



2014 ANNUAL REPORT

Flood Control District of Maricopa County, Arizona

Flooding on Interstate 17 at Dixelela Road—August 19, 2014

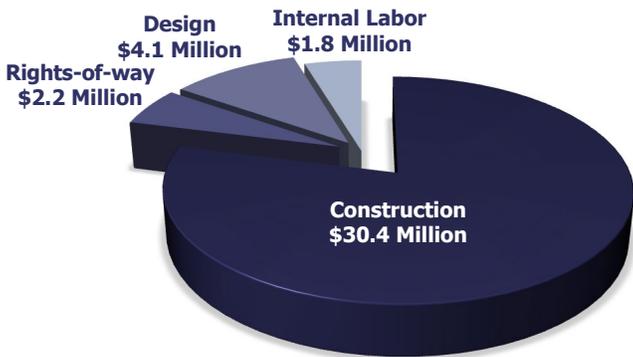
10 Significant Accomplishments in Fiscal Year 2014

- 1** Powerline FRS "unsafe" classification has been removed
- 2** Completed in December 2014, the Lower El Mirage Wash Basin was named Small Project of the Year by the American Public Works Association
- 3** Launched Report-A-Flood, Facebook, YouTube, Twitter
- 4** Over 8,000 documents and periodicals in the Engineering Library were made available online
- 5** Completed 101 miles of delineation while working on additional 73 miles of delineation
- 6** Maintained Community Rating System Class 4 designation resulting in 30% discount on flood insurance for county citizens; savings of over \$395,000
- 7** Natural Resources Conservation Service obligated \$81.1 million to rehabilitate Buckeye Flood Retarding Structure (FRS) No.1, White Tanks FRS No.4, Powerline FRS and Vineyard Road FRS
- 8** Increased customer information interactions—5,954 (up over 1,600 from last FY). Average score for Customer Satisfaction Survey: 99.9% from 324 responses, 6% response rate
- 9** Labor charged to vandalism repairs have decreased 58% since 2011 due to the Deputy Sheriff program
- 10** 76% of Ad Hoc Task Force recommendations were implemented by October 1

Administration	Engineering	Executive	Floodplain Management and Services
			
<ul style="list-style-type: none"> • Contracts and Procurement • Finance • Support Services 	<ul style="list-style-type: none"> • Sand and Gravel • Flood Warning • Hydrology and Hydraulics Manual • FLO-2D Modeling • Floodplain Delineations 	<ul style="list-style-type: none"> • Chief Engineer/ General Manager • Deputy Director • Ombudsman • Public Information 	<ul style="list-style-type: none"> • Floodplain Use Permits • Inspections • Flood Insurance • Community Rating System • Levee Certification

Capital Improvement Program

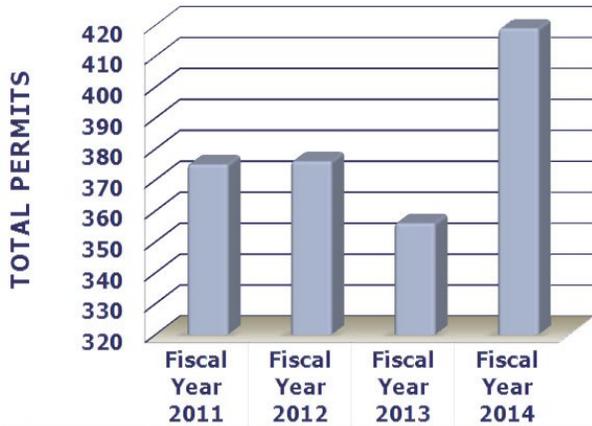
Adopted Budget for FY14 \$40.0 million
 District expended \$38.5 million (96.2%)



Dam Safety Rehabilitation

	Supervisor District	Estimated Substantial Completion Date
White Tanks Flood Retarding Structure (FRS) No. 4	4	January 2017
Powerline FRS	1	September 2018
Vineyard Road FRS	1	September 2018
Rittenhouse FRS	1	To be determined
Buckeye FRS No. 1	4	November 2016
Guadalupe FRS Modifications	5	To be determined
McMicken Dam	4	June 2030
Cave Buttes Dam Modifications	3	June 2018
Saddleback FRS	4, 5	To be determined

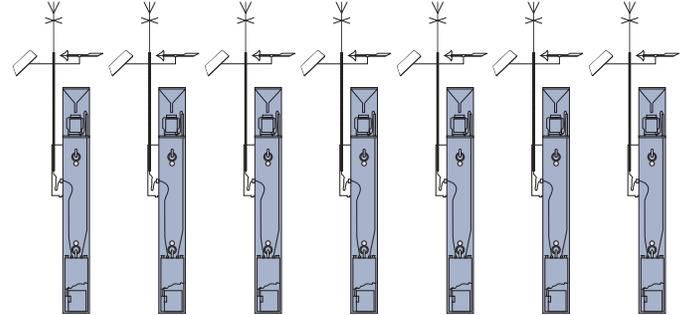
Floodplain Use Permits Processed



Fiscal Year	2011	2012	2013	2014
Permits Processed	375	376	356	419

Flood Warning ALERT Station Data

ALERT Stations achieved 99.6% operational efficiency for the year.



INSTALLED 7 NEW ALERT STATIONS

Geographic Information Systems



- Aerial Photography
- Mapping Services
- Data Sales

Operations & Maintenance



- Structure Maintenance
- Work Control Center

Planning and Project Management



- Planning Studies
- Capital Improvement Program
- Small Projects Assistance Program
- Dam Safety

Real Estate

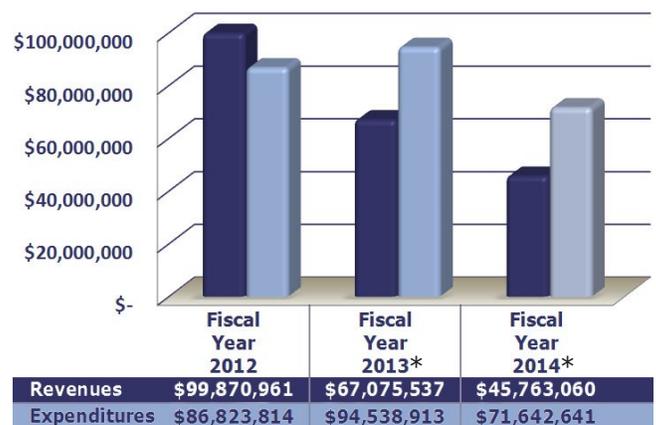


- Land Sales and Acquisitions
- City Limit Mapping
- Auctions

Studies in Progress

	Supervisor District	Estimated Completion Date
Pinnacle Peak West ADMS	2, 3	June 2015
Wickenburg ADMP	4	October 2014
Tempe ADMS	1, 5	September 2015
Gila Bend ADMP	5	December 2014
Middle Indian Bend Wash ADMS	3	February 2017
Lower Indian Bend Wash ADMS	1, 2, 3	June 2015
Ahwatukee Foothills ADMS	1, 5	December 2015
Upper East Fork Cave Creek ADMS	3	September 2016

Revenue and Expenditures



* Expenditures partially covered by fund balance.

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Flood Control District of Maricopa County

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www.fcd.maricopa.gov



WELCOME

William "Bill" Wiley, P.E.
Chief Engineer and
General Manager

When I assumed the position of Chief Engineer and General Manager on June 2, the District was in the process of exploring opportunities to enhance customer service and operate more efficiently. This was reinforced by recommendations from an Ad Hoc Citizen Task Force. It was during this time that Arizona experienced one of the most active monsoons in its history. In August and September Maricopa County witnessed widespread, catastrophic flooding which impacted thousands of its citizens. These events highlighted the value of effective flood control for the safety of citizens and property.

It's safe to say that I hit the ground running.

As I consider the future of the District, certain words come to mind. Collaboration. It is important that we collaborate with our stakeholders and find opportunities to work together. We need partnerships that will increase flood protection for citizens and provide flood protection for areas that are expanding due to rapid growth and development. Communication. We need to improve communication with our elected officials and citizens about the projects and studies that are occurring in their communities. Vision. While I believe that this is one of the best flood control districts in the country, I want to make sure that we prepare for the challenges ahead and for future generations. I'm committed that the District will continue to be a service-oriented and a well-respected community partner.

The Flood Control District serves an essential role in Maricopa County. It is important that as the county grows that the Flood Control District continues to protect our citizens and enhance the vitality of the county's future.

Bill

ABOUT THE DISTRICT

The Flood Control District of Maricopa County (District) is a municipal corporation and political subdivision of the state of Arizona. The Maricopa County Board of Supervisors serves as the District's Board of Directors, which in turn receives counsel from the Flood Control Advisory Board which is comprised of county citizens.



Mission: The Flood Control District of Maricopa County provides regional flood hazard identification, regulation, remediation, and education to Maricopa County residents so that they can reduce the risk of injury, death, and property damage from flooding, while still enjoying the natural and beneficial values served by floodplains.

Vision: The District's vision is for the residents of Maricopa County and future generations to have the maximum level of protection from the effects of flooding through fiscally responsible flood control actions and multi-use facilities that complement and enhance the beauty of our desert environment.

We pledge to be responsive to our clients in an efficient, effective, and fiscally responsible manner. We will show personal integrity and professionalism in all our actions, and display continuous improvement, innovative thinking, and technical expertise. We will be stewards of the environment and the public's trust, and we will be concerned about the effects of our actions on not only the current, but also future generations.

BOARD OF DIRECTORS



Denny Barney
Chairman
District 1



Steve Chucri
District 2



Andy Kunasek
District 3



Clint Hickman
District 4



Mary Rose
Wilcox
District 5 (resigned)



Marie
Lopez Rogers
District 5

2014 FLOOD CONTROL ADVISORY BOARD

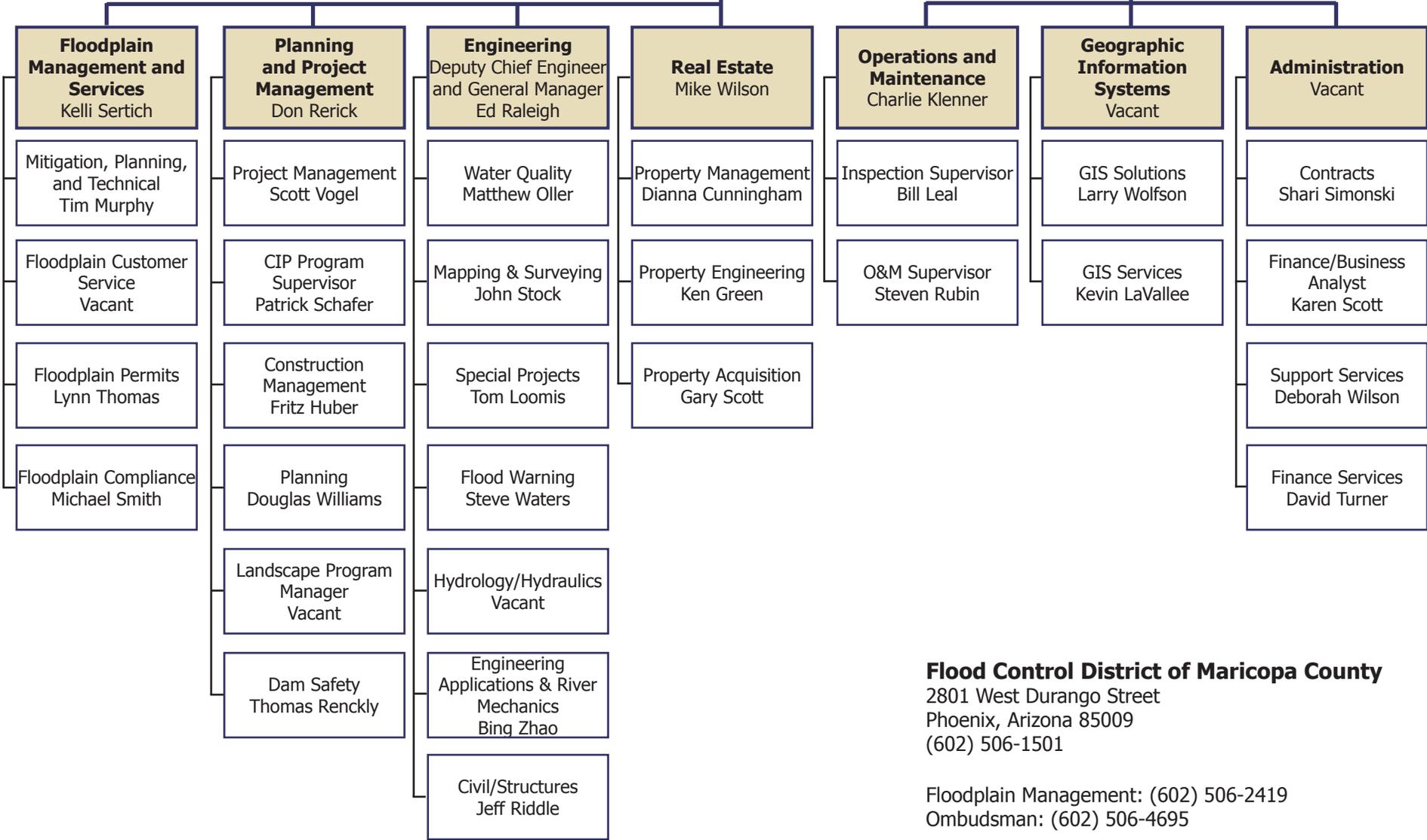
Hemant Patel, Chairman
Dallas Tanner
Gregg Monger
Scott Ward, Secretary
Melvin Martin
DeWayne Justice
Ray Dovalina, Ex Officio
Bob Larchick, Ex Officio

Chief Engineer and General Manager
Bill Wiley

Deputy Director
Ken Proksa

Executive Assistant
Anna Medina

Public Information
Officer
Aisha Alexander



Flood Control District of Maricopa County
2801 West Durango Street
Phoenix, Arizona 85009
(602) 506-1501

Floodplain Management: (602) 506-2419
Ombudsman: (602) 506-4695

CITIZEN TASK FORCE

Recognizing an opportunity to enhance customer service and streamline regulatory processes, the Maricopa County Board of Supervisors initiated a citizen's task force in April 2014 to identify and recommend process improvements for the District. Two subcommittees, Process & Communication and Regulatory Review, met bi-weekly to discuss the issues and ultimately made 17 recommendations for process improvement. All of the recommendations were supported by staff and the District's Board of Directors approved the task force recommendations on September 22, 2014. Approximately 76 percent of the recommendations were implemented as of October 1, 2014.

Implemented Recommendations

Create meeting communication form

Examine communication to public on ADMP studies

Conduct Annual Public Forum

Monthly Floodplain Stakeholder Group (FSG)

Establish Ombudsman position

Establish standards on service expectations of District staff

Implement Customer Feedback Form

Utilize customer inquiry tracking system (FITS)

Enhance GIS tools

Add teleconferencing tools

Establish Sand & Gravel Committee

FCD Web site, engineering library on-line, FAQ tool

Clarify variance and appeal process online

Recommendations In-Progress

Conduct "Kaizen" on key process with stakeholders & staff

Create combined grading & drainage checklist for P&D and District

Enhance on-line services and FCD Web site

Relook at Agua Fria River study

Look at revising garage elevation regulations

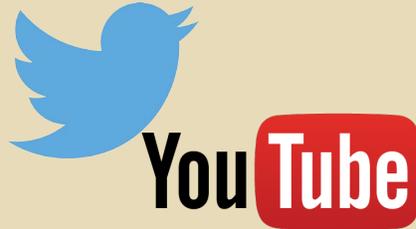


FCD in the Community

In addition to traditional media and advertising, the District's communication office launched mobile tools and other online resources to engage the citizens of Maricopa County.



ReportAFlood.org (RAF), an application that allows county citizens to participate in reporting flooding, was introduced in March 2014. County residents are able to upload flood photos and videos directly to geo-referenced locations throughout the county due to the tool's GIS and GPS applications. The information that is uploaded into RAF helps District professionals better understand how all parts of the county are impacted by floodwaters.



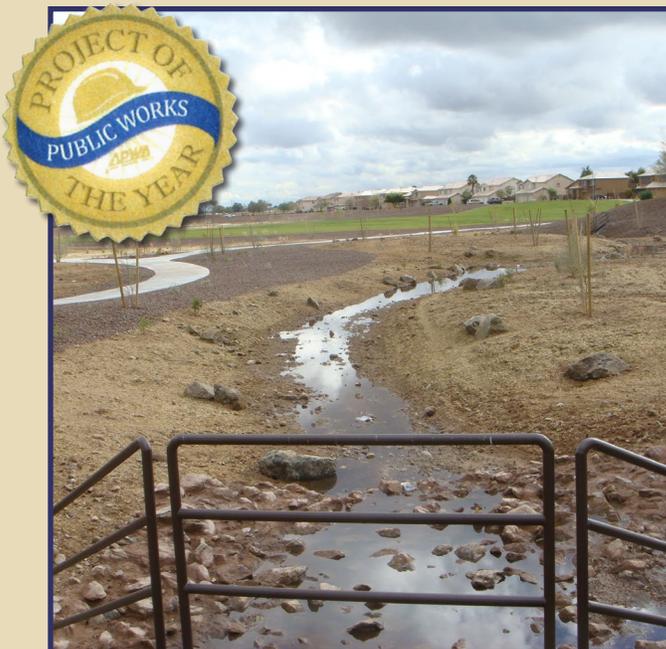
Recognizing that the communication environment has changed, the District joined social media to interact with county residents using popular networking mediums. The District now operates Facebook and Twitter pages, and has a YouTube channel. The sites have been instrumental in interacting with citizens on a consistent basis as well as connecting the District with media outlets.

Education Outreach



In 2014, the District added two new flood safety ambassadors to the education outreach team. Gage and Jet made their debut at Phoenix Comicon 2014 where over 400 children and educators received copies of the District's new activity book, 'Flood Safety with Gage and Jet.' The beaver and bat outreach duo are featured throughout the District's activity book. Geared towards ele-middle aged students, the activity book is a tool that is used by the District to help teach children what it means to be flood safe and flood smart!

Award Winning Lower El Mirage Wash Basin, El Mirage, AZ



The Arizona Chapter of the American Public Works Association (APWA) awarded the 2014 Public Works Project of the Year, for structures less than \$5 million, to the District's Lower El Mirage Wash Basin project. This project is located on a portion of Lower El Mirage Wash at the southwest corner of Cactus Road and El Mirage Road. Prior to this project, the site was vacant land with a roughly graded depression. During storm events the existing large culvert under El Mirage Road would not attenuate flood flows, and after a storm event ponded water as deep as three feet would remain on the site. The wash now flows into the site from the north across a dip crossing at Cactus Road. Flows then exit the basin eastward under El Mirage Road.

The flood control features of this project include an outlet culvert at El Mirage Road, a graded basin, a sediment-removal basin, and storm drain improvements. This landscaped basin also includes grass-lined, terraced areas above the low flow channels within the project. The resulting project setting provides multi-use functions and experiences for various recreational activities.

Managing Floodplains

The District is responsible for providing regional flood protection in all of Maricopa County and local flood protection in unincorporated Maricopa County. The District is not responsible for all floodplain regulation in Maricopa County as some municipalities handle their own floodplain management. The District is responsible for floodplain management and regulation in the following communities: Buckeye, Carefree, Cave Creek, Chandler, El Mirage, Gila Bend, Guadalupe, Litchfield Park, Mesa, Queen Creek, Surprise, Tolleson, Youngtown and Wickenburg, Wickenburg, and unincorporated county. To provide a "One Stop Shop" for unincorporated county, the engineering staff at Maricopa County Planning and Development (P&D) issue floodplain use permits. P&D engineering staff also respond to entitlement cases (zoning, plats, special use) on behalf of the District. Floodplain Use Permits for the other 14 communities are processed at the District.



Circle City, August 2014



Wickenburg, August 2014

Permits & Inspections

Floodplain Use Permits

Unincorporated & Community	419
Fees collected	~\$108,000

Inspection & Enforcement

Unincorporated Floodplain Use Permit Inspections*	538
Floodplain Inquiry Cases	84
Number of completed cases	55

*100% turnaround conducted within one day of request.

National Flood Insurance Community Rating System

The District, on behalf of Maricopa County, maintains a Class 4 in the Community Rating System (CRS) and is rated by the Federal Emergency Management Agency as one of the top 11 programs in the nation for comprehensive floodplain management. Participation in the National Flood Insurance CRS program offers financial and educational benefits to the citizens of Maricopa County. As a result of the District's outreach efforts and success, individual flood insurance policy holders in unincorporated Maricopa County receive up to a 30% discount on their flood insurance, which results in an estimated annual savings of over \$395,000.



New River Dam downstream

RAINFALL & WEATHER

Rainfall and streamflow information that is used by the District, county emergency departments and National Weather Service is provided by 313 automatic rain gauges, 175 automatic stream gauges, and 36 automatic weather stations, located strategically throughout the county. The gauges and weather stations are monitored and maintained by the District's flood warning team.

The 2014 North American Monsoon, which began on June 15, proved to be one of the most memorable monsoons in Maricopa County history. Additional moisture from multiple hurricanes and tropical storms off the coast of Mexico pushed inland and combined with the residual moisture from the North American Monsoon resulting in increased rainfall across the Desert Southwest. The convergence of moisture caused flash floods in southern Nevada, southern California and Arizona. Maricopa County experienced four significant rain events, two which required the activation of the ALERT Operations Center and partial activation of the Maricopa County Department of Emergency Management's Emergency Operation Center.

Regional and local flooding plagued portions of the county as it experienced storm events ranging from 100-year to 1,000-year floods. The District continues to work with the county manager's office, its Board of Directors and the impacted cities to analyze flood control needs in preparation for future storms of such magnitude.



STRUCTURE OPERATION AND MAINTENANCE

Flood control structures are operated and maintained by the District with a commitment to minimizing environmental impacts while enhancing the quality of life for residents living near them. In addition to providing flood control, many of the District's structures are aesthetically pleasing, multi-use facilities that meld with the desert environment and provide flood protection along with hiking trails, bike paths and open space enjoyed by the residents of Maricopa County.

The Operations and Maintenance (O&M) Division regularly maintains and inspects District structures. Structure maintenance responsibilities include: mitigating the effects of erosion and sedimentation; vegetation and vector control; maintenance of channels, floodways and outflow devices; and storm damage repair.

During the 2014 North American Monsoon, District O&M personnel were crucial to ensuring that the ALERT Operation Center (AOC) was informed about the integrity of District structures. Following each event, O&M inspected structures for potential damage and cleared debris to ensure that the structures would perform as designed for subsequent events.



Cave Buttes Dam



New River Dam

Maricopa County Structures Maintained by the District

22 dams

365 acres of basins

165 miles of channel

60+ additional structures (levees, drains and spillways)

PLANNING FOR THE FUTURE

The District's annual budget is divided into two buckets: an operating budget that funds routine operations, and a capital project budget that funds new structures or major repairs (CIP). The operating budget is generally fixed by an annual operating target; revenue in excess of the operating target may be available for the CIP. The CIP (project) budget varies from year to year and is dependent upon the availability of funds, grants and cost share.

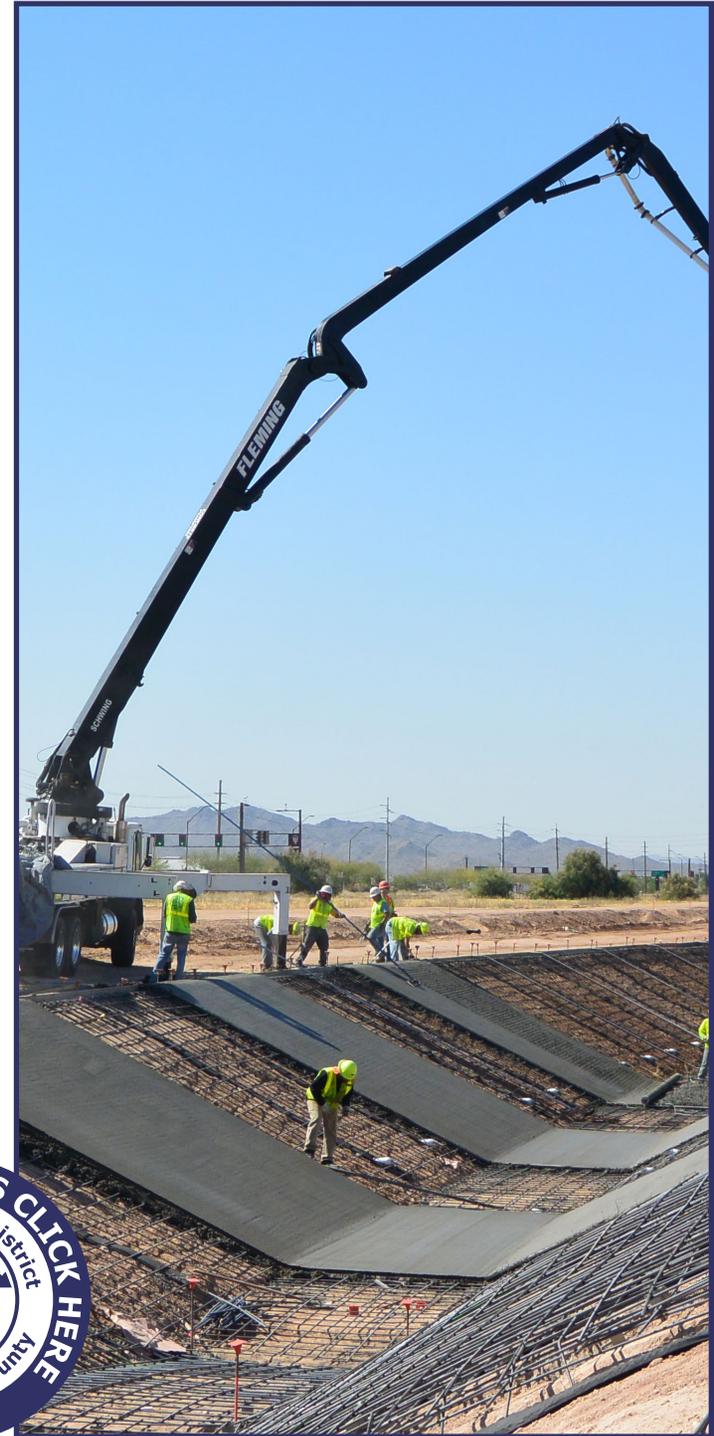
Projects in the District's CIP have been identified through the District's planning process, operations and maintenance staff, or project partners. CIP management includes scheduling and funding approved District capital projects, design project management, and construction project management. Project schedule and funding are subject to change as a result partner agencies' funding availability, public support, priority events, or unexpected project discoveries such as buried utilities, fissures or archeological sites.

2014 Completed Projects

- 43rd Avenue/Baseline Road Detention Basin
- Powerline FRS Fissure Risk Zone Mitigation
- Lower El Mirage Wash Detention Basin
- Northern Parkway Drainage Improvements Phase I from SR-L303 to Dysart Road
- Downtown Phoenix Storm Drain Improvements
- 60th Street & Hollyhock Street Storm Drain
- 25th Street & Illini Street Storm Drain
- 28th Street & East Polk Street Storm Drain
- 22nd Street & Clarendon Avenue Storm Drain
- Almeria Road & Willetta Street Storm Drain

2014 Completed Planning Studies

- Pinnacle Peak South Area Drainage Master Study
- Gillespie Watershed Area Drainage Master Study
- East Mesa Area Drainage Master Plan Update
- Peoria Area Drainage Master Plan
- San Tan Watershed Area Drainage Master Study
- Hohokam Area Drainage Master Plan



2014 Financial Highlights

Preliminary and Unaudited

Revenue Collection Status			
	Full Year Revised Budget	Collections Full Year	Collections Remaining
Property Taxes	39,364,869	39,655,196	290,327
Licenses & Permits	166,000	454,212	288,212
Partnership Reimbursement	7,886,000	4,278,135	(3,607,865)
Payments in Lieu	155,382	154,287	(1,095)
Interest Earnings	250,000	117,946	(132,054)
Grant Funding	159,134	159,133	(1)
Miscellaneous Revenue	297,643	944,150	646,507
	48,279,028	45,763,060	(2,515,968)

Operating Budget - Financial Comparative			
	Full Year Budget	Full Year Actual	Funds Remaining
Net Payroll	16,384,725	15,221,211	(1,163,514)
Net Supplies	2,033,943	1,302,858	(731,085)
Net Services	19,008,539	16,069,747	(2,938,792)
Net Capital	570,184	428,984	(141,200)
Intergovernmental Payments			—
	37,997,391	33,022,800	(4,974,591)

Grants			
Services	159,134	159,133	(1)
	159,134	159,133	(1)

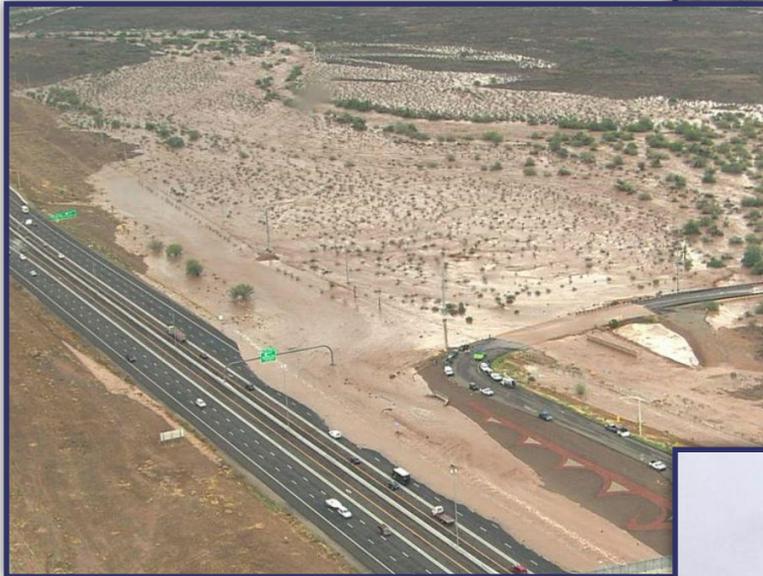
Capital Improvement Program			
	Full Year Budget	Full Year Actual	Funds Remaining
Force Account Payroll	2,300,000	1,831,981	(468,019)
Land Acquisition	2,305,000	2,178,698	(126,302)
Design	5,260,000	4,101,546	(1,158,454)
Construction	30,135,000	30,348,482	213,482
	40,000,000	38,460,708	(1,539,292)

Fund Balance Reserves			
	Operating Fund	CIP Fund	Total Fund Reserve
Beginning Fund Balance	40,277,265	26,994,074	67,271,339
Total Revenue Collected	41,484,925	4,278,135	45,763,060
Less Expenses	(33,181,934)	(38,460,708)	(71,642,641)
Inventory	(48,310)		
Transfer Out/In	(14,696,402)	14,696,402	—
	33,835,544	7,507,904	41,391,757

Monsoon 2014 Memorable Storms

August 12, 2014

Over 2.5 inches of rain fell in several hours causing a canal to overtop onto Dobbins Road near 19th Avenue. Neighborhoods became inundated with flood water.



August 19, 2014

Sheet flooding from desert flowed onto Interstate 17 at Dixelela Road and numerous swift-water rescues occurred in New River, AZ.



September 8, 2014

Phoenix Sky Harbor 1933 record 2.91-inch rainfall record broken. New record is 3.29 inches. Flooding on I-10 at 43rd Avenue closed the interstate for several hours and the Emerald Park basin overtopped causing massive flooding in Mesa neighborhoods.



September 27, 2014

More than 46,000 county residents were left without power and Interstate 17 at Buckeye Road was closed for several hours due to flooding.