Mission

We responsibly manage stormwater in service of safe, sustainable, and livable 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.
Table of Contents

4 Message from the General Manager–Chief Engineer
5 Value Statements
6 Board of Supervisors
7 Management Team
8 Organizational Chart
9 Leadership Commitment to the Community
10 District Zones
12 2018/2019 Dashboard
13 Rainfall and Runoff
16 Debris Flows
18 Storm Events
22 Emergency Projects
24 Awards Received in Fiscal Year 2018/2019
24 Pinto Project
25 Capital Project Highlights
26 Completed Projects
28 Ongoing Projects
30 Active Design Projects
31 District Annual Highlights
34 Watershed Analytics
36 Watershed Protection
37 Retirements – Celebrating Service
38 In Memoriam
The Drought Ends with a Bang

The winter of 2018/2019 is one for the record books. Not only did we have the Holy and Cranston Fires, two of the most significant and dangerous burns in recent Riverside County history, we also had an incredibly wet winter that ended with an atmospheric river producing 200-year, 12-hour storm events over both burn areas. Summer monsoonal moisture was no less impressive. Remnant moisture from two category four hurricanes slammed into Mexico, sending significant moisture into our desert communities. As a result, in October 2018, two (yes TWO!) 1,000 year thunderstorms pounded Box Canyon (just east of Indio) within weeks of each other. All told, the County suffered nearly $80,000,000 in damages from these storms. Over $15,000,000 of that total reimburses ongoing costs to clear over 500,000 cubic yards (50,000 truckloads) of debris and mud out of District facilities. The balance will reimburse federal, state and other local agency costs to repair and remove mud and debris from drainage facilities, damaged roads and other public infrastructure.

To great extent, private property downstream of the burn areas was spared from extensive damage. Less than one dozen private structures were damaged as a result of an incredible effort coordinated by the Emergency Management Department with support from numerous non-profit, local, state and federal agencies including our Flood Control District. Our goal, of course, was “zero” private structure damage; however, many more properties were spared or protected by the coordinated response effort.

To put the magnitude of threat in perspective, consider that the Holy and Cranston fires burned over 35,000 acres and threatened nearly 40,000 downslope residents with the potential for impacts from dangerous debris flows and enhanced flooding. The 200-year, 12-hour February 14th storm was strong enough to not only trigger the Holy and Cranston Fire burn scars, but to also mobilize mud and debris from the 5-year old Mountain Fire burn scar above Palm Springs. All told, there were 11 different evacuation events across the winter months. At the height of the February 14th storm, there were more than 60,000 residents under evacuation or shelter in place orders.

Again, the key to success was the incredible team, support from our Board of Supervisors and the commitment by dozens of local, state and federal agencies to abandon their silos, link arms and do what was necessary to protect our communities. I am most proud of our District staff and the role they played. District staff led efforts to develop debris flow risk maps for each of the burn areas, convey risk information at community meetings, develop tools and technology to map, monitor and assess the evolution of the burn areas, advise and support other public works agencies and, of course, quickly design and construct emergency protection projects in advance of the winter. Once the winter started, our maintenance crews and emergency contractors were working around the clock to remove mud and debris from facilities as significant storms were coming every 2-3 weeks. The District’s efforts received local, state and national recognition from peer groups including the American Society of Civil Engineers, National Association of Flood and Stormwater Management Agencies, California State Association of Counties and the National Association of Counties.

Please keep in mind that our staff accomplished all the above while also continuing to move the ball forward on our intended schedule of projects that was set long before the Holy and Cranston Fires. The emergency response did impact schedules and available funding for pending projects, but our team did an amazing job advancing both their day jobs and the emergency work that demanded their attention.

We’ve also learned from this year. This winter taught us how to better prepare for and defend against future mud and debris flows. We’ve made several modifications to debris-susceptible facilities that will better prepare them for future events. We’ve learned how to effectively deploy new remote monitoring technology for District facilities. Lastly, we’ve learned how to work even more closely and effectively with our partner agencies.

The pages herein cover these issues in more detail. We hope that as you read this report, you find that our service this year has exemplified our values and vision. We look forward to serving you in the near future.

Jason E. Uhley,
General Manager-Chief Manager
Value Statements

**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 results and ensuring staff development.
Board of Supervisors

1st District
Kevin Jeffries

2nd District
Karen Spiegel

3rd District
Chuck Washington

4th District
Jeff Hewitt

5th District
V. Manuel Perez

Riverside County Flood Control and Water Conservation District • 2019
Management Team

BACK ROW STANDING LEFT TO RIGHT:

John Carrillo
Chief of Watershed Analytics
Jim McNeill
Chief of Surveying & Mapping
Jeanine Rey
Chief of Finance
Joan Valle
Chief of Regulatory
Richard Boon
Chief of Watershed Protection
Henry Olivo
Chief of Operations & Maintenance

FRONT ROW SITTING LEFT TO RIGHT:

Claudio Padres
Chief of Design & Construction
Robert Cullen
Assistant Chief Engineer
Jason Uhley
General Manager–Chief Engineer
Edwin Quiñonez
Chief of Planning
Beth DeHayes
Executive Assistant II

Not Shown In Picture:
Leadership

Commitment to the Community

National Association of Flood and Stormwater Management Agencies (NAFSMA)
Jason Uhley, Board of Directors

Riverside County Employee Campaign
Jason Uhley, Chair

California Spatial Reference Center's (CSRC) Executive Committee
Josh Tremba, Treasurer
Shane Bender, Elected Member

American Society of Civil Engineers - 2020 Inland Empire Report Card Co-Chairs
Julianna Adams and Edwin Quiñonez

Southern California Stormwater Monitoring Coalition
Rebekah Guill, Vice Chair

California Stormwater Quality Association
Richard Boon, Director
Matt Yeager, Policy and Permitting Chair
Darcy Kuenzi, Legislative Chair
Rebekah Guill, Monitoring and Science Chair

SBVC GIS Industry Advisory Committee Member
Alma Hidalgo

American Society of Civil Engineers - San Bernardino/Riverside Branch Treasurer
Entcho Anguelov

United Way of the Inland Valleys - Board of Directors
Julianna Adams

Adjunct Geography/GIS Faculty at San Bernardino Valley College
Alma Hidalgo

Alert Users Group
Robert Laag, Treasurer

Association of Environmental Professionals Inland Empire Chapter
Kevin Cunningham, Past President
Joan Valle, Legislative Liaison

Cal Poly Pomona Department of Urban and Regional Planning Alumni Association
Kevin Cunningham, Vice President

Community Contribution & Involvement

Santa Ana River Clean Up – September 29, 2018
Santa Ana River, Fairmount Park, Martha McLean – Anza Narrows Park and downtown Riverside

Event Partners: Riverside County Flood Control and Water Conservation District, Riverside Chamber of Commerce - Keep Riverside Clean & Beautiful, City of Riverside Public Utilities, Custom Service Systems, Farmer Boys, Western Municipal Water District, Athens Services, Bank of America, Best Best & Krieger, Patty & Mike Blakely, Burrtec, Riverside Police, Riverside County Sheriff, California Baptist University, CR&R Environmental Services, HDR, Inland Empire Waterkeeper, La Sierra University, Louie's Nursery, OctoGreen, Rivers and Lands Conservancy, SoCal Gas, Toro, University of California at Riverside, and Kathy Wright & Dwight Tate.

Volunteers: 522 • Pounds of Trash: 28,420 lbs. (over 14 tons!) • Paint: 50 gallons graffiti of paint to remove over 1,000 tags

Volunteer Charitable Event Coordinators

Riverside County Employee Campaign
Jason Uhley, Campaign Chair
Komy Ghods and Joan Valle, District Coordinators

As part of the Riverside County Employee Campaign, the District fundraises every October to support Breast Cancer Awareness. Team Pink hosts a breakfast each Tuesday, along with selling pink ribbon crafts and raffles. With the tremendous support of District staff, Team Pink raised over $1,800 for a local breast cancer resource center.

LifeStream Blood Drives
In FY 2018/2019, the District held 2 drives with 51 units collected. Beth DeHayes • Summer Smith

Thanksgiving Food Drive
Christine Morones • Summer Smith

Fill-A-Backpack School Supply Drive & Snowflake Toy Drive
Summer Smith

Culture of Health Ambassadors
Firas Kassem and Rick Landeros

Youth In Government
Norma Cummings, Coordinator

American Heart Walk
Charlene Warren
District Zones

The District is divided into seven geographically defined funding zones. The District collects tax revenues within both the unincorporated and incorporated portions of each zone. The revenue generated in each zone must be spent on projects that benefit the zone.

The Board appoints three Zone Commissioners to serve each zone and assist the District with setting budget priorities.

ZONE 1
Don Harriger, 1st District
Scott H. Krentel, 1st District
Chuck Krieger, 2nd District

ZONE 2
Serena Burnett, 1st District
Ted Hoffman, 2nd District
Richard MacGregor (Ret.), 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
Richard Cromwell III, 4th District
Ivan Sewell, 4th District
Steven Stewart, 4th District

ZONE 7
Teri Biancardi, 3rd District
Vincent Scarpino, 1st District
Vacant, 3rd District
2018/2019 Dashboard

CAPITAL PROJECT EXPENDITURES ($1,000s)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Values</td>
<td>34,782</td>
<td>30,207</td>
<td>76,931</td>
<td>66,276</td>
<td>25,476</td>
<td>34,145</td>
<td>25,593</td>
</tr>
</tbody>
</table>

REVENUE

- **TAXES**: $55,023,000
- **STATE AID**: $557,562
- **OTHER REVENUE**: $11,971,202
- **CHARGES FOR SERVICES**: $4,202,280
- **USE OF MONEY**: $7,136,136

TOTAL: $78,890,180

EXPENSES

- **ADMINISTRATION**: $21,078,000
- **LAND USE / PURCHASE**: $1,441,000
- **RIGHT OF WAY / SURVEY / DESIGN**: $9,747,000
- **CONSTRUCTION**: $12,328,000
- **MAINTENANCE**: $13,130,000

TOTAL: $57,724,000

53 Structures Removed from the Floodplain

36 Acres of Harmful Floodplain Removed
Rainfall and Runoff

Water year 2019 (October 1, 2018 to September 30, 2019) marked a return to wetter conditions statewide, with nearly all the state experiencing average to above-average precipitation. Southern California was no exception and received more than average annual precipitation during the winter months. The prior water year, which had little precipitation and higher than average temperatures, coupled with the dry vegetation from the recently ended five-year drought, contributed to the Holy and Cranston fires that occurred at the beginning of the 2019 water year.

There were more than 30 atmospheric rivers with many making landfall in northern California.

The state’s snowpack as of April 1st was 175 percent of average compared to last year’s 58 percent of average.

Statewide reservoir storage is 128 percent of average through the end of September which is approximately 29.7 million acre-feet.
Precipitation

Riverside County had been experiencing the fluctuations of more sporadic climate variations bringing wet conditions one year and extremely dry the next; this is referred to as a “whiplash effect”. After water year 2017 ended as an average year for rainfall in Riverside County, water year 2018 ended well below average. Then as water year 2019 progressed, Riverside County found itself with above average rainfall leading to the wettest year since 2011 and the hope that the prolonged dry spell would come to an end. The figure below summarizes actual rainfall as a percent of annual precipitation for three representative areas throughout Riverside County.
Runoff

Runoff in Riverside County made a comeback to above average rainfall over most of the County. The real stand out was the Whitewater River which saw an event on the 14th of February that caused massive flows throughout the Coachella Valley. The reason for such a high percentage of runoff with that storm was the short duration being a 12-hour window of heavy precipitation. Another contributing factor was a warm rain event on snow which covered the surrounding mountains. The figure below shows runoff as a percent of the historical average during recent water years at four USGS gauge stations: Santa Ana River at the Metropolitan Water District crossing, San Jacinto River near Sun City, Murrieta Creek near Highway 79, and the Whitewater River at Rancho Mirage.

Water Year Runoff In Percentage Of Average

![Water Year Runoff Chart](chart.png)
Debris Flows

Debris flows are fast-moving landslides that occur in a wide variety of environments throughout the world. They are particularly dangerous to life and property because they move quickly, destroy objects in their paths, and often strike without warning. The term “debris flow” is a general term used to describe the type of runoff from a watershed that carries not only stormwater, but other matter along with it—sand, stones, trees and vegetation—anything in the path of the flowing water.

The burned mountain slopes of the Santa Ana Mountains were primed to produce potentially deadly mud and debris flows. Experts indicated that ½ inch of rain could trigger mud and debris events. Close to 40,000 residents lived below the burn scars. Our desert facilities also experienced a significant amount of debris flow in the form of sediment (sandy, rocky material) that was deposited into our basins and channels.
District staff led efforts to develop debris flow risk maps for each of the burn areas, convey risk information at community meetings, develop tools and technology to map, monitor and assess the evolution of the burn areas, advise and support other public works agencies and, of course, quickly design and construct emergency protection projects in advance of the winter.

Once winter started, our maintenance crews and emergency contractors were working around the clock to remove mud and debris from facilities as significant storms were coming every 2-3 weeks.

The District’s efforts received local, state and national recognition from peer groups including the American Society of Civil Engineers, National Association of Flood and Stormwater Management Agencies, California State Association of Counties and the National Association of Counties. In some cases, the debris filled some facilities, requiring emergency action to remove and restore our infrastructure to ensure capacity is maintained for the next storm event.
Storm Events

Early 2019 saw many large storm events that resulted in extensive flooding and debris damage. The 200-year, 12-hour February 14th storm was strong enough to not only trigger the Holy and Cranston Fire burn scars, but to also mobilize mud and debris from the 5-year old Mountain Fire burn scar above Palm Springs. All told, there were 11 different evacuation events across the winter months.

At the height of the February 14th storm, there were more than 60,000 residents under evacuation or shelter in place orders. Rain totals for the month were several inches above the yearly average and are largely due to the major storms that occurred in February.

The District ran 24-hour staff and contract crews to ensure that District facilities were cleared of mud and debris after each event and before the next. Our maintenance teams partnered with County Transportation, CalTrans, the City of Lake Elsinore, and other entities to provide mutual aid throughout the rainy season.
The unprecedented storms also resulted in the declaration of a Federal Disaster for Riverside County and over $2 million in FEMA funding. Countywide, over $70 million in property damage was recorded from the February 14th storm alone. District facilities and the areas they protected fared well, though. The damages reflect the fact that over $1 billion in drainage infrastructure still needs to be built in Riverside County.
Box Canyon road washed out after a large storm cell sat stationary above the north end of the canyon and dropped several inches of rain in a few hours. The repairs will cost $3 million due to the extent of the damage.

Photo Credit: Maria Thompson; Glendora, California

An excavator works at Leach Canyon Basin after heavy rainfall. The bollards were installed to keep large debris from going downstream. Several inches of rain fell on the Holy Fire burn scar in a short period of time resulting in large flows.

Photo Credit: Josh Gutknecht

The Palm Springs area saw 5” of rain on February 14th and 15th with nearly all of that falling within a 12-hour period. Seen here, stormwater flowing over the Tahquitz dam spillway after the basin was completely filled with sediment and debris from the canyons above.

Photo Credit: Josh Gutknecht

Pictured here is Hemet Channel at Warren Road where water overflowed the banks after 12 hours of rain totaling between 2.5” and 3.5” fell in the San Jacinto and Hemet area.

Photo Credit: George McPherson

Highway 243 at Saunders Meadow was completely washed out after the mountain areas received between 6” and 9” of rainfall during a 12-hour period. This storm event damaged several stretches of Highway 243 and Highway 74 rendering them impassable for several months while construction crews rebuild several sections of roadway.

Photo Credit: Caltrans

A couple is stranded in the rushing waters of the San Gorgonio River in Cabazon. The area received heavy rains which led to the high flow rates of many creeks and rivers within the San Gorgonio pass and surrounding areas.
The Surveying & Mapping Division faced the challenge of delivering mapping of the Holy Fire burn area beginning in the fall of 2018. The mapping area covered approximately 60 square miles, the majority of which was mountainous and largely inaccessible. The Photogrammetry Section utilized high density LiDAR to map the topographic features of the burn area and create Digital Terrain Models (DTMs). Imagery was also collected and processed so that an orthorectified and mosaiced image that covers the entirety of the mapping limits could be provided. This process was completed four times between September 2018 and February 2019 and was utilized to study mudslides, to aid in emergency preparations for upcoming storms, and decide which areas would need to be evacuated. Smaller mapping sites were flown with more frequency by the Survey Section using the drone. Sites flown by the drone include Leach Canyon Dam, McVicker Debris Basin, and areas throughout the Lake Elsinore area that experienced storm or mud damage.
### Emergency Projects

Many of the emergency projects completed this year were related to the Holy Fire and were either preparation for, or clean-up after debris flows. The Holy Fire was a wildfire that occurred in August 2018 and burned over 23,000 acres of the Cleveland National Forest near Lake Elsinore, Corona, and Temescal Valley. The Holy Fire created a dangerous debris flow condition for the area as the watershed was severely burned just before the rainy season. Post-fire debris can contain high concentrations of organics and ash, which need to be disposed of thoughtfully following local, state, and federal regulations. The large rainfall totals and subsequent flooding in February resulted in 18 emergency District projects. These projects primarily focused on sediment removal and spillway repairs throughout the cities of Lake Elsinore and Corona.

<table>
<thead>
<tr>
<th>FACILITY NAME</th>
<th>CITY</th>
<th>WORK COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horsethief Canyon Storm Drain Repair</td>
<td>Corona</td>
<td>Storm Drain Repair</td>
</tr>
<tr>
<td>Horsethief Canyon O&amp;M Preparation and Clean Out</td>
<td>Corona</td>
<td>Sediment Removal</td>
</tr>
<tr>
<td>Leach Canyon Dam Preparation and Clean Out</td>
<td>Lake Elsinore</td>
<td>Sediment Removal</td>
</tr>
<tr>
<td>Leach Canyon Dam Spillway Restoration</td>
<td>Lake Elsinore</td>
<td>Spillway Repair</td>
</tr>
<tr>
<td>Leach Canyon Dam O&amp;M Dewatering</td>
<td>Lake Elsinore</td>
<td>Sediment Removal</td>
</tr>
<tr>
<td>McVicker Debris Basin Preparation and Clean Out</td>
<td>Lake Elsinore</td>
<td>Sediment Removal</td>
</tr>
<tr>
<td>McVicker Debris Basin O&amp;M Dewatering and Access Road Repair</td>
<td>Lake Elsinore</td>
<td>Sediment Removal</td>
</tr>
<tr>
<td>McVicker Debris Basin O&amp;M Canyon Wall Stabilization</td>
<td>Lake Elsinore</td>
<td>Slope Stabilization in Planning/Design Stages</td>
</tr>
<tr>
<td>Palm Canyon Wash D&amp;C Stream and Levee Restoration and R/W</td>
<td>Palm Springs</td>
<td>Significant reduction of hydraulic capacity was caused by the deposition of sediment in the wash bed. Deposition depths range from 2’ to 6’ within restoration limits. Excavation and removal of such deposits is necessary to restore levee function and ensure the protection of adjacent communities against subsequent storm events.</td>
</tr>
<tr>
<td>FACILITY NAME</td>
<td>CITY</td>
<td>WORK COMPLETED</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>---------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Tahquitz Creek Debris Basin O&amp;M Clean Out</td>
<td>Palm Springs</td>
<td>As a result of a significant winter storm and occurring wildfires, the debris basin has reached capacity due to sediment accumulation. This accumulation has prevented floodwaters from entering drainage structures and has resulted in flows utilizing the emergency spillway. Excavation and removal of sediment is necessary to restore capacity to the debris basin and protect downstream facilities and properties.</td>
</tr>
<tr>
<td>Indian Canyon Debris Basin O&amp;M Restoration</td>
<td>Banning</td>
<td>Sediment Removal</td>
</tr>
<tr>
<td>San Jacinto River Levee Repair O&amp;M and KIP Inc.</td>
<td>San Jacinto</td>
<td>Levee Repair</td>
</tr>
<tr>
<td>West Elsinore Line A O&amp;M Restoration</td>
<td>Lake Elsinore</td>
<td>Sediment Removal</td>
</tr>
<tr>
<td>West Elsinore Line A-1 Outlet Restoration</td>
<td>Lake Elsinore</td>
<td>Sediment Removal</td>
</tr>
<tr>
<td>Palm Canyon Wash O&amp;M Stream and Levee Restoration and R/W</td>
<td>Palm Springs</td>
<td>Sediment Removal</td>
</tr>
<tr>
<td>San Jacinto River Levee O&amp;M Remaining Repair and Restoration</td>
<td>San Jacinto</td>
<td>Slope, Levee, and Road Repairs</td>
</tr>
<tr>
<td>Bautista Basin O&amp;M Clean Out</td>
<td>Unincorporated</td>
<td>Sediment Removal</td>
</tr>
<tr>
<td>Cottonwood Canyon Wash O&amp;M Restoration</td>
<td>Unincorporated</td>
<td>Sediment Removal</td>
</tr>
</tbody>
</table>
Awards Received in Fiscal Year 2018/2019

**American Society of Civil Engineers**
San Bernardino and Riverside Counties Branch (ASCE)
- Outstanding Civil Engineering Project
- Environmental Engineering Project: Meadowview Stream Restoration Project

**American Society of Civil Engineers**
San Bernardino and Riverside Counties Branch (ASCE)
- Outstanding Civil Engineer – Public Sector
  Edwin Quiñonez

**American Society of Civil Engineers**
San Bernardino and Riverside Counties Branch (ASCE)
- Outstanding Civil Engineer – Community Service
  Julianna Adams

**National Association of Counties (NACo)**
- Best in Category – Information Technology
  Monitoring and Response Tools for Post-Wildfire Debris Flow Management

**Government Finance Officers Association**
- Certificate of Achievement for Excellence in Financial Reporting

**California Stormwater Quality Association (CASQA)**
- Outstanding Stormwater BMP Implementation Project
  Bioretention Basin Retrofit (as part of the Low Impact Development Testing and Demonstration Facility)

**National Association of Flood and Stormwater Management Agencies (NAFSMA)**
- Second Place – Communication Awards
  Communications Tools for Post-Wildfire Debris Flow Management

**American Public Works Association (APWA)**
Southern California Chapter, Inland Empire Branch
- 2019 Stormwater Project of the Year Award
  Heacock Channel Project

**Public Relations Society of America**
Inland Empire Chapter
- Capella – 2018 Polaris Awards
  Watershed Protection Program Newsletter

**California State Association of Counties**
- 2019 Challenge Award
  Southeast Drainage Challenge Improvement Project

---

**Pinto Project**

The District is proud to have completed the remediation and acquisition of the Pinto property within the Temescal Valley. For decades, the property was used as an illegal landfill with an accumulation of over five million pounds of trash and debris. The District led the effort and partnered with several other County Departments including Transportation, Environmental Health, Waste Resources, and Code Enforcement to clean up the site. Due to the level of contamination, the project required substantial regulatory oversight. In the end, the debris was removed; the District acquired the site as part of our Temescal Wash Buyout Program; and the renewed site is no longer a threat to the watershed.
Completed Projects
1. Meadowview Stream Restoration Project
2. Norco MDP Line SA-2
3. Bluff Street Storm Drain
4. Corona Landfill Southeast Drainage Channel Improvement Project
5. Third Street Channel
6. Corona Line S2
7. Arlington Groundwater Basin Recharge Project (Victoria Basin)

Ongoing Projects
1. Murrieta Creek Flood Protection and Environmental Restoration Project Phase 2
2. Heacock Channel
3. Norco MDP Line NA-1, Stage 2 and NA-1A
4. Santa Ana River BNSF Bridge Protection Project
5. Coldwater Canyon Improvements
6. Norco Minor Drainage Improvements
Completed Projects

1. Meadowview Stream Restoration
The $541,566 Meadowview Stream Restoration Project is located within the Meadowview Community Association. The 4.25-acre stream restoration project was designed in coordination with the Natural Resource Conservation Service and includes stream stabilization with native vegetation and bioengineering techniques with the primary purpose of stabilizing stream banks, minimizing erosion and sedimentation, protecting adjacent utilities, a recreational trail, and ultimately restoring the functions and values of the stream. This project received the Environmental Engineering Project award from the San Bernardino and Riverside Branch American Society of Civil Engineers.

2. Norco MDP Line SA-2
The storm drain improvements will capture runoff along Corona Avenue to alleviate flooding to existing homes on the westerly side of the street. The District is contributing approximately $258,276 to construct these storm drain improvements.

3. Bluff Street Storm Drain
The storm drain project will capture runoff on Bluff Street from River Road to Vine Street to alleviate flooding and erosion to residential properties along the roadway. The contribution to this project is approximately $263,010.

4. Corona Landfill Southeast Drainage Channel Improvement Project
This project is led by the Riverside County Department of Waste Resources to address flooding and erosion problems along the south side of a closed landfill in the city of Corona. The proposed improvements include armoring along the southern boundary of the landfill. The District will contribute $900,000 to Riverside County Waste Resources who will design, construct, and maintain the drainage improvements.
5. Third Street Channel, Stage 2
This City of Lake Elsinore-led project completed in early 2019 extended the existing Third Street Channel from Collier Avenue, under the I-15 Freeway to Cambern Avenue. The new drainage system was built to help alleviate street flooding east of Interstate 15. The District contributed $53,322 toward the design and construction of the project and will be accepting the project for ownership, operation, and maintenance.

6. Corona Line 52
The City of Corona has led the design and construction of an underground storm drain in Joy Street extending north to Temescal Creek. The District is funding the design and construction, in the amount of $26,463, that will reduce flood risk along Joy Street and Grand Boulevard.

7. Arlington Groundwater Basin Recharge Project (Victoria Basin)
The Victoria Recharge Basin will deliver Western Municipal Water District customers a new, local supply of up to 1,800 acre-feet of water per year. The new water supply will be equivalent to the amount of annual water needed to supply 3,600 homes. The $3.4 million project is part of the larger $10 million Arlington Recharge Project, which includes building the Victoria Recharge Basin as well as construction of a production well and transmission pipeline.
Ongoing Projects

1. Murrieta Creek Flood Protection and Environmental Restoration Project Phase 2

The District continues to work with the US Army Corps of Engineers to complete Phase 2A. This project will improve flood protection for Old Town Temecula and reduce the likelihood of a repeat of the catastrophic 1993 floods that resulted in more than $22 million in damages to the Old Town Temecula community. The project also incorporates extensions of existing trails for residents and new habitat conservation corridors for the environment. We continue to work with Congressman Ken Calvert and the local congressional delegation to obtain the remaining $100 million in funds necessary to complete this critical flood protection, environmental restoration, and recreation project for the cities of Murrieta and Temecula.

2. Heacock Channel, Stages 3 and 4

This is a $13.6 million project located in the city of Moreno Valley. This project consists of a 100-year reinforced concrete channel that provides flood hazard mitigation to March Air Reserve Base, adjacent businesses, and local residents. This project was mostly constructed and functional during the 2018/2019 fiscal year, with official acceptance anticipated early fiscal year 2019/2020.
3. Norco MDP Line NA-1, Stage 2 and Line NA-1A
The $2 million project will reduce flooding and mud flows in the neighborhood surrounding Crestview Drive and Mt. Rushmore Drive within the city of Norco. The storm drain will collect stormwater from the La Sierra Hills along Crestview Drive in an underground pipe and convey them southerly.

4. Santa Ana River BNSF Bridge Protection Project
This $50 million endeavor consists of bridge and pier protection improvements for the existing BNSF railroad bridge downstream of Prado Dam. The Army Corps of Engineers awarded a contract in September 2017, and construction began in 2018. The District, as Local Sponsor, will continue to assist in project management, right of way acquisition, construction, utility relocations, environmental review, and permitting.

5. Coldwater Canyon Improvements
This project reduces flood risk to the public on Temescal Canyon Road at the intersection of Glen Ivy Road, and is an emergency project being implemented in response to the increased flood risk following the 2018 Holy Fire. The project is being pursued in collaboration with County Transportation, where Transportation constructed a new culvert under Temescal Canyon Road, and the District is constructing a basin to ensure that storm flows are conveyed to the new culvert.

6. Norco Minor Drainage Improvements
These improvements comprise of eleven City of Norco-led projects to design and construct drainage improvements within the Norco Master Drainage Plan to provide residents with protection from flooding. The District already fully funded the construction of several projects in previous fiscal years. During this fiscal year, the District provided funding in the amount of $502,000 for the construction of Norco MDP Line N-1C, which is an extension of Norco MDP Line N-1C southerly on Pedley Avenue.
Active Design Projects

In addition to the ‘Completed’ and ‘On-going’ 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 below lists the projects that were actively being designed in Fiscal Year 2018/2019, and indicates (D) for District-led, or (P) for Partner-led.

<table>
<thead>
<tr>
<th>ZONE</th>
<th>SUP</th>
<th>ACTIVE DESIGN PROJECTS</th>
<th>SUPERVISORIAL DISTRICT</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5</td>
<td>BANNING MDP LINE H</td>
<td>D</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>BAUTISTA CREEK CH (RECHARGE BASIN EXPANSION)</td>
<td>D</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>BEAUMONT MDP LINE 16 (AKA RECHARGE BASIN FEEDER)</td>
<td>D</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>BEAUMONT MDP MARSHALL CREEK</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>BEDFORD CANYON WASH</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>1, 2</td>
<td>CAJALCO ROAD SD (LAKE MATTHEWS)</td>
<td>D</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>CALIMESA CHANNEL, STAGE 3</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>COLDWATER CANYON - STRUCTURAL IMPROVEMENTS</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>CORONA DRAINS LINE 52, STAGE 1</td>
<td>P</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>DESERT HOT SPRINGS MDP LINE E-5 STG 1</td>
<td>D</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>EAGLE CANYON DAM</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>EASTVALE CHANDLER STREET LATERAL AGREEMENT</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>EASTVALE MDP - LINE D (WATER QUALITY ENHANCEMENT)</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>EASTVALE MDP - LINE E (WATER QUALITY ENHANCEMENT)</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>EL CERRITO CHANNEL RESTORATION</td>
<td>D</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>GILMAN HOME CHANNEL STG 6</td>
<td>P</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>GOOD HOPE-OLIVE AVENUE SD</td>
<td>D</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>GREEN ACRES DAM &amp; OUTLET</td>
<td>D</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>HEACOCK CH-SUNNYMEAD LINE B, STAGE 3</td>
<td>P</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>JURUPA-PYRITE MDP LINE A-2, STAGE 1</td>
<td>D</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>LAKE ELSINORE OUTLET-AG PIPE JNT PROJ</td>
<td>P</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>LAKELAND VILLAGE MDP LINE H (AKA ADELFA CHANNEL)</td>
<td>D</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>LAKEVIEW/NUEVO MDP - LATERAL D</td>
<td>D</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>MEAD VALLEY MDP LINE A</td>
<td>D</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td>MEADOWVIEW STREAM RESTORATION, STAGE 60</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>MOCKINGBIRD CYN RESTORATION SUB-REACH 1</td>
<td>D</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>MONROE MDP - MONROE CHANNEL</td>
<td>D</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ZONE</th>
<th>SUP</th>
<th>ACTIVE DESIGN PROJECTS</th>
<th>SUPERVISORIAL DISTRICT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>MONROE MDP LINE E, STAGE 2 &amp; 3</td>
<td>P</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>MORENO MDP LINE F-2 AND F-18</td>
<td>P</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>MORENO MDP LINE K-1, STAGE 3 AND LINE K-4</td>
<td>P</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>MORENO-ALESSANDRO INTERIM FACILITY (DISCOVERY CH)</td>
<td>D</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td>MURRIETA CREEK CHANNEL (PHASE II &amp; III)</td>
<td>P</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>NORCO MDP LINE S-2</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>NORCO MDP LINES NA-1, STAGE 2 &amp; NA-1A</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>NORCO MINOR DRAINAGE IMPROVEMENTS</td>
<td>P</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>NORTH NORCO CHANNEL - LINE NB, STAGE 3</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>NORTH NORCO CHANNEL - LINES N-2, NC &amp; LAT NC-1</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>NORTH NORCO CHANNEL, STAGE 11</td>
<td>D</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>ORTEGA CHANNEL (CONVERT PIPE TO CHANNEL)</td>
<td>D</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>PALM CANYON WASH LEVEE RESTORATION</td>
<td>D</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>PALM SPRINGS MDP - LINE 41, STAGE 3</td>
<td>D</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>PHOENIX AVENUE SD DRY WEATHER DIVERSION</td>
<td>P</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>ROMoland MDP - LINE A-3, STAGE 2</td>
<td>D</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>SAN JACINTO MDP LINE E-2 &amp; E-2A</td>
<td>P</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>SAN JACINTO RIVER, STAGE 3</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>SANTA ANA RIVER BELOW PRADO DAM</td>
<td>P</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>SEDCO LINE F STAGE 3 (BUNDY CANYON ROAD)</td>
<td>P</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>SOUTH NORCO CHANNEL</td>
<td>D</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>SUNNYMEAD - CA CTUS AVE CHANNEL</td>
<td>P</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>SUNNYMEAD - FLAMING ARROW DRIVE SD</td>
<td>D</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>SUNNYMEAD MDP LINE B-16A, STAGE 2</td>
<td>D</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>SYCAMORE DAM OUTLET MODIFICATION</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>1, 2</td>
<td>TEMESCAL CREEK FLOOD PLAIN AQ</td>
<td>D</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>THIRD STREET CHANNEL</td>
<td>P</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>WILDOMAR MDP LATERAL C - BASIN</td>
<td>D</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>WOODCREST DAM OUTLET MODIFICATION</td>
<td>D</td>
</tr>
</tbody>
</table>
District Annual Highlights

Surveying and Mapping
The Surveying and Mapping Division now has five FAA-certified UAV pilots, who are helping the District’s drone program grow into a valuable tool for the District and other County Departments. The new drone’s capabilities were immediately tested following the Holy Fire in August 2018. Numerous mapping missions were completed on a near daily basis to support design and safe operation of our facilities downstream of the burn scar. Surveying and Mapping was also able to deliver four complete data sets of LiDAR mapping over the entire burn area. An enormous amount of work was delivered over the rainy season with minimal resources, highlighting the hard-working and dedicated survey team for the District.

Environmental Protection
The Regulatory Division’s Environmental and Regulatory Services Sections (ERS) ensure that we are compliant with various environmental laws such as CEQA, FESA, CESA, Porter Cologne, and various sections of the Federal Clean Water Act and the California Fish and Game Code. In addition to supporting our typical construction and maintenance endeavors, in the past year ERS:

- Collaborated with the State Water Resources Control Board in an effort to assist in developing a policy that will help to ease regulatory requirements for flood control districts statewide on routine facility maintenance.
- Acquired a number of emergency projects related to the Holy Fire and the winter storms by working closely with regulatory agencies to obtain emergency permits for work in basins and waterways.
- Coordinated cleanup of 2,730 tons of trash and other hazardous materials that was illegally dumped adjacent to Temescal Creek.
- Supported the U.S. Fish and Wildlife Service with their species counts for the endangered Casey’s June beetle.
- Assisted the Riverside Corona Resource Conservation District and the San Bernardino Valley Municipal Water District with Santa Ana Sucker surveys.
- Assisted the Santa Ana Watershed Association with their annual invasive plant removal efforts.

Floodplains
The District’s Regulatory Division’s Floodplain Management Section prepares floodplain maps and coordinates with the Federal Emergency Management Agency in removing Special Flood Hazard Area (SFHA) designation when stormwater management structures are constructed to reduce flood hazards. During this period, Coldwater Canyon Wash Flood Hazard Study was added to County Ordinance 458 under the Special Study Floodplains. The Coldwater Study delineates a flood hazard area which includes the limits of the meandering wash, debris, and the 100-year floodplain. This will help improve development guidance in the area.
Real Estate Services

Real Estate Services now has the ability to search a given property back as far as the 1880s using the search engine known as TitlePoint (owned by Black Knight Financial Services). TitlePoint provides a wide variety of information including but not limited to: scanned pages of old hand-written property transfer books; documents and maps, court orders and liens on individuals, and any other items recorded through the Riverside County Recorder’s Office; current tax roll information; and computer-generated property runs on every Riverside County parcel. TitlePoint has already be instrumental in locating previously unknown items such as cemetery and other restrictions and easements on properties and even access the District didn’t know it had. This search engine has not only been a monetary savings to the District, but it is a time saver as well, such as having the ability to print documents and maps takes only seconds as opposed to waiting days or even weeks if they had to be ordered from other entities.

Finance: Awards & Acknowledgments

The Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the District for its Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2018. This was the twenty-eighth consecutive year that the District published an easily readable and efficiently organized CAFR that satisfied both generally accepted accounting principles and applicable legal requirements. The District is submitting for its twenty-ninth Certificate of Achievement for Excellence in Financial Reporting for the fiscal year ended June 30, 2019.

The District continually looks for the most efficient, useful, and comprehensive ways to provide detailed project financial data to the public and other governmental agencies. Currently it is exploring the full use functionality of its integrated project cost accounting software Finance Enterprise and reporting software COGNOS to enhance data capture capabilities and customer information data delivery through the use of GIS, scanned documents, online data entry, internal workflows, and online payments.

Maintenance

The Operations and Maintenance (O&M) Division is responsible for the ongoing inspection, operation, and maintenance of District facilities, consisting of underground storm drains, channels, levees, debris basins, embankment dams, and the District’s building and grounds. During FY 2018/2019, O&M coordinated several major debris export operations with several Cities and County Departments as a result of the Holy Fire and subsequent winter storm events. The District’s O&M Division also collaborated with several Cities and Riverside County agencies with the clean up of homeless encampments throughout Riverside County.

Finance: Awards & Acknowledgments

The Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the District for its Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2018. This was the twenty-eighth consecutive year that the District published an easily readable and efficiently organized CAFR that satisfied both generally accepted accounting principles and applicable legal requirements. The District is submitting for its twenty-ninth Certificate of Achievement for Excellence in Financial Reporting for the fiscal year ended June 30, 2019.

The District continually looks for the most efficient, useful, and comprehensive ways to provide detailed project financial data to the public and other governmental agencies. Currently it is exploring the full use functionality of its integrated project cost accounting software Finance Enterprise and reporting software COGNOS to enhance data capture capabilities and customer information data delivery through the use of GIS, scanned documents, online data entry, internal workflows, and online payments.
Repeal of Eastvale Area Drainage Plan

Originally adopted in June 1991, Eastvale Area Drainage Plan (ADP) has been a funding mechanism to offset taxpayer costs for the proposed ADP drainage facilities by imposing a fee on the development to pay their fair share. By the end of 2018, essentially all of the Eastvale ADP facilities had been constructed. Since the objective of the ADP has been met, Eastvale ADP is the first ADP to be considered for closeout. The District has been coordinating with the County and the City of Eastvale in identify the process and preparing necessary documents in repealing the ADP. The target date to bring the repeal of Eastvale ADP for Board approval is September 2019.

Development Services Team

The District’s Development 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 150 entitlement cases, answered over 400 inquiry calls, provided feedback on the District’s interest of over 500 development cases in incorporated cities, and reviewed approximately 70 flood proofing cases of residential structures proposed in a floodplain. Plan Check reviewed over 50 projects and approved 19 sets of storm drain improvement plans for proposed facilities to be maintained by the District. In addition, Plan Check reviewed, issued, and inspected about 155 encroachment permits for use, access, trails, and connections within District right of way. Contract Services prepared over 55 agreements in addition to processing administrative clearances for tracts and parcels prior to construction. Contract Services also helps to administer the District’s grant programs, which includes coordinating the District’s Proposition 84 grant reporting, preparing grant applications for West Elsinore MDP – Line A (Hazard Mitigation Grant Program), and assisting with the Lakeland Village MDP Line H Pre-Disaster Mitigation Grant Program.

Water Quality Project

Phoenix Avenue storm drain dry weather flow diversion project is being led by the City of Riverside in collaboration with the District with the goal of minimizing bacteria levels in the Middle Santa Ana River (MSAR). Studies have found significantly elevated concentrations of E. coli bacteria at the Phoenix Storm Drain outfall and it has been identified as a high priority for the dry weather flow mitigation activities. The project will divert up to 1 cfs of dry weather flow into a nearby sewer line. This project is the first stormwater diversion to sewer project in Riverside County and will serve as a pilot project for additional future diversions to address the MSAR bacteria TMDL. The project is currently at the 60% design level with the goal of construction in 2020.
Another new tool developed to handle the Holy and Cranston post-fire responses is the Storm Center Rainfall Dashboard which was used at the District’s Storm Center activations and the County EOC activations.

New cameras were installed at Coldwater Canyon, Rice Canyon, McVicker Canyon, and Leach Canyon to monitor in real time the current conditions of the dams and basins that would be most affected by debris flows this year.
The Hydrology Section of Watershed Analytics was heavily involved in post-fire preparations for the coming winter storm season with the elevated risk of debris flows and flooding. Hydrology installed, upgraded, and serviced several rain gauges along and below the Holy Fire burn area.

In addition to the rain gauges, Hydrology also serviced several stream flow gauges at Indian Canyon, Horsethief Canyon, Rice Canyon, McVicker Canyon, and Leach Canyon in preparation for the anticipated Holy post-fire debris flows.

The Hydrology Section also serviced several rain gauges in and around the Cranston Fire perimeter.

With the District’s Hydrology equipment running efficiently, we were able to successfully handle several heavy rain events that triggered debris flows and flooding in and around the Holy Fire perimeter.
Watershed Protection

The Watershed Protection Division continued to move forward with projects supportive of a coordinated regional program addressing sources of bacteria in the Middle Santa Ana River. With diversion of the Phoenix Storm Drain to the sanitary sewer underway (see prior page), attention has been focused on Eastvale MDP Lines D and E. Water quality monitoring, intended to determine if dry weather flows within these facilities meet sanitary sewer acceptance criteria and therefore represent further candidate facilities for diversion was completed.

A public education strategic plan that will inform Riverside Watershed Protection Program public education and outreach programs over the next five years has been completed. The plan puts an emphasis on eliminating dry weather runoff in the Middle Santa Ana River and Santa Margarita River watersheds and litter abatement in the Whitewater River watershed. The plan will be implemented under the aegis of the Public Education Strategic Taskforce (PEST), a steering committee comprising County, City and water district representatives.

The winter storms enabled early completion of the dry and wet weather elements of the Consolidated Monitoring Program across all three watersheds. With the assistance of the Surveying & Mapping Division, stream channel stability at three locations was evaluated for the first time, and drone technology was used to complete a census of transient persons encampments in the Middle Santa River. Bioassessment monitoring, as part of a coordinated regional investigation of stream ecology, was also completed.

Another significant special study completed by Watershed Protection Division’s monitoring staff was an investigation of the water quality implications of both mud and debris flows from the Holy Fire burn area and the District’s efforts to manage such flows. In August 2018, the Holy Fire burned 23,00 acres of the Cleveland National Forest, much of it tributary to Lake Elsinore. The study showed that the District’s removal of 178,904 CY of material from debris basins prevented an estimated 7,527 tons of nitrogen and 120 tons of phosphorus from entering the lake.

In November 2018, the San Diego Regional Water Quality Control Board (RWQCB) formally accepted the Santa Margarita River Water Quality Improvement Plan (WQIP). Acceptance of the WQIP establishes eutrophication as the priority water quality condition in the watershed. Watershed Protection Division staff, as well as staff from the Counties of Riverside and San Diego, the Cities of Wildomar, Murrieta and Temecula, and other watershed stakeholders worked together to complete the WQIP’s priorities, goals, and strategies.
Retirements – Celebrating Service

Ken Clark
Automotive Mechanic II
19 years of service

Gayle Cuneo
Engineering Technician II
18 years of service

Mekbib Degaga
Chief of Regulatory Division
29 years of service

Dan Dennington
Principal Engineering Technician
34 years of service

Antonio Escobar de Leon
Equipment Operator II
8 years of service

Mark Luna
Operations & Maintenance Superintendent
25 years of service

Stuart McKibbin
Chief of Planning Division
33 years of service

Jess Tovar
Equipment Operator II
20 years of service

Scherie Washington
Engineering Aide
17 years of service
In Memoriam

Abdelmessih “Chris” Rizk (10/09/18)

Chris Rizk started at the District as a Senior Building Maintenance Worker in 2010. He interacted with everyone at the District, as his job duties required him to be in several places on any given day. Chris was a man with a very strong faith; he always had time for a smile and valued conversation on a variety of subjects. Chris often spoke of his previous work and how he taught chemistry to many students back in Egypt.

He spoke proudly of his wife, children and grandchildren. Chris was always very proud of his doctor son, Levi, and Levi’s work and fundraising efforts for hopemultiplied.org which benefited children. Chris also spoke proudly of his daughter, Lucinda, and her success in the field of accounting with the County of Riverside. For Chris and his wife Kamilia, their true joy was babysitting Levi’s two girls, Irie and Lavi. Levi and Lucinda offered these kind words: “Our father was and will always be our role model. He is an example for us to lead and to serve every day. He cared for and loved his family in a way we will never forget. He is truly missed by all of us.”

Miguel “Mike” Luna (12/10/18)

Mike Luna worked at the District for 29 years, beginning in 1980 until he retired in 2009 from his position of Construction Inspector II. In these capacities, Mike performed with distinction while providing countless hours of diligent inspection during the construction of all types of flood control facilities. He demonstrated a high degree of professionalism and skill in performing all of his duties and received commendation from other agencies for his professionalism and attention to duty.

Mike Luna will long be remembered by his associates at the District for his dependability, independent thinking and commitment to quality.
Kay Ceniceros (07/26/19)

Kay Ceniceros, Riverside County Supervisor from 1981 to 1996, passed away at the age of 81 from Alzheimer’s disease. Active in her community, Kay was appointed to the Riverside County Planning Commission in 1972. She was elected vice president on the California County Planners Association in 1976 and became its president in 1978. She earned her master’s degree, raised 3 children and was a full time planner for the City of Hemet until running for the Third District seat on the Riverside County Board of Supervisors. She was sworn in as the first female supervisor elected to the Board in January 1981.

Current Third District Supervisor Chuck Washington said it best: “Kay Ceniseros’ expertise in planning and land use helped shape the County of Riverside into the modern, developed region that we see today. She is warmly remembered as a resolute leader and a compassionate advocate by the Third District communities that she served.”

Christine “Chris” Hyland (07/27/19)

Chris Hyland served as a Zone Commissioner for the District’s Zone 3 from 2007 to 2017. As Commissioner, she would regularly meet with residents to discuss flood control issues and inspect District facilities to ensure that the community and District were ready for the winter rainy season.

Chris' advocacy was instrumental in the realization of the $5 million Arroyo del Toro project in 2015, a facility that provides critical flood protection for the Elsinore Valley Cemetery as well as State Route 74. She championed efforts to develop the Lakeland Village Master Drainage Plan and advocated for the construction of many additional facilities in Zone 3, including the Adelfa Channel project.

Chris Hyland always held the District to the highest standards and, in doing so, made it a better, stronger organization. She will be long remembered for her unwavering loyalty to her community and as one of the most caring and active Zone Commissioners appointed to the District's Commission.