Gorgonio debris flow 12/24/2021 - 7:19am



# Capital Projects

## Overview & Highlights

### Riverside County Flood Control and Water Conservation District CIP Projects FY 21/22



#### [ COMPLETED ]

1. South Norco Channel, Stage 6; Norco MDP Line S-1, Stage 1 and Norco MDP Line S-5, Stage 1
2. Banning MDP Line H, Stage 1
3. Norco Crestview Drive Debris Basin Expansion, Stage 50
4. Sunnymead Line M-11 Extension/Flaming Arrow
5. Norco Lateral NB-4
6. Bautista Creek Channel Recharge Basin Expansion, Stage 50

#### [ IN CONSTRUCTION ]

1. Romoland MDP Line A-3, Stages 2 & 3
2. Woodcrest Dam Outlet Modification, Stage 9
3. Potrero Creek Debris Basin, Stage 90
4. Paramount Estates MDP Line C
5. Palm Springs MDP Line 41, Stages 3 & 4
6. Sedco MDP Line F, Stage 3
7. Moreno MDP Line K-1, Stage 2
8. Beaumont MDP Line 16 (Recharge Basin)
9. Monroe MDP Line E, Stages 2 & 3
10. Lakeland Village MDP Line H



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. South Norco Channel, Stage 6; Norco MDP Line S-1, Stage 1 and Norco MDP Line S-5, Stage 1:** This is a District-led project that will reduce flooding and remove properties from the floodplain between Second and Fourth Streets east of Corona Circle. It is expected to benefit local residences, traffic, Norco Intermediate School, and Norco High School. **South Norco Channel, Stage 6:** This portion of the project will upgrade an existing interim earthen channel and replace it with 4,100 feet of soft bottom trapezoidal channel with concrete sideslopes. This system begins adjacent to Temescal Avenue at the Norco Intermediate School and conveys flows southerly past Norco High School where it begins to head westerly until it meets the existing improved channel at the intersection of Second Street and Corona Circle. **Norco MDP Line S-1:** This lateral will collect runoff along Third Street east of Temescal Avenue, in an underground storm drain roughly 2,300 feet long and discharge this water into South Norco Channel. **Norco MDP Line S-5:** This lateral will collect runoff along Hillside Avenue between Kingman Street and Hillside Lane, convey it west within Hillside Lane, then southerly around Norco Intermediate School until it discharges into South Norco Channel.





[ COMPLETED ]

2



**2. Banning MDP Line H, Stage 1:** This is a District-led project that will reduce flooding along Hathaway Street between Barbour Street and Wesley Street. It will collect flows in Hathaway Street beginning at Barbour Street and convey them south in an underground storm drain within Hathaway Street, then east along Wesley Street until it discharges into Smith Creek.

**3. Norco Crestview Drive Debris Basin Expansion, Stage 50:** This District-led project was requested by the City of Norco to reduce mud/debris issues along Crestview Drive at the foot of the La Sierra Hills. The debris basin will collect mud/debris at three inlets along the La Sierra Hills and will drain to the existing Norco MDP Line NA-1, Stage 2 in Crestview Drive.

**4. Sunnymead Line M-11 Extension/Flaming Arrow:** This City of Moreno Valley-led project to capture runoff that is flooding properties along Saint Christopher Lane consists of a storm drain that will extend from Bay Street north and west to Saint Christophe Lane.

**5. Norco Lateral NB-4:** This is a City of Norco-led project to reduce street and community flooding along Valley View Avenue south of Norco Line NB. This proposed underground storm drain consists of about 450 lineal feet of 30" maximum diameter pipe which

will convey flows within Valley View Avenue starting from its intersection with Arroyo Lane and north to the existing Norco Line NB.

**6. Bautista Creek Channel Recharge Basin Expansion, Stage 50:** This project is a partnership between the District and Lake Hemet Municipal Water District (LHMWD) to expand the groundwater recharge within District-owned land adjacent to Bautista Creek Channel. The project will utilize 17.5 acres of open space to construct six sub-basins that will be interconnected with the existing basins to the south. During wet weather, additional storm flows will be able to be diverted from the channel to allow for natural percolation in the new sub-basins. During dry periods, surplus water will be piped into the new basins through a proposed 18-inch waterline. The District will construct the project, with LHMWD assuming responsibility for the operation and maintenance of the project. •



6

[ IN CONSTRUCTION ]



1

**1. Romoland MDP Line A-3, Stages 2 & 3:** This District-led project is a portion of the Line A-3 system that will ultimately provide 100-year flood protection to the existing neighborhoods along Varela Lane and properties south of Varela Lane and east of Palomar Road. Stages 2 and 3 will construct approximately 3,200 feet of underground box storm drain along Palomar Road, collect runoff beginning at Varela Lane, and extend south along Palomar Road to the existing Stage 1 storm drain in Palomar Road at Matthews Road. This project also enables the future construction of Stages 4 and 5, which extend the system east from Palomar Road along Varela Lane. The full benefit of this project will not be realized until Stages 4 and 5 are also constructed.

**2. Woodcrest Dam Outlet Modification, Stage 90:** This is a District-led project to upgrade the safety and operation of Woodcrest Dam. The improvements include replacing the existing gate assembly, control system, outlet structure with a new debris rack, outlet structure to reduce clogging potential, and installing erosion control measures on the embankment slope.

**3. Potrero Creek Debris Basin, Stage 90:** This is a District-led project to remove accumulated sediment from the existing basin to restore its capacity and function. Approximately 350,000 cubic yards of material will be removed.



2



**4. Paramount Estates MDP Line C:** This project is a collaboration between the District, City of Jurupa Valley, and a developer to deliver the master-planned Line C storm drain system. The objective for this



4



[ IN CONSTRUCTION ]

project is to provide flood protection for the existing neighborhood southwest of the Canal Street and Opal Street intersection in Jurupa Valley. Through the collaboration with the developer, it will also provide flood protection to parts of Tentative Tract Map 37211. The project will include 1,100 feet of various size reinforced concrete pipe (36"-48"), 77 feet of a double cell 11'x7' reinforced concrete box, and modifications to both the existing Sunnyslope Channel and Sunnyslope Channel Freeway Lateral. The developer fully funded and prepared the design, obtained regulatory permits and CEQA, and the District will construct, operate, and maintain the proposed storm drain improvement project.



**5. Palm Springs MDP Line 41, Stages 3 & 4:** Stage 3 of the Line 41 system is a District-led project to install approximately 5,450 feet of underground pipe ranging from 30"-108" and construct a 7-acre detention basin. The primary objective of this project is to remove the Federal Emergency Management Agency (FEMA) floodplain and provide 100-year flood protection to properties south of Highway 111 between Cherokee Way and Golf Club Drive. The project will

collect flows at the Cherokee Way and Seminole Road intersection from the proposed Palm Springs MDP Line 41, Stage 4 project and convey them southeasterly to the detention basin along Matthew Drive near Linden Way. Reduced flows exiting the basin will be conveyed easterly along Highway 111 where they will discharge into the existing Palm Springs MDP Line 41, Stage 2 storm drain system at Golf Club Drive. Stage 4 of the Line 41 system is a District-led storm drain improvement project to install approximately 1,365 feet of 84" reinforced concrete pipe. The primary objective is 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 will be 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.

**6. Sedco MDP Line F, Stage 3:** This City of Wildomar-led project includes approximately 950 feet of varying RCP (48"-60") in Bundy Canyon Road extending from the existing Line F in Sellers Road to the culvert at Interstate 15. The City is building this storm drain in conjunction with the Bundy Canyon Road widening project.

**7. Moreno MDP Line K-1, Stage 2:** This City of Moreno Valley-led project consists of an underground facility that will reduce local and freeway flooding. The approximately 1,600 feet facility is located along Iron-wood Avenue between Oliver Street and Petit Street. The City is building this project in conjunction with the SR-60/Moreno Beach Drive Interchange Improvements. Moreno MDP Line K-1, Stage 2 was advertised and awarded during the 2020/2021 fiscal year.

[ IN CONSTRUCTION ]



8

**8. Beaumont MDP Line 16 (Recharge Basin):** This is a District-led storm drain project featuring water conservation elements and is a joint project with Beaumont-Cherry Valley Water District (BCVWD). The project consists of 7,800 feet of pipe (54"-84") and recharge basin improvements. The primary objective of this project is 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.

**9. Monroe MDP Line E, Stages 2 & 3:** This City of Riverside-led project consists of an 11,200-foot underground storm drain system which will reduce flooding along Gratton Street, Hermosa Drive, and Dufferin Avenue in the Arlington Heights neighborhood of Riverside. The storm drain collects stormwater along Hermosa Drive, then conveys it along Gratton Street, and discharges into an existing portion of Line E north of Lincoln Avenue and into Monroe Basin.

**10. 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, and a 2-acre sediment basin. The primary objective of this project is to provide flood protection to the residential area of Lakeland Village by capturing stormwater runoff from the Elsinore Mountains and safely conveying it in an underground storm drain along Cottrell Boulevard and Maiden Lane to Lake Elsinore. The existing FEMA floodplain will be removed following construction of this project, reducing flood insurance costs to property owners in the area. The sediment basin will contribute to the lake water quality by removing sediment and pollutants in runoff.



10



[ 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 building.

**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 2021/2022.

ACTIVE DESIGN PROJECTS	CATEGORY	SUPERVISORIAL DISTRICT	DISTRICT ZONE
Bedford Canyon Channel	District	2	2
Box Springs MDP Line D	Partner	1	1
Calimesa Channel Stg 3	Partner	5	5
El Cerrito Channel Restoration	District	2	2
First Street Storm Drain	Partner	2	2
Good Hope-Olive Avenue Storm Drain	District	1	4
Green Acres Dam & Outlet	District	3	4
Lakeview/Nuevo MDP - Lateral D	District	5	4
Little Lake MDP Line B - Stage 2	District	3	4
Mockingbird Canyon Stabilization	District	1	2
Monroe MDP - Monroe Storm Drain	Partner	1	1
Moreno MDP Line F-18 and F-19	Partner	5	4
Murrieta Creek Channel Phase 2B and 3	Partner	3	7
Norco Citation Drive Storm Drain	Partner	2	2
Norco Elementary Storm Drain	Partner	2	2
Norco Fifth Street Storm Drain	Partner	2	2
Norco Lateral S-1B Extension	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 MDP Line S-2	Partner	2	2
Norco MDP Line S-2	Partner	2	2
Norco Substation Road Storm Drain	Partner	2	2
North Norco Channel - Line NB	District	2	2
North Norco Channel Stage 11	District	2	2
Palm Springs Line 20	Partner	4	6
Perris Valley Channel Lateral B, Stage 4	District	5	4
San Jacinto MDP Line E-2 & E-2A	Partner	3	4
Santa Ana River Stabilization (District Reach)	District	2	1
Santa Ana River Stabilization (Federal Reach)	District	2	1
South Norco Channel	Partner	2	2
Southwest Riverside MDP Line E-1 Stage 1	Partner	1	1
Sunnymead Indian Street Basin	Partner	5	4
Sunnymead MDP Line B-16A, Stage 2	Partner	5	4
Sunnymead MDP Line F, Stage 5 and F-7, Stage 1	Partner	5	4
Sycamore Dam Outlet Modification	District	1	1
Temecula Creek - Morgan Valley Wash	District	3	7
Temescal Creek Flood Plain AQ	District	1, 2	2
West Hemet Line C, Stages 2 and 3	Partner	3	4
Wildomar MDP Lateral C, Stage 3	District	1	7
Woodcrest - Rinehart Acres Drainage Plan Improvements	District	1	2

# District Highlights

## EMERGENCY MANAGEMENT & GOVERNMENT AFFAIRS



Murrieta Creek in Old Town Temecula Phases 1 and 2A. Open to the public for pedestrian, bicycle and equestrian use.

### At-A-Glance

In March 2022, the Emergency Management and Government Affairs Division was created as a dedicated group to coordinate emergency planning and response needs holistically. With the rising workload in the Special Projects and Operations Sections, which handle current emergency declarations and the increasing regulatory requirements related to (a) dam and levee safety, (b) state and federal-driven Emergency Management plan preparation, and (c) coordination of state, federal, and local programs for post-disaster recovery, it was clear a new Division would need to be formed. The District now has a centralized team that will manage and implement the programs efficiently during emergencies.

### Current Functions

- > Federal Projects
- > IRWM, FEMA and Proposition 84 Grants
- > PRAs/Litigation
- > Government Affairs/Public Relations

### Looking Into The Future

- > Emergency Preparedness & Management
- > CRS Public Outreach
- > State & Federal Dam & Levee Inspections



Accomplishments

**Murrieta Creek**

The long-awaited turnover of Murrieta Creek Phases 1 and 2A took place on April 17, 2022. This turnover effort allows the District to operate and maintain this portion of Murrieta Creek. Additionally, the multi-use trail/maintenance roads within Phases 1 and 2A have been opened to the public for pedestrian, bicycle, and equestrian use. Residents joined the U.S. Army Corps of Engineers, Riverside County, and the City of Temecula in a ribbon-cutting ceremony for the community.

Ribbon-cutting ceremony at Murrieta Creek



Santa Ana riverbed

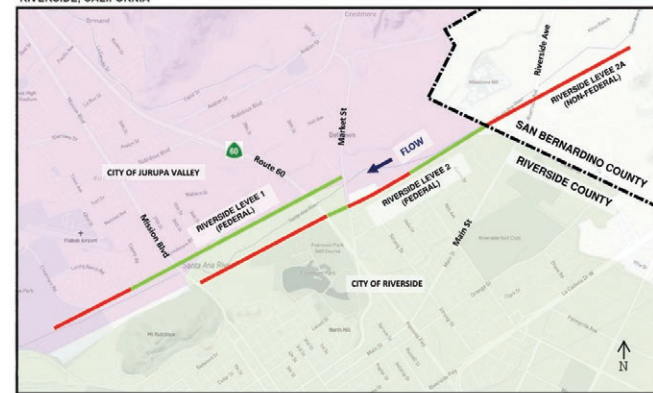
Santa Ana River levee



**Santa Ana River Levee**

This \$36 million U.S. Army Corps of Engineers-led project was awarded to Skanska USA on June 6, 2022 and will rehabilitate approximately 13,000 linear feet of damaged portions of the federally constructed reach of the Santa Ana River levee system. Levee rehabilitation will include replacing and grouting the existing levee rock slope protection and extending the rock slope protection deeper than the current condition. Construction is scheduled for September 2022.

RIVERSIDE LEVEE 1 AND RIVERSIDE LEVEE 2  
RIVERSIDE, CALIFORNIA



LEGEND  
 - LEVEE SECTIONS TO BE REHABILITATED  
 - LEVEE SECTIONS TO REMAIN AS IS  
 - COUNTY BOUNDARY



**ENVIRONMENTAL PROTECTION**

The Regulatory Division ensures that the District complies with applicable environmental laws such as CEQA, NEPA, FESA, CESA, Porter Cologne, and various sections of the federal Clean Water Act and California Fish and Game Code. In addition to supporting our typical construction and maintenance endeavors, in the past year we:

- > Collaborated with multiple agencies, including the and the U.S. Fish and Wildlife Service to secure the Biological Opinion needed for the construction and long-term maintenance of the **Santa Ana River Levees**. This project includes levees owned by both the Corps and the District.
- > Prepared the CEQA documentation and negotiated regulatory permits with both the California Department of Fish and Wildlife and the Santa Ana Regional Water Quality Control Board for the **North Norco Line NB project**. The District successfully proposed and implemented an atypical mitigation project to compensate for impacts related to the NB project: a massive debris removal effort within the Temescal Wash. The mitigation project has already been completed.
- > Collaborated with multiple agencies, including the US Army Corps of Engineers and the California Department of Transportation to secure approvals for the District's **Potrero Sediment Removal project**. This facility was in critical need of maintenance following the 200-year storm event that hit the region in 2019.
- > Secured and established 40 acres of conservation land that will be held in perpetuity specifically to **protect habitat** for the endangered Casey's June Beetle. The conservation land is now under the management of the Center for Natural Lands Management and was required in order to construct Palm Springs Line 41, which commenced construction in the spring of 2022.

**Project Spotlight**



Before: Impact to the natural drainage within Aliso Creek



After: Completed restoration work within Aliso Creek

**Aliso Creek Restoration**

Completed a 5-year mitigation project to restore habitat within **Chino Hills State Park**. The restoration work addressed unexpected impacts to Aliso Creek that occurred during construction of the Inland Empire Brine Line Project. The restoration included: recontouring channel banks, removing non-native vegetation, and plantings of various native and riparian species. Despite some challenges (fires and floods within the restoration area), the District successfully restored the area to its natural condition.



> Reinitiated **regular meetings** with our local Regulators at the California Department of Fish and Wildlife, the Santa Ana Regional Water Quality Control Board, and the Army Corps to establish positive working relationships with new staff amongst all agencies.

> Continued to work with Corps headquarters in Washington, DC to discuss **existing and pending policy and legislation** that directly affect the District, and to propose improvements therein that ultimately benefit the nation's wetlands and waterways. •

**MAINTENANCE**



**50,893 Cubic Yards of Sediment Removed**



**Fences Repaired at 1,730 Locations**



**4,262 Hours for Homeless Encampment Cleanup**



**196 Miles Graded**



**282,000 Square Feet of Graffiti Removed**



**83 Linear Feet of New Fence Installed**



**614 Acres Mowed**

**PLANNING DIVISION**

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

**FPM** implements the National Flood Insurance Program through County Ordinance No. 458. FPM prepares floodplain maps and coordinates with the 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. FPM established a 20% discount on flood insurance premiums for County residents via FEMA's NFIP Community Rating System (CRS) program. This fiscal year, FPM submitted 15 Letters of Map Revision (LOMR) to FEMA, 8 of which were approved. These efforts resulted in the removal of 918 structures, 1,472 acres of harmful floodplain, and 6,308 acres of undetermined floodplain risk. FPM's efforts also aid in the County's economic development by formally reducing regulated floodplains.

**918 Structures Removed from Floodplain**

**1,472 Acres of Harmful Floodplain Removed**

**6,308 Acres of Undetermined Floodplain Risk Removed**

**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.

**Special Projects** partners with other agencies and developers to design and construct drainage facilities, water quality, and water conservation projects. Special Projects manages partner-led projects which are projects led by local public agencies with District funding support. In addition, Special Projects assists with post-fire emergency risk assessment. •

**FINANCE**

The Finance Division strives to provide excellent fiscal support, oversight, and internal control to ensure proper fiscal management, budgeting, and accounting. During fiscal year 21/22, the Finance Division was presented an award for their 31st consecutive Certificate of Achievement (COA) for Excellence in Financial Reporting from the Government Finance Officers Association (GFOA) for its Annual Comprehensive Financial Report. This award indicates that the District went above and beyond the minimum requirements of generally accepted accounting principles to prepare annual comprehensive financial reports that evidence the spirit of transparency and full disclosure. The COA is the highest form of recognition in the area of governmental accounting and financial reporting.

The Finance Division's goal is to continually seek methods of increasing efficiencies and improving financial reporting. To accomplish this goal, the Finance Division successfully automated the project billing reconciliation processes. This automated process has reduced the billing cycle from 35 days to 15 days, allowing the District to issue timely invoices and increase the timely collection of accounts receivable.



The Finance Division is also working closely with the District's Watershed Analytics and Design and Construction divisions to deliver an automated Capital Budgeting tool to overcome the limitations of Excel workbooks. This automated process will allow District Divisions to seamlessly prioritize projects within the 5-year capital improvement plan, provide approval workflows for requested changes, allow multi-user access, and provide increased financial transparency through real-time reports and dashboards. •



**WATERSHED PROTECTION DIVISION**

The Watershed Protection Division (WPD) is a multidisciplinary team that works to reduce the stormwater pollution in our waterways across western Riverside County.

**What We Do**

- > To our partner municipalities engaged in surface water quality protection, we provide training, guidance, and technical support;
- > At the watershed-scale, we collaborate with the region’s special districts and municipalities to develop and implement integrated water resource projects;



Trialing an electromagnetic flowmeter

- > We coordinate closely with other District divisions, to collect, manage, and analyze chemical, meteorological, and biological quality data to assess the state 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.

**Training**

WPD has created a series of training modules that are now available to District, County, and City staff through the County’s online learning management system. The modules enable staff to remotely acquire the knowledge necessary to implement the environmental regulatory requirements associated with the municipal “stormwater mandate.” These modules were accessed on 297 occasions.

**Training Module Attendees:**

- Construction Site Inspection—98**
- Municipal Facility Inspection—131**
- Inspecting Commercial & Industrial Sites—16**
- Preparing Project Water Quality Management Plans—52**

**Partnering**

A major focus of water quality protection efforts in the Santa Margarita River Watershed Management Area is reducing non stormwater discharges. WPD conducted continuous flow monitoring studies to measure dry weather non-stormwater discharges from municipal outfalls. County and City staff were given access to the data on a near real-time basis via a web-accessible portal. During follow-up investigations,



Sampling at Magnolia Center outfall



Compositing samples at Perris Valley Channel



Rubidoux High School cleanup team



Sunnyslope Channel

outreach and “Sprinkler Spruce-Up” public education materials were provided to residences where irrigation runoff was observed.

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 on a dry weather flow abatement feasibility study. The study will identify additional opportunities for dry weather flow diversion, capture, and treatment.

The Storm Water Management Planning Act of 2014 requires a Storm Water Resource Plan (SWRP) as a condition of receiving grant funding for stormwater and dry weather runoff capture projects from any bond approved by California voters after January 2014. Following successful completion and acceptance by

the State Water Resources Control Board of the Upper Santa Margarita River Watershed SWRP, WPD commenced development of the Middle Santa Ana River SWRP. It is anticipated to be completed in late 2022.

**Community Engagement**

WPD organized a trash mapping and cleanup project for **Rubidoux High School** students. The school campus is adjacent to the District’s **Sunnyslope Channel**. The project included classroom presentations, student use of a trash mapping application developed by District staff, and presentation of findings by the students using ArcGIS StoryMaps. The project culminated with a trash cleanup event in the channel that was attended and undertaken by the students and local elected representatives.

Annually, the District, Keep Riverside Clean & Beautiful, Riverside County Parks, and CR&R Environmental Services organize a cleanup of the **Middle Santa Ana**



**River.** Volunteers were mobilized to 5 sites to collect litter and bulky waste, and eliminate graffiti. This year, 230 volunteers removed 144,000 lbs. of trash, tires, and appliances from the riverbed and covered 24,000 sq. ft. of graffiti.

**Environmental Monitoring**

District monitoring teams were mobilized on 111 occasions for dry and wet weather stream monitoring across all three principal watersheds. 3,265 points of analytical data were generated and evaluated, providing insights on surface water quality conditions across the County. Reports presenting detailed analyses of these data are now complemented with synopses prepared for wider audiences.



Monitoring with a multi-parameter sonde

**Environmental Regulations**

Discharges from the region’s municipal storm drain systems are authorized by National Pollutant Discharge Elimination System (NPDES) permits. WPD commenced negotiations with the Santa Ana River and Colorado River Regional Water Quality Control Boards regarding NPDES permit renewal. The permits are anticipated to be adopted in 2023. •

**PLANNING DEVELOPMENT 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.

**260 Entitlement Cases Reviewed by Development Review Staff**

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

**191 Agreements Prepared by Contract Services**

**Development Review** staff reviewed over 260 entitlement cases, answered over 1,200 inquiry calls, provided feedback on the District’s interest of 430 development cases in incorporated cities, and reviewed approximately 100 flood proofing cases or residential structures proposed in a floodplain.

**Plan Check** reviewed over 81 projects and approved 41 sets of Storm Drain Improvement Plans for proposed facilities to be maintained by the District. In addition, Plan Check reviewed, issued, and inspected about 49 encroachment permits for use, access, trails, and connections within District right of way.

**Contract Services** prepared over 191 agreements, and successfully negotiated and executed 132 agreements this past year. Additionally, Contract Services processed Professional Services Agreements for the District’s on-call consultant contracts, answered over 50 public records requests, and processed 89 administrative clearances for developer projects and professional services. Contract Services also continues to work on the Apple and El Dorado Fire emergency contracting and reporting to the Board of Supervisors. •

**Celebrating Service**



**George Ruiz**  
Engineering Technician II

**48** Years



**Bob Cullen**  
Assistant Chief Engineer

**36** Years



**Sharon Johnson**  
Senior Engineering Technician

**34** Years



**Michelle Ver Doorn**  
Secretary I

**34** Years



**Henry Verduco**  
Senior Engineering Technician

**33** Years



**Jeanine Rey**  
Chief of Finance Division

**25** Years



# FEMA Recognition

## RIVERSIDE COUNTY RECEIVES CRS LEVEL 6 RATING FROM FEMA

The District submitted itself to a FEMA audit of our unincorporated community floodplain management programs as part of FEMA's Community Rating System (CRS) program. CRS is a voluntary element of the FEMA's National Flood Insurance Program that evaluates the quality of local floodplain management programs. If the local program meets certain CRS criteria, the local community earns discounts on federal flood insurance rates. Federal flood insurance is mandatory for flood-prone properties with federally backed mortgages. As a result of the audit, the joint District/County unincorporated community floodplain management program was elevated from a Level 7 to a Level 6 CRS score, which will increase the insurance discount from 15% to 20% for unincorporated communities. Only 1% of floodplain management communities in the nation have reached this level, and the discount will put as much as \$311,000 annually back in the hands of unincorporated, often lower income, residents.

Riverside County Building and Safety (B&S) administers the CRS program with support from the Riverside County Flood Control and Water Conservation District (District) and the Coachella Valley Water District (CVWD). FEMA's audit recognized the County's efforts to implement programs that exceed federal minimums, including B&S's continual updating and consistent enforcing of Ordinance 458, as well as CVWD's and the District's effort to maintain detailed floodplain maps, implement effective flood warning and response programs, and effectively maintain dams and levees. The audit also recognized all three agencies' efforts to implement effective public outreach related to flood risk. •



L-R Front Row: Jason Uhley, Scott Strosnider, Tesfaye Demissie, Devraj Oza, Hilal Elhaddad, Joan Valle, Deborah de Chambeau  
L-R Back Row: Chuck Washington, Kevin Jeffries, Jeff Hewitt, Karen Spiegel, Kyle Gallup, V. Manuel Perez, Michael Nakagaki, Sam Shahrouri

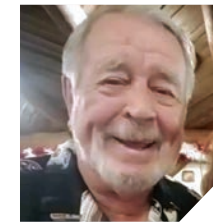


# In Memorium



**Gene Lewis  
(10/18/21)**

Gene Lewis was a Principal Construction Inspector and worked for the District from 2002 to 2011. He was a wizard of many skills and had a very storied life. District staff knows Gene for his fantastic professional-grade photography, quite a bit of which currently adorns the hallways in the District buildings. His legacy at the District will include both beauty and infrastructure.



**Tom Carpenter  
(11/03/21)**

Tom Carpenter worked at the District for 38 years and retired December 1996. Tom served in the U.S. Army and was a resident of the Riverside area for more than 80 years. During his time at the District, Tom began as an Engineering Aide and retired as a Principal Construction Inspector. Tom was an avid golfer and is the unofficial namesake of the District's annual golf tournament, in which he had been a regular participant and which is still played today.



**Charlie O. Hernandez  
(12/15/21)**

Longtime District Maintenance Supervisor, Charlie Hernandez, passed away on December 15, 2021. Charlie retired from the District in 2002 after providing 29 years of service, the majority of which was as the District's Maintenance Supervisor where he was responsible for the field maintenance of all District flood control and drainage facilities. He will be remembered for his dedication, dependability, and loyalty.



**Dale Anderson  
(03/11/22)**

Dale started his career at the District embedded as Consultant Plan Checker and in 1989 joined District staff as an Associate Civil Engineer. According to those who knew him, Dale was a well-loved rogue. He led several sections very well: Project Planning, Floodplain Management, Contract Services, and Construction Management. He was known for being a wealth of practical knowledge on structural design, geotechnical issues, and concrete construction. He was especially generous with his expertise and mentored many District colleagues. He retired from the District in March 2011.



**Frank "Jerry" Peairs  
(09/23/22)**

After serving in the U.S. Army, Frank graduated from Cal Poly Pomona with a degree in Civil Engineering. He served the District for 31 years, beginning his career as a Junior Civil Engineer in 1969 and retiring as the Assistant Chief Engineer in December 2000. A colleague called him, "an engineer's engineer...a wizard in hydrology and hydraulics." He returned for nearly a decade as a retired annuitant and worked closely with the District's Finance Division to develop the Capital Improvement Plan budget process and financial rates system that are still in use today.





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

1995 Market Street, Riverside, CA 92501

951 955 1200

[rcflood.org](http://rcflood.org)