

Regional Flood Control District

ANNUAL REPORT

Clark County, NV
2013 | 2014



VISION

Premier regional agency providing a community safe from the devastation of floods while protecting the surface water environment.

MISSION

To improve the protection of life and property for existing residents, future residents and visitors from the impacts of flooding while also protecting the environment.

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DISTRICT MESSAGE



Lawrence L. Brown III
RFCD Chairman
Clark County Commissioner



Gale Wm. Fraser, II, P.E.
RFCD General Manager/Chief Engineer

FROM THE CHAIR

Each year it seems Mother Nature knows when the calendar hits July. Monsoon moisture returns to the desert, bringing muggy saturation to our dry air and, with it, the threat of flash flooding. In response, the Clark County Regional Flood Control District continues its mission of building the facilities that make Southern Nevada a safer community.

As of June 2014, there are 90 detention basins and approximately 590 miles of channels and underground storm drains. Currently, the District is spending \$188 million on 20 new projects. Since 1988, we have invested \$1.8 billion in flood control infrastructure, but our work is far from finished. Even though we have completed close to 75 percent of our Master Plan, another 31 detention basins and 215 miles of conveyance are planned.

Our success is attributed to the regional approach we take in building our facilities. Storm events and flood waters have little regard to jurisdictional boundaries and, thus, our member agencies collaborate and coordinate on what is best for the entire community. In addition, the cooperation we receive from Nevada's federal delegation, the National Weather Service, local media partners and our citizens has been a tremendous asset.

As you read this report, you will learn how all these stakeholders have assisted the District in keeping flood waters away from people and people away from flood waters. Likewise, you will see how today's challenges are shaping the District's future.

FROM THE GENERAL MANAGER

The Las Vegas Wash Project is transforming the Desert Rose Golf Course before our very eyes as the District's largest project in history. The Las Vegas Wash Project represents not only a huge investment for the future, but it is putting people to work now, keeping homeowners safer and, ultimately, will result in a wonderful multi-use facility for residents to enjoy.

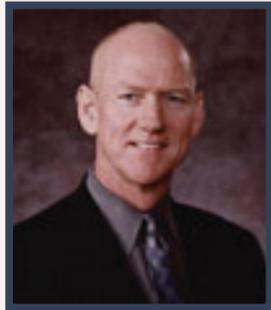
Work is on track to remove 1,700 homes from FEMA flood zones with this project alone.

In closing I'll be retiring in March 2015. I cannot begin to express enough thanks to all that have been with me on this journey over the past 27 years. I thank our Board of Directors for continuing to have a regional perspective and showing unwavering support in the management of the District; I thank the dedicated District staff, without them none of the District accomplishments would have happened; I thank our member entities and the private sector for aiding us in implementing the programs; and I thank the citizens for allowing the District to invest in infrastructure that makes southern Nevada one of the most resilient and sustainable communities in the nation. This investment in infrastructure is not for only one storm, but for many storms and will be here for generations to come.

This will be my last time I can put my stamp on the Annual Report. I know others will follow and I wish them all the success in the world. I hope my successor will feel as fortunate and blessed as I feel in holding this position and the opportunity it presents to help shape our community as the District continues to be true to our mission of improving the protection of life and property for existing residents, future residents and visitors from the impacts of flooding; and striving to fulfill our mission of being the premier regional agency providing a community safe from the devastation of floods while protecting the surface water environment.

Thank you all for showing your trust in me.

BOARD OF DIRECTORS (as of September 2014)



Lawrence L. Brown

Chairman
Commissioner
Clark County



Debra March

Vice Chairman
Councilwoman
Henderson



Chris Giunchigliani

Commissioner
Clark County



John Lee

Mayor
City of North Las Vegas



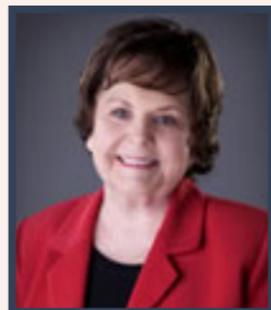
Allan Litman

Mayor
City of Mesquite



Steven D. Ross

Councilman
City of Las Vegas



Dr. Lois Tarkanian

Councilwoman
City of Las Vegas



Roger Tobler

Mayor
City of Boulder City

AUTHORITY OF THE DISTRICT

The Nevada Legislature authorized the creation of the District in 1985 to develop a coordinated and comprehensive Master Plan to solve flooding problems; to regulate land use in flood hazard areas; to fund and coordinate the construction of flood control facilities and to develop and contribute to the funding of a maintenance program for Master Plan flood control facilities. The District also provides public education regarding flood dangers and monitors rainfall and runoff data during storms, disseminating information to appropriate public works and safety crews. The service area for the District includes Clark County and the incorporated areas of Boulder City, Henderson, Las Vegas, Mesquite and North Las Vegas.

The District is governed by a Board of Directors comprised of the same membership as the Regional Transportation Commission, except that each board/commission elects its own officers. The Board includes two representatives from both Clark County and the City of Las Vegas and one representative from Boulder City, Henderson, Mesquite and North Las Vegas. Public meetings are generally held on the second Thursday of the month, at which time the Board acts on policy and other flood control matters.

The Board annually elects a chairman and a vice chairman from among its members. The General Manager/Chief Engineer is responsible for surveying, investigating, reporting and estimating the extent of flood control problems and for presenting flood control recommendations to the Board.

The Regional Flood Control District is a distinct local governmental agency. The District contracts with Clark County for various legal and administrative services provided by departments such as the Comptroller, District Attorney, General Services, Human Resources, Information Systems and Treasurer.

ADVISORY COMMITTEES

TECHNICAL ADVISORY COMMITTEE

The Regional Flood Control District Board of Directors is advised on technical matters, per state law, by a Technical Advisory Committee (TAC), the representation of which mirrors that of the Board of Directors. The current members include local public works directors, city engineers or planning directors. The General Manager/Chief Engineer (serving as the Executive Director of the Committee) and a representative of the Citizens Advisory Committee are both non-voting members of the TAC.



TECHNICAL ADVISORY COMMITTEE MEMBERS

PICTURED (LEFT TO RIGHT):

Joe Yatson*,
Clark County
Design Engineering Manager

David Bowers (Chairman),
City of Las Vegas
Public Works Director

Travis Anderson (Vice Chair),
City of Mesquite
City Engineer

Jennifer Doody*,
City of North Las Vegas
Flood Control Supervisor

Ebrahim Juma,
CC Water Reclamation District
Environmental Planning Manager

Scott Hansen,
City of Boulder City
Public Works Director

Robert Herr,
City of Henderson
Assistant Public Works Director

NOT PICTURED:

Jim Keane,
City of Boulder City
City Engineer

Joseph Leedy*,
CC Water Reclamation District
Principal Planner

Richard Secrist*,
City of Mesquite
Principal Planner

Denis Cederburg,
Clark County
Public Works Director

Robert Thompson*,
Clark County
Public Works Deputy Director

Robert Murnane*,
City of Henderson
Public Works Director

Ed McGuire*,
City of Henderson
City Engineer

Kristina Swallow,
City of Las Vegas
City Engineer

Jeremy Leavitt*,
City of Las Vegas
Engineering Program Manager

Oh-Sang Kwon*,
City of Las Vegas
Engineering Project Manager

Qiong Liu,
City of North Las Vegas
Public Works Director

Thomas Brady*,
City of North Las Vegas
Senior Engineer

*Alternate

CITIZENS ADVISORY COMMITTEE

The Citizens Advisory Committee (CAC) is comprised of one citizen appointed by each city council and county commission included in the District and one citizen appointed by each Board Member. The CAC, per state law, was created to represent public interest and to advise the Board on various matters.



CITIZENS ADVISORY COMMITTEE MEMBERS

PICTURED (LEFT TO RIGHT):

John Birkland,
City of North Las Vegas

Michael M. Wisner,
City of Las Vegas

Calvin Black,
City of Henderson

Larry Nelson (Chairman),
City of Henderson

Jim Beneda,
City of Boulder City

Terry Kane,
City of Las Vegas

Ron Newell (Vice Chairman),
Clark County

NOT PICTURED:

Shawn Fleming,
City of Boulder City

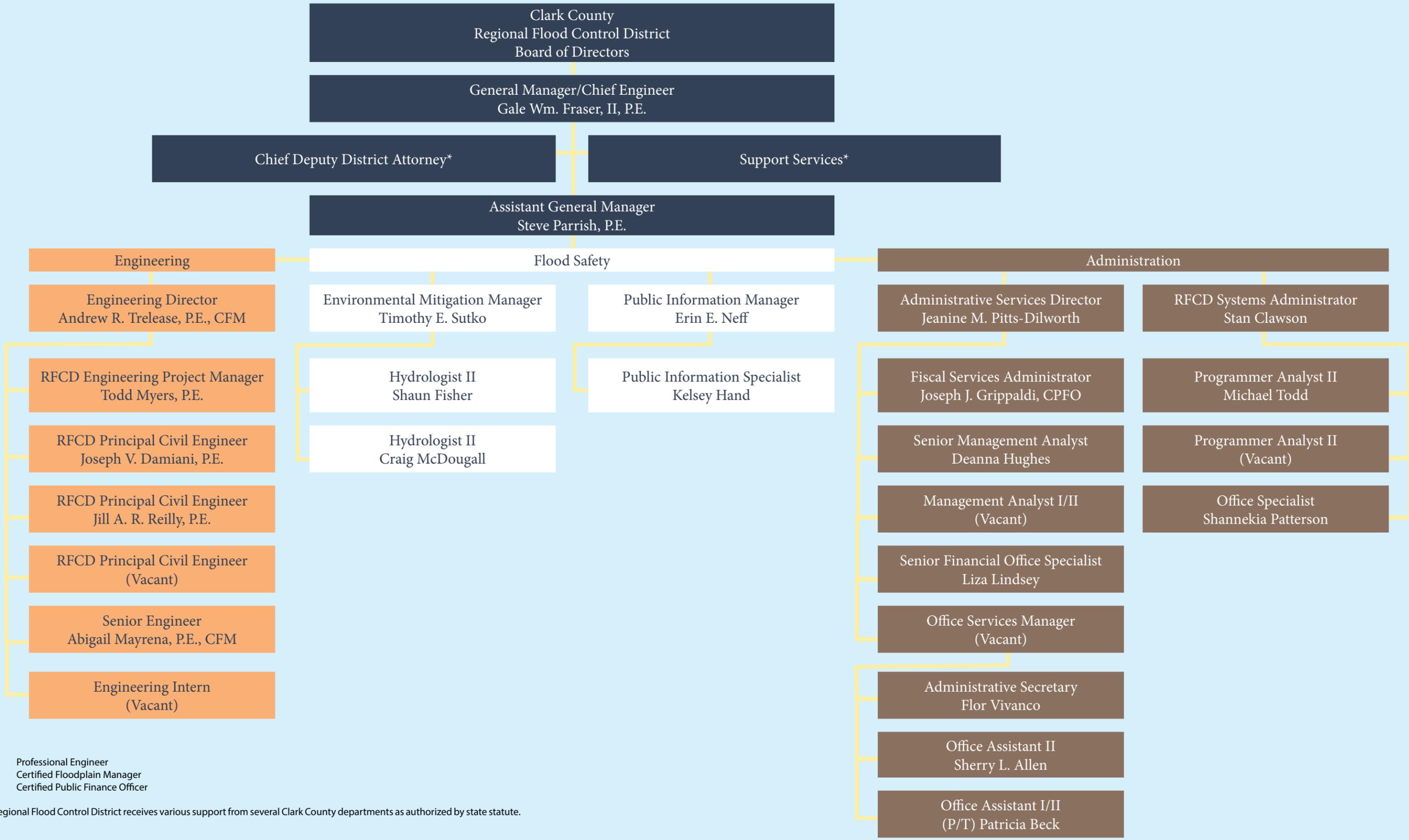
Cathy Littlefield,
Clark County

Jennifer L. Taylor, Esq.,
Clark County

Ryan Wheeler,
City of Mesquite

Dr. Linda Young,
City of Las Vegas

REGIONAL FLOOD CONTROL DISTRICT ORGANIZATION CHART



PE. Professional Engineer
 CFM Certified Floodplain Manager
 CPFO Certified Public Finance Officer

*The Regional Flood Control District receives various support from several Clark County departments as authorized by state statute.

ABOUT OUR REGION

Clark County, Nevada continues its steady recovery from the economic downturn. With population growth of 2.7 percent in the past 12 months, Clark County is the nation's 13th most populous county at more than 2 million residents, According to the Las Vegas Convention and Visitors Authority. And at more than 8,000 square miles, it has an area larger than that of three U.S. states.

Las Vegas continues to be a worldwide destination for tourists and conventioners, with nearly 40 million visitors in 2013, according to the Las Vegas Convention and Visitors Authority. Tourism numbers are ticking up again with a 2 percent growth of air travels and 4 percent growth of tourists.

Clark County stretches from Laughlin in the south to Mesquite in the north. The Las Vegas Valley in the heart of Clark County is surrounded by mountains that provide recreation, from biking the hills or climbing the rocks of Red Rock Canyon to escaping summer heat in the Springs Mountains, topped by Charleston Peak at 11,916 feet.

MONITORING THE WEATHER

The District, in cooperation with the U.S. Geological Survey (USGS) and the National Weather Service (NWS), began implementing a Flood Threat Recognition System (FTRS) throughout the Clark County area in 1987. The system includes a network of strategically located field stations that automatically report data from more than 410 meteorological sensors in real-time to computerized base stations operated by each of the cooperating agencies. While more than 75 percent of the FTRS field stations are located in the Las Vegas Valley, other gage installed in Laughlin, Searchlight, Jean, Primm, Goodsprings, Mesquite, Bunkerville, Moapa Valley, Coyote Springs, CalNevAri and Indian Springs allow emergency responders to monitor weather conditions throughout Clark County.

The total number of field stations in operation at the end of the fiscal year was 184. Of this total, 38 stations collect temperature, humidity and wind data in addition to rainfall data, and 104 stations collect rainfall and water level information. The remaining 42 stations report only rainfall data. In addition, two water level stations have been temporarily decommissioned in order to accommodate construction activities. Eight of the field stations are maintained by the USGS under the terms of a joint funding agreement with the District. The District staff maintains the remaining 178 stations as well as five radio repeater sites that allow data from the outlying areas to be transmitted into the Las Vegas Valley.

The FTRS provides valuable information on water levels, rainfall and other meteorological parameters. Humidity sensors alert NWS forecasters when summer monsoonal moisture is sufficient to trigger thunderstorms. Information on wind speed and direction helps the NWS track severe storms in the Clark County area and issue more timely, site-specific weather statements than were previously possible. The District's fully automated base station notifies staff, both in and out of the District's offices, of potentially dangerous situations, and staff can assess the potential for flooding and alert public works and other emergency response personnel.

The information provided by this system helps emergency response agencies to more effectively direct their limited resources. The District maintains an FTP site to provide local governments and staff access to the FTRS. The District also provides the public and the media with access to the FTRS data through our website (www.regionalflood.org). Both historic and current rain and weather data collected from any of the District's field stations can be accessed from the District's website.



Kyle Canyon Detention Basin after August 2013 flood event



In July of 1975, the Las Vegas Sun reported the torrential downpour that flooded the Las Vegas Strip.

HISTORY OF FLOODING IN CLARK COUNTY

For more than 100 years, the dry hot region of Clark County has been home to periods of intense rainfall and subsequent flash flooding. In a special report entitled "History of Flooding, Clark County, Nevada 1905-1975," the U.S. Soil Conservation Service documented 184 different flooding events that resulted in damages to private property and public facilities. Since 1960, the area has experienced at least 11 floods that resulted in more than \$1 million in property damage. In that same period, 33 lives were lost in 23 separate flash flood events.

While floods can and have occurred in almost every month of the year, the most damaging storms typically occur between July and September. During these hot summer months, moist unstable air, usually from the Gulf of Mexico or Gulf of California, is rapidly forced upward by hot air currents. The dynamics of this process often result in spectacular displays of lightning in the desert sky. Too often, they also cause severe thunderstorms with intense rainfall on steep mountain slopes and armored desert surfaces. The rainwater runs off rapidly and concentrates in the urbanized areas at lower elevations.

Most residents and visitors are unaware of the flood potential or never see flooding occur until it is too late. Aside from the tremendous property damage and deaths related to flooding, Clark County residents experience inconveniences caused by impassable or difficult-to-travel roads. Support services such as police, fire and ambulance are sometimes delayed in responding to victims of life-threatening incidents.

Flood events can also adversely impact the local economy through loss of business at commercial establishments due to decreased access. Furthermore, flooding in the Las Vegas Valley can become national news and deter tourists from visiting the area.

The average rainfall in the Las Vegas Valley is 4.19 inches and this amount is nearly equally divided between summer and winter rainy seasons. During FY 2013-14, the official rainfall total reported by the National Weather Service for Las Vegas was 2.96 inches. This ranks as the 27th driest year on record. The wettest month was November 2013, with 1.37 inches recorded at McCarran International Airport. This was the 6th wettest November ever. But November was the only month of the past year to record more than an inch of rain. In other areas of Clark County, our rain gages picked up more precipitation. Summerlin Northwest had 6.4 inches during the year, Robindale and Pecos had 5.71 inches and Aliante had 5.35 inches.

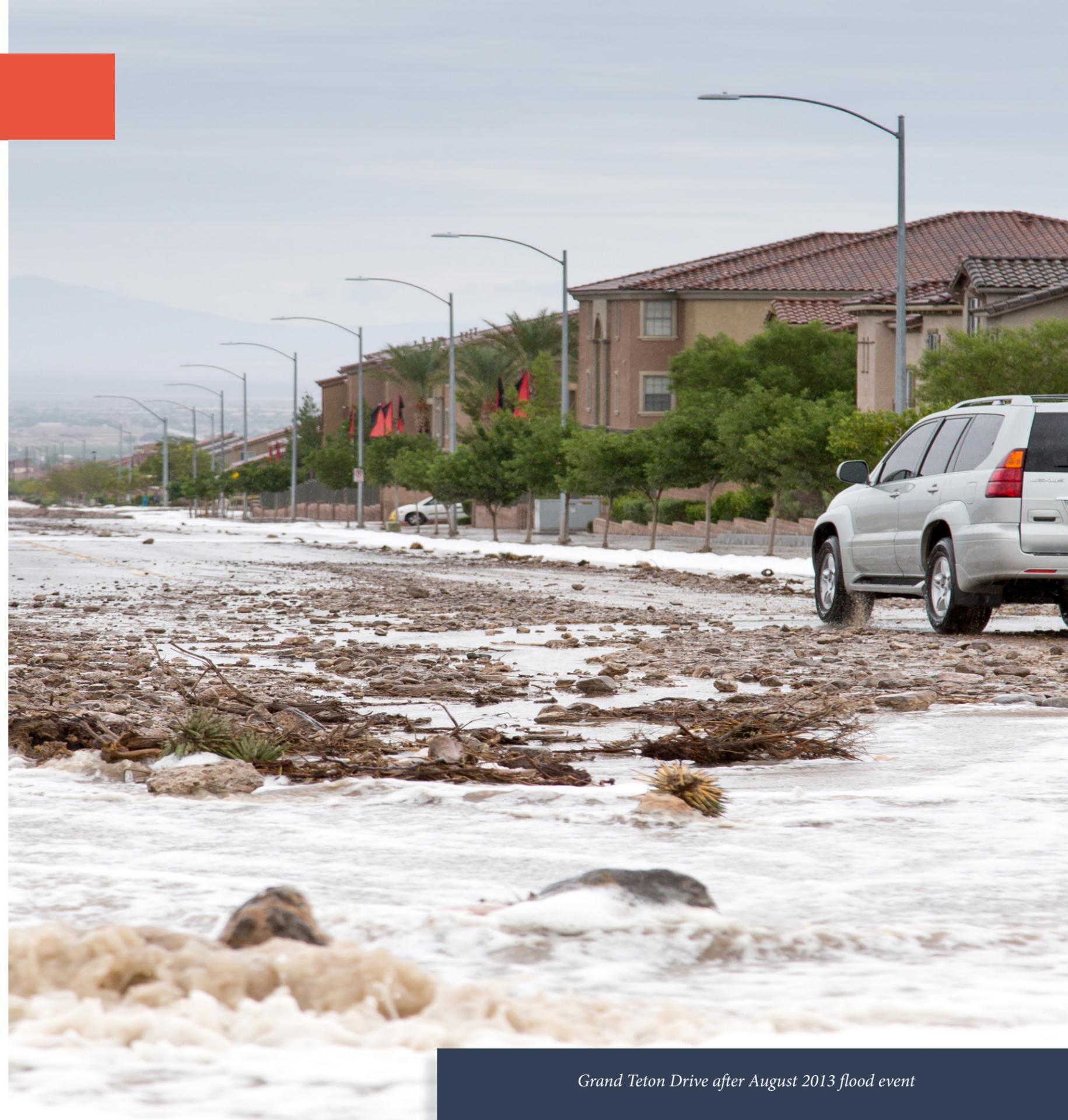
SIGNIFICANT FLOOD EVENTS

A major thunderstorm in the northeastern slopes of the Spring Mountains on August 25, 2013 triggered the biggest flash flood event of the year. Radar indicated parts of the mountain received more than 6 inches of rain and District gauges recorded more than 4 inches that afternoon. The far northwest area of Las Vegas was impacted the most.

The July 2013 Carpenter 1 forest fire on Mt. Charleston created millions of dollars in damage, and left behind a scarred landscape that added to mountain flooding and problematic runoff downstream. The August 25 storm resulted in tremendous amounts of water, rocks and mud flowing from the fire scar.

The Kyle Canyon Detention Basin, constructed in the mid-1990s, provided a strong layer of protection for northwest Las Vegas communities. The basin did its job, capturing an unprecedented amount of water, and sparing thousands of homes beneath it from flood damage. Water in the basin rose to a depth of 30 feet in four hours.

Storm water ran along Grand Teton Drive near Hualapai for three days as the detention basin drained. Flood control projects are nearing completion along Grand Teton Drive to safely convey these storm flows underground.



Grand Teton Drive after August 2013 flood event



KEEPING THE COMMUNITY INFORMED

The District's Public Information Program focuses on educating the public about the dangers of flash flooding and informing the community about the progress of flood control in Clark County. The program also works to educate the community about stormwater quality and how residents can help improve the quality of urban runoff and rainwater draining to Lake Mead.

Several ongoing programs present information about drainage improvements and flood safety throughout the year. Following is a summary of some of those activities:

- The Board of Directors designated July as "Flash Flood Awareness Month" and held a news conference in June kicking off Flash Flood Season. The event was covered by all major news media and helped increase public awareness of a heightened potential for flash floods during the summer months.
- The District educated students about the dangers of playing in floodwater and drainage facilities. This past school year, District staff made classroom presentations at 50 elementary schools speaking to approximately 6,300 students.
- To kick off Flash Flood season, the District highlighted its smartphone application, FloodSpot, that allows users to get weather updates, see flood reports, share flood photos and learn about floods and insurance. The app also features a game aimed at younger audiences. FloodSpot is available for a free download on both iPhone and Android.

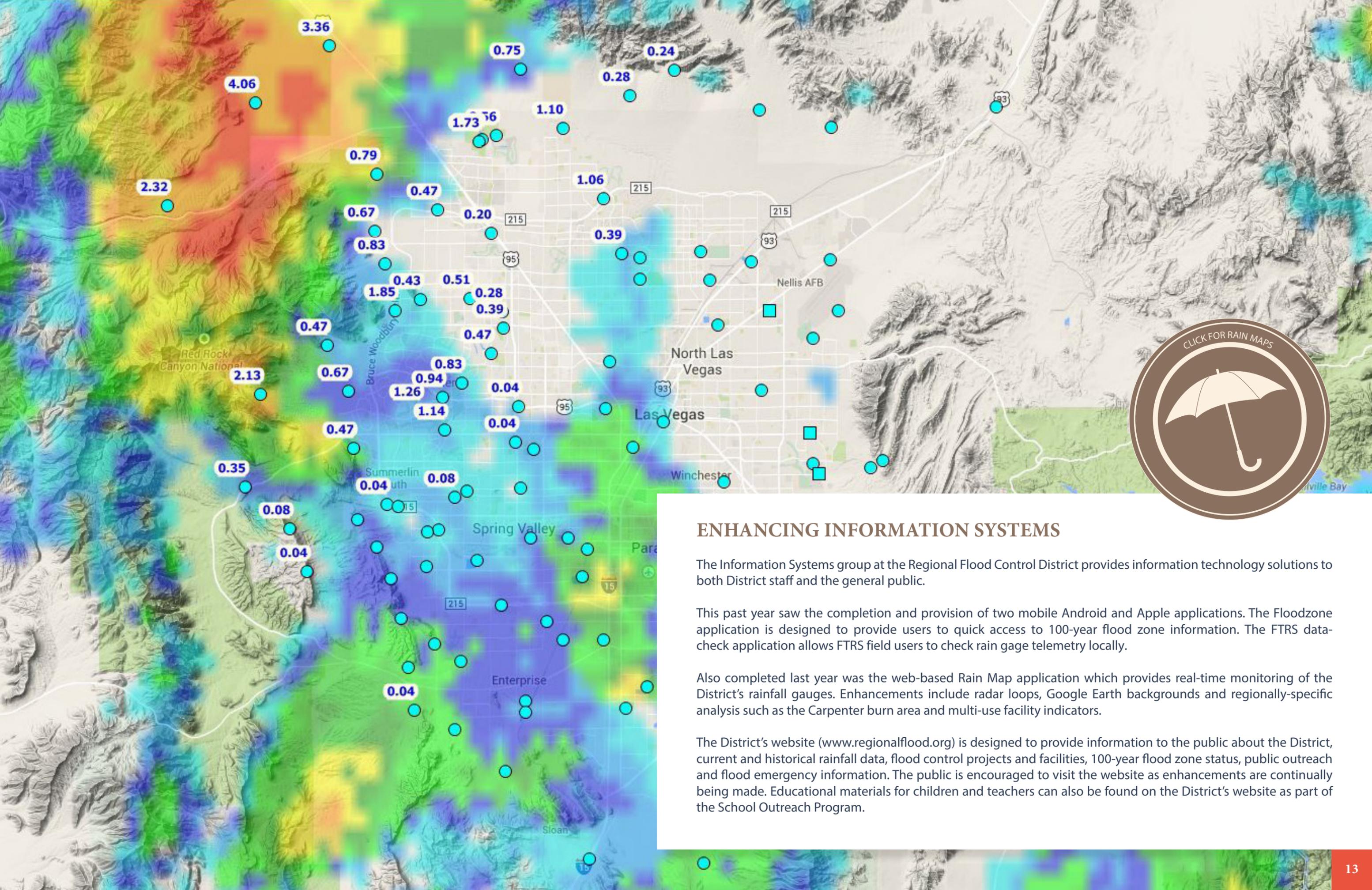
- The District conducted a paid Flood Safety Advertising Campaign between July and September when heavy rain and flash flooding are more likely to occur. The campaign used billboards, radio, television and print media to inform residents of the dangers of flooding. Creative artwork featuring recognizable locations and flood safety messages reminded motorists to stop and think before entering flooded streets. District staff complemented this campaign with social media and earned media efforts.

- The District engaged a survey of residents in 2013 to determine the effectiveness of our paid advertising campaign. More than 60 percent of respondents indicated flood control in southern Nevada is being handled in a good or excellent manner, and 68 percent of respondents indicated that the dangers of flash flooding are being effectively communicated.

- The District continued with production of The Flood Channel, a 30 minute informational television program airing on local government access stations, Cox Cable channels 2 and 4. Each episode informs the public about construction progress, flood safety and environmental issues.

**Future Public Information projects include a major campaign to update to our storm water quality public service announcement and educational outreach.*





ENHANCING INFORMATION SYSTEMS

The Information Systems group at the Regional Flood Control District provides information technology solutions to both District staff and the general public.

This past year saw the completion and provision of two mobile Android and Apple applications. The Floodzone application is designed to provide users to quick access to 100-year flood zone information. The FTRS data-check application allows FTRS field users to check rain gage telemetry locally.

Also completed last year was the web-based Rain Map application which provides real-time monitoring of the District's rainfall gauges. Enhancements include radar loops, Google Earth backgrounds and regionally-specific analysis such as the Carpenter burn area and multi-use facility indicators.

The District's website (www.regionalflood.org) is designed to provide information to the public about the District, current and historical rainfall data, flood control projects and facilities, 100-year flood zone status, public outreach and flood emergency information. The public is encouraged to visit the website as enhancements are continually being made. Educational materials for children and teachers can also be found on the District's website as part of the School Outreach Program.



KEEPING OUR WATERS CLEAN

In accordance with the Federal Water Pollution Control Act, the Clark County Regional Flood Control District, as lead agency, has been operating under a National Pollutant Discharge Elimination System (NPDES) permit with the various city and county agencies since December 1990. The permit, which has a five year duration, was most recently renewed in February 2010. It outlines a schedule of monitoring requirements, best management practices and conditions designed to protect the quality of surface waters in the Las Vegas Valley.

This past year, the District continued execution of a Storm Water Management Plan (SWMP) adopted in November 2011 identifying specific program areas which must be addressed. The newest programs presented in the SWMP deals with mitigation of impacts to storm water quality associated with new development. These new programs were developed with the intent to be sensible and effective in Las Vegas' unique arid environment and focus on regional solutions that employ existing and future planned detention basins. Final programs were submitted to the Nevada Division of Environmental Protection in November 2012 and were fully implemented in November 2013. Revisions and additions to the District's Hydrologic Criteria and Drainage Design Manual to support these new programs were processed in 2013.

Three detention basin storm water quality modification projects were funded for construction this year. They are Angel Park, Pioneer, and Equestrian detention basins. These modifications will capture smaller storm flows, allowing sediments and pollutants to settle out, keeping them out of the downstream environment. Regular maintenance will remove accumulated sediments and dispose of them properly. Construction of the Angel Park Detention Basin modification is nearing completion, and Pioneer and Equestrian Detention Basins are scheduled to begin in fall 2014.

The current construction site inspection program continues, unchanged, from previous years with the goal to reduce sediment and construction pollutants entering the storm drain system. Training sessions are held twice annually for local construction companies to aid in their compliance with the program.

The District is also an active member of the Lake Mead Water Quality Forum, the Las Vegas Wash Coordination Committee and participates on the Las Vegas Valley Watershed Advisory Committee. Annual reports of NPDES compliance activities are available on the District's website at www.regionalflood.org.

Additional information useful to the general public in the reduction of storm water pollution is available at www.lvstormwater.com. The site provides information about stormwater quality, describes proper use and disposal of household chemicals and fertilizers and educates the community about how to improve the quality of urban runoff that travels untreated to Lake Mead. Similar information is distributed at several community events throughout the year.

Residents can also help reduce the impact of pollutants on the environment. By notifying the District and the local government entities about improper disposal of chemicals and pollutants, corrective action can be taken by the appropriate agency. Clogged storm drains and washes, littered with debris, may also cause pollution and flooding problems. In the case of severely clogged drop inlets/storm drains, residents should notify the city or county jurisdiction where the drain is located. Residents can also notify the District at (702) 685-0000 and staff will forward the information to the appropriate entity.

The District continues to develop public service announcements (PSA) that focus on the importance of not polluting our desert environment. These commercials inform residents how they can help protect Lake Mead, our primary drinking water source.

Commercials are placed as paid advertising in the spring and fall with the four major television networks to reinforce the importance of disposing of trash properly, reporting clogged storm drains, fertilizing properly, disposing of pet waste and using commercial car washes. The District staff is also available to give presentations to groups interested in environmental topics associated with floodplain management.

FLOODPLAIN MANAGEMENT

MASTER PLANNING

Master Plans include descriptions of the proposed flood control facilities, cost estimates and suggested phasing. Typical facilities are detention basins, channels, bridges and storm drains. Master Plans for all areas of Clark County are updated every five years. A Master Plan Update for the City of Boulder City was adopted by the Board in July 2013. A Master Plan Update for the Las Vegas Valley was adopted by the Board in September 2013. A Master Plan Update for the outlying areas of Clark County was adopted in April 2014. The next area scheduled for a master plan update is Muddy River and Tributaries. The elements of a comprehensive floodplain management program include environmental and flood insurance regulations, the community rating system, land development reviews, floodplain mapping and drainage standards. The following sections briefly describe each of these categories being utilized by the entities and the District, as well as the milestones accomplished in fiscal year 2013-14.

FULFILLING ENVIRONMENTAL REGULATIONS

Throughout its history, the District has nurtured its relationships with the Bureau of Land Management, United States Fish and Wildlife Service, U.S. Army Corps of Engineers and other resource management agencies. The District continues to assist local governments in their efforts to obtain rights-of-way and environmental permits from regulatory agencies.

The Clean Water Act requires a federal permit for the deposition of fill material in "Waters of the United States." Fill material includes channel armoring, (e.g. concrete and rock lining) as well as detention basin embankment materials. Permits for projects which include these types of activities often require some form of mitigation to compensate for adverse impacts to the "Waters of the United States." Identifying acceptable mitigation projects is one of the biggest challenges currently facing the District. We continue to work with the regulatory and permitting agencies to identify mitigation projects and sites so that construction of drainage facilities that protect life and property can move forward without delays.

REGULATORY PROGRAM

The National Flood Insurance Program (NFIP), administered by the Federal Emergency Management Agency (FEMA), has established rules and requirements to address the diverse issues that encompass flood insurance and flood hazard mitigation. Clark County and the incorporated communities within the county have adopted the revised Uniform Regulations for the Control of Drainage in accordance with state statutes. These regulations are designed to protect the health, safety and welfare of residents within the community from the hazards associated with flooding. The regulations provide the minimum regulatory control necessary to:

- 1) Promote comprehensive floodplain management
- 2) Require safe flood-prone area development
- 3) Foster sound development policies and construction procedures
- 4) Reduce storm water runoff damage to public and private property

By meeting and exceeding the NFIP requirements, the regulations ensure all residents of Clark County and incorporated areas are eligible for flood insurance that is available from the federal government. Additionally, all participating communities are eligible for a higher federal match for disaster assistance in the event of a flood disaster declaration.



FLOODPLAIN MANAGEMENT (CONTINUED)

THE COMMUNITY RATING SYSTEM

Initiated in 1990, the Community Rating System (CRS) reduces flood insurance premiums to reflect those community activities that are above and beyond the NFIP's minimum standards. The objective of the CRS is to reward insured residents for their community's extra efforts in floodplain management, as well as to provide an incentive for new flood protection activities.

Nationwide, of the more than 22,000 communities participating in the NFIP, roughly 1,296 community flood management programs are recognized by CRS verification audits. In a cooperative effort with the District, Clark County, the City of Henderson, the City of Las Vegas, the City of Mesquite and the City of North Las Vegas were among the communities to realize a 15 to 25 percent reduction in flood insurance premiums as a result of these audits.

These entities received credit for the District's public information programs, maintenance activities, re-mapping efforts and the Flood Threat Recognition System. In addition, the District's Master Plan, Hydrologic Criteria and Drainage Design Manual and the Uniform Regulations for the Control of Drainage serve as the foundation of a higher regulatory standard that has been recognized by CRS auditors as one of the most comprehensive in the nation.



LAND DEVELOPMENT REVIEWS

The District performs land development reviews to ensure compliance with the Uniform Regulations for the Control of Drainage and the District's Hydrologic Criteria and Drainage Design Manual, both adopted pursuant to state statutes. The entities are responsible for the review and approval of all drainage plans and studies within their boundaries. The entities must submit development proposals to the District for review if the development impacts the implementation of the Master Plan or lies within a FEMA Special Flood Hazard Area. In accordance with the District's Policies and Procedures, staff will commence review once the entity approval is obtained for the pending studies.

This past year, the District received 180 studies and 219 addenda related to the development of private properties deemed to have regional flood control significance. Reviews by the District resulted in the issuance of 174 concurrence letters and 25 related comment letters.

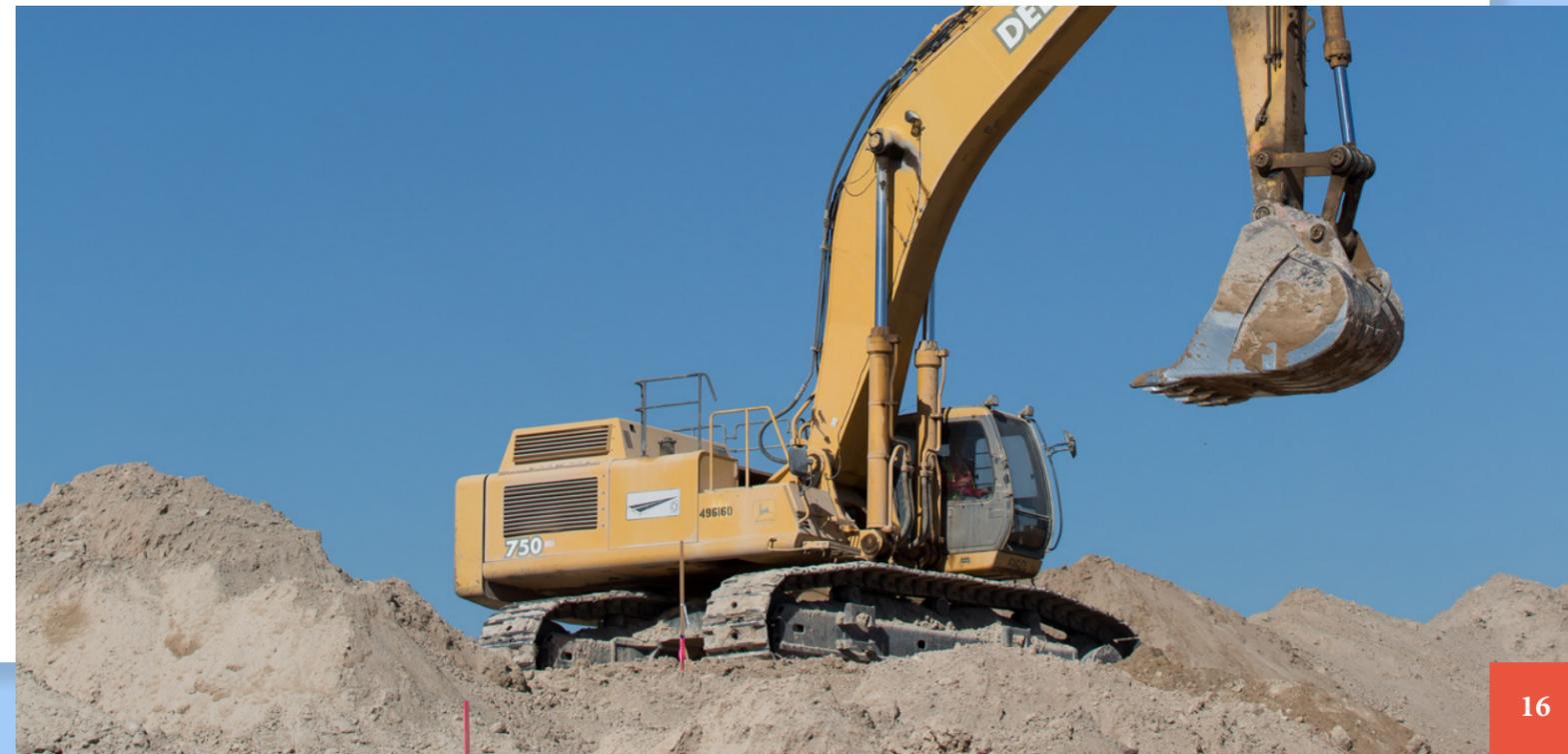
FLOODPLAIN MAPPING

All six local governments in Clark County are currently participating in the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program (NFIP). In participating communities, all residents are eligible for federal flood insurance whether they live in a flood zone or not. In order to participate in the NFIP, communities must adopt flood hazard maps prepared by FEMA and floodplain regulations in compliance with FEMA's minimum requirements. It is the District's objective to reduce flood risks by implementing the Flood Control Master Plan. As part of the District's ongoing effort to improve the accuracy of FEMA's flood insurance rate maps and take credit for completed flood control facilities, restudy of flood hazard areas is required. Many areas have already been restudied resulting in the removal of approximately 52.7 square miles or 33,728 acres from identified 100-year flood zones. Assessment of flood hazards with the latest technologies were published by FEMA on November 16, 2011 for Las Vegas Wash from I-15 to Lake Las Vegas and the Muddy River at Logandale. This resulted in addition of approximately 1,900 properties to the Special Flood Hazard Areas (SFHA). We are working to implement the Master Plan facilities to eventually remove these new flood hazard areas. The Las Vegas Wash project south of Bonanza through the Desert Rose Golf Course (including the Flamingo Wash from Nellis Boulevard to the Las Vegas Wash confluence) is currently under construction. In addition, the design for the Muddy River Logandale Levee is nearly complete, and construction should begin in spring 2015.

The District will continue to work closely with the entities and FEMA to further the restudy efforts. In fact, Clark County and the entities were issued one of the first state-of-the-art Digital Flood Insurance Rate Maps (DFIRM) in the nation in fiscal year 2002-03. This has made it possible to make detailed flood hazard information available to the public on the District's website.

DRAINAGE STANDARDS

The District and the entities have adopted the Hydrologic Criteria and Drainage Design Manual (Manual) that presents drainage standards and criteria for the Clark County area. It provides uniformity in drainage planning and design within the District's service area, improves the urban environment and provides a sound basis for the expenditure of future private, public and regional monies. The Manual is used by governmental designers and reviewers and consulting engineers. The Manual was originally adopted in 1990 and updated in 1999 to provide more clarity and address advances in state-of-the-art hydrologic and hydraulic techniques. An update to add elements relating to the storm water quality program was adopted by the Board in September 2013.



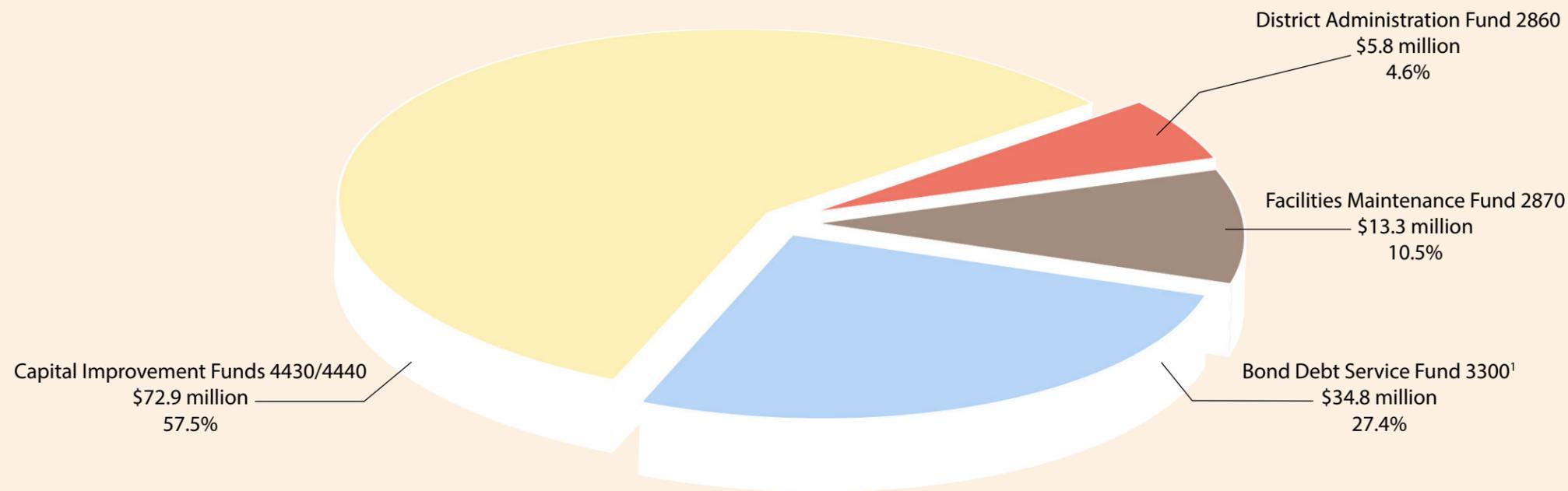
DEMONSTRATING FISCAL INTEGRITY

In the primary election of 1986, Clark County voters approved a one-quarter of one percent sales tax increase to fund flood control improvements. The sales tax increase became effective in March 1987, and the first sales tax revenues were received in May 1987. Sales tax revenue for fiscal year 2013-14 totaled \$85.1 million, bringing total revenues derived from sales tax since 1987 to \$1.45 billion.

During the financial crisis of 2007-2010 (The Great Recession), sales tax revenues declined by more than 24 percent. However, as the economy has improved each year since 2010, sales tax revenues have increased, and next year's revenues are projected to be \$86.1 million. More than 90 percent of sales tax revenue continues to be used to build and maintain flood control projects and pay for the associated debt service. The remainder, approximately 10 percent of sales tax revenue, is used to pay for salaries and benefits, professional consulting contracts, and other administrative costs. During fiscal year 2013-14, the District expended approximately \$120.9 million for flood control projects, debt service and flood control maintenance and \$5.8 million for administrative costs. Since inception, the District has overseen the design and construction of approximately \$1.88 billion in flood control improvements throughout Clark County.

Over the past 20 years, the District has been awarded the Distinguished Budget Presentation Award by the Government Finance Officers Association of the

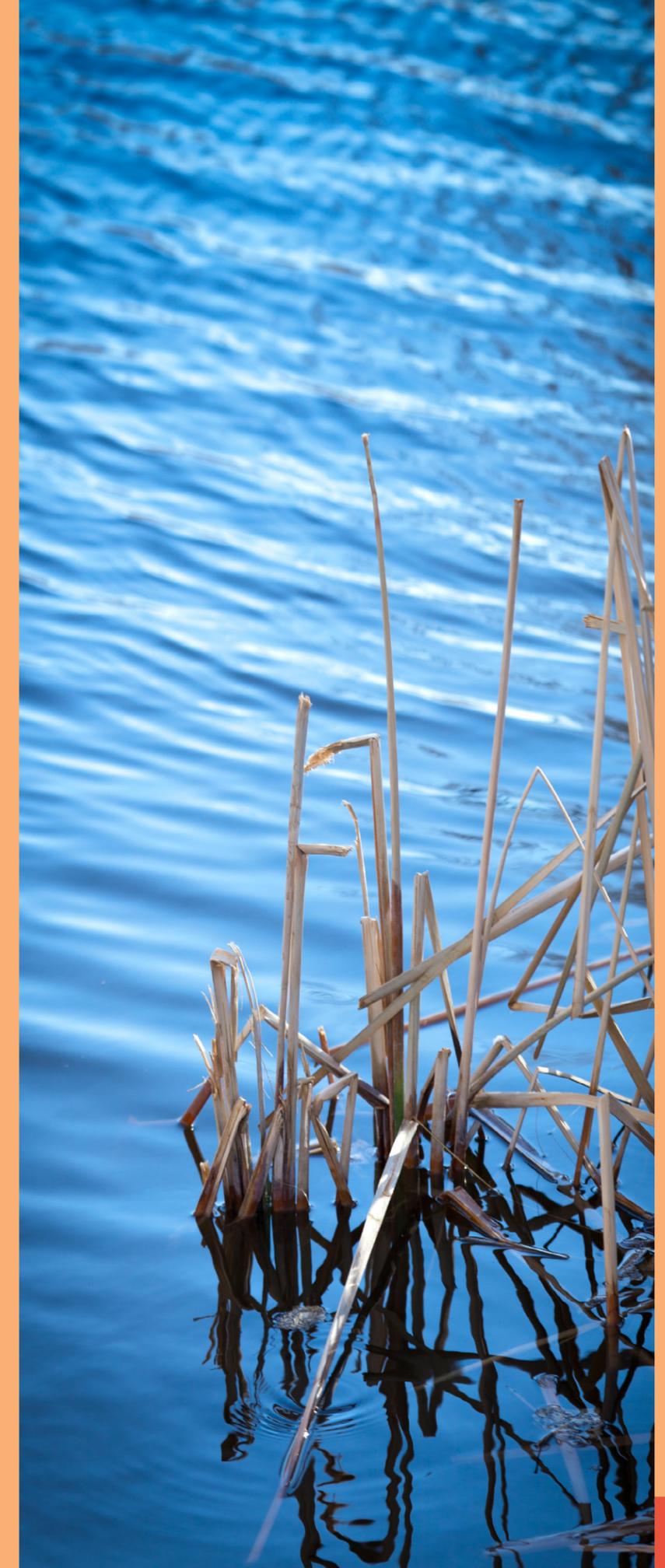
DISTRICT EXPENDITURES FISCAL YEAR 2013-14



¹Bond Debt Services includes the 2006 (\$200 million) General Obligation Flood Control Refunding Bonds, the 2008 (\$50.57 million) General Obligation Flood Control Refunding Bonds, the 2009B General Obligation Flood Control Build America Bonds (\$150 million), the 2010 (\$29.425 million) General Obligation Flood Control Refunding Bonds and the 2013 (\$75 million) General Obligation Flood Control Bonds that were issued to expedite construction of flood control improvements.

United States and Canada. The award represents a significant achievement by the District and reflects the District's commitment to meet the highest principles of governmental budgeting. In order to receive the award, the District has to satisfy nationally recognized guidelines for effective budget presentation.

Annually, the District continues to receive favorable audit opinions that state the District's financial statements are presented fairly in all material respects. This means that independent auditors have reviewed the District's financial statements and are satisfied that the financial statements are materially accurate. These positive opinions advise stakeholders that the District is following proper accounting principles and procedures.



DEMONSTRATING FISCAL INTEGRITY (CONTINUED)



CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT FUNDS

Governmental Funds - Fiscal Year 2013-14

Sources and Uses of Funds Summary (Unaudited¹)

	Operating Fund 2860	Facilities Maintenance Fund 2870	Bond Debt Service Fund 3300	Capital Improvement Funds 4430/4440	Total District Funds ¹
Beginning Balance (July 1, 2013)	\$11,811,073	\$2,948,119	\$11,683,929	\$120,767,963	\$147,211,084
Sources of Funds					
Sales Tax Revenue	85,194,052	0	0	0	85,194,052
Build America Bonds Rebate	2,953,592	0	0	0	2,953,592
Interest/Other	199,020	43,257	136,822	1,652,660	2,031,759
Proceeds from Bonds and Loans	0	0	750,000	77,515,708	78,265,708
Transfers from Other Funds	707,888	13,000,000	35,112,481	36,000,797	84,821,166
Total Sources of Funds	89,054,552	13,043,257	35,999,303	115,169,165	253,266,277
Uses of Funds					
Salaries and Wages	(2,258,511)	0	0	0	(2,258,511)
Employee Benefits	(784,279)	0	0	0	(784,279)
Services and Supplies	(2,620,974)	(13,261,491)	(521,559)	0	(16,404,024)
Capital Outlay	(90,618)	0	0	(72,925,936)	(73,016,554)
Principal	0	0	(11,730,000)	0	(11,730,000)
Interest	0	0	(22,499,137)	0	(22,499,137)
Refunding Bonds	0	0	0	0	0
Transfers to Other Funds	(84,113,278)	0	0	(707,888)	(84,821,166)
Total Uses of Funds	(89,867,660)	(13,261,491)	(34,750,696)	(73,633,824)	(211,513,671)
Fiscal Year Net Change	(813,108)	(218,234)	1,248,607	41,535,341	41,752,606
Ending Balance (June 30, 2014)	\$10,997,965	\$2,729,885	\$12,932,536	\$162,303,304	\$188,963,690

¹ Audited financial statements are expected to be available in November 2014



TEN YEAR CONSTRUCTION PROGRAM FUNDING

Each year, in conjunction with the development of the Ten-Year Construction Program (TYCP), a 10-year forecast of project funding is developed. The forecast incorporates revenues including sales tax, interest earnings and debt-financing and expenditures for projects, operations, maintenance and debt service. This long-range financial plan drives the TYCP project funding schedule including the planning and coordination of upcoming design and construction projects. Although revenues are still nine percent below their peak in 2007, the District has been able to maximize resources for the TYCP.

Approximately \$70.6 million in resources are available for projects in the first year of the TYCP, and total available resources for the TYCP are estimated to be \$666.1 million, including future debt issues of \$100 million and \$200 million. The majority of the \$100 million debt has already been committed to projects, and based on economic conditions and progress in project development, the District expects to issue the debt at the end of 2014. In order to expedite flood control project design and construction, from 1991 to the present, the District has issued a total of \$655 million in general obligations, of which \$456.6 million remains outstanding.

These funds have been directly used to pay for flood control projects. Due to the District's and Clark County's excellent credit ratings, extremely favorable interest rates have been obtained, which saves the community millions of dollars in interest costs.

Current policies and procedures allow the entities to accelerate the construction of projects in the second and third year of the TYCP if certain conditions are met. The potential exists for funding requests to exceed available resources, which creates a competitive environment that drives the entities to expedite project implementation. The District has also been able to work with other governmental jurisdictions and agencies to fund projects in advance of the availability of District resources. The projects are built ahead of schedule and the District pays for the project at a later date by using Entity Advance Funding or Resolution Agreements. Furthermore, the District has successfully negotiated with private developers and other governmental agencies to pay for flood control projects when certain conditions exist.

Some of the advantages of accelerating the construction of flood control projects are: 1) Constructed projects protect life and property; 2) There are cost savings in building projects ahead of schedule because of the deterioration of purchasing power over time due to inflation; and 3) As a result of the current state of the economy and the construction industry, construction pricing continues to be favorable. The District is continuously evaluating opportunities to accelerate the construction of flood control facilities.

MAINTAINING FLOOD CONTROL FACILITIES

The Board has adopted an Operations and Maintenance Manual to establish performance standards and guidelines for the maintenance of flood control facilities located within the District's service area. Each of the separate entities in Clark County is provided funds by the District to maintain the regional flood control facilities within their respective jurisdictions. The District worked with the entities to develop the fiscal year 2013-14 Maintenance Work Plans and Budgets, which were approved by the Board on June 13, 2013 in the amount of \$9,731,314. The Board approved supplemental budget requests totaling \$7,029,408 bringing the total approved budget to \$16,760,722. The supplemental budget requests were necessary to fund debris removal from the Kyle Canyon Detention Basin. This detention basin captured approximately 300,000 tons of material that was washed out of the Kyle Canyon area during a major flood event on August 25, 2013.

Flood control facility maintenance was performed using a combination of private contractors and entity maintenance staff. During this year, District staff inspected and/or maintained numerous facilities throughout the District service area including 590 miles of underground storm drains and channels, of which 132 miles are natural washes and 90 detention basins.

MAINTENANCE WORK PROGRAM EXPENDITURES

Entity	FY 2013-14 (Unaudited)
Boulder City	\$104,422.79
Clark County	\$1,503,352.32
Henderson	\$580,697.29
Las Vegas	\$8,920,449.00
Mesquite	\$309,655.84
North Las Vegas	\$1,842,914.00
TOTAL	\$13,261,491.24



Debris in Kyle Canyon Detention Basin after August 25, 2013 flood

TOTAL PROJECT FUNDING

Through Fiscal Year 2013-14 (\$ Millions)

Entity	Total-to-Date	FY 2013-14
Boulder City	\$27.2	\$0.0
Clark County ¹	\$868.6	\$73.9
Henderson	\$169.4	\$3.9
Las Vegas	\$470.4	\$67.7
Mesquite	\$24.0	\$0.0
North Las Vegas	\$322.7	\$21.9
TOTAL¹	\$1,882.2	\$167.5

¹ Includes federal funding for the Tropicana and Flamingo Washes project.



PROJECTS COMPLETED (DURING FY 2012-13)

CLARK COUNTY

Annie Oakley Drive at Rawhide Channel Storm Drain, Local Drainage Project..... January 2013
Olive Street Storm Drain, US-95 to Palm Street, Local Drainage Project..... March 2013
Flamingo Diversion - South Buffalo Branch, Flamingo Wash to Sunset Road.....June 2013

CITY OF HENDERSON

NV Energy Relocation, Equestrian Tributary, Phase I..... January 2013

CITY OF LAS VEGAS

Oakey Drain - Cahlan to Barnard January 2013
Oakey Meadows Storm Drain - Phase IIB.....June 2013

CITY OF NORTH LAS VEGAS

Simmons Street - Phase II, Carey to Cheyenne March 2013
Las Vegas Wash - Las Vegas Boulevard to Cheyenne AvenueMay 2013

PROJECTS COMPLETED (DURING FY 2013-14)

CITY OF BOULDER CITY

North Railroad Conveyance.....July 2013

CLARK COUNTY

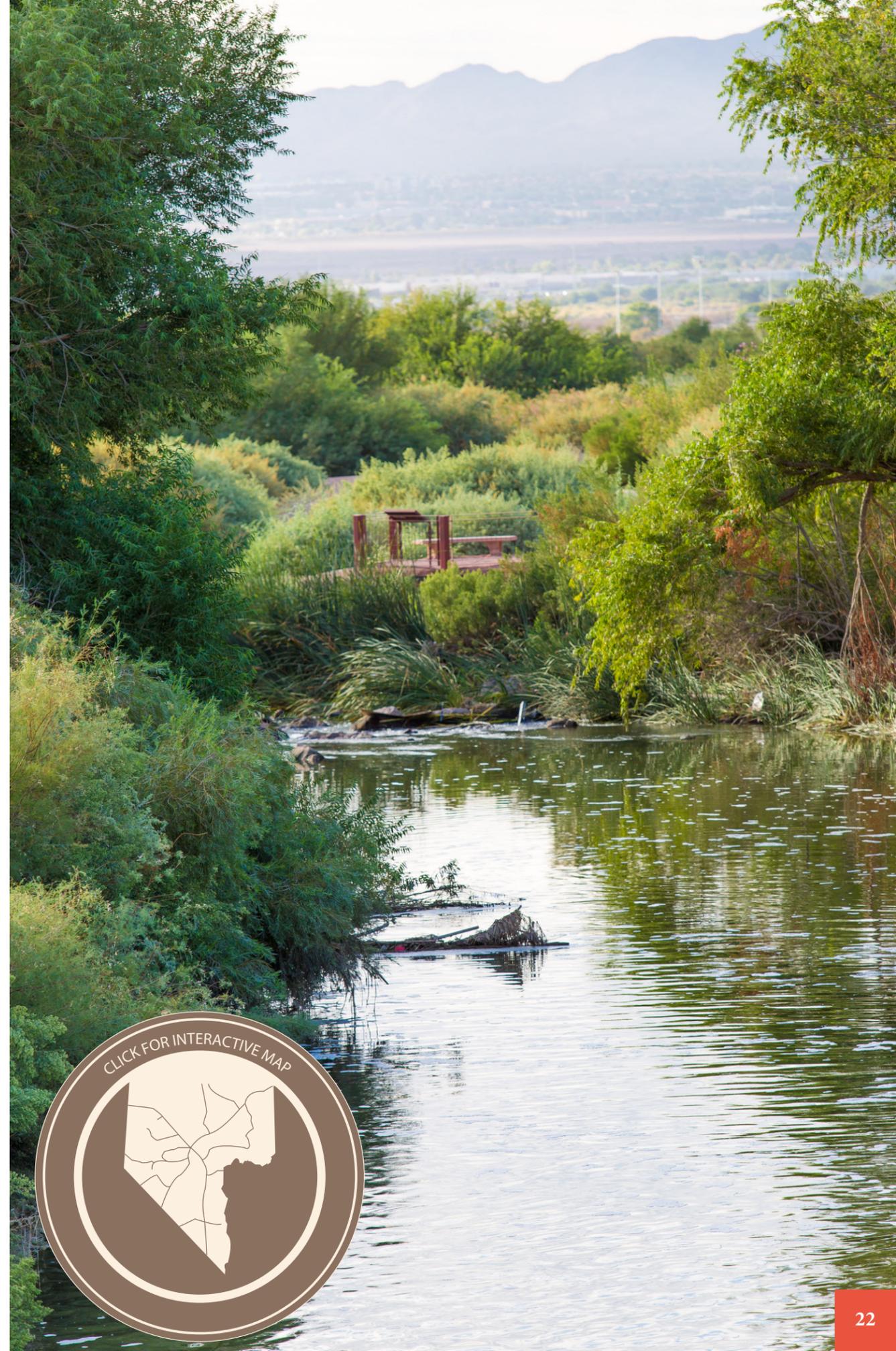
Flamingo - Boulder Highway North, Sahara Avenue to Flamingo Wash.....July 2013
Carey Avenue Storm Drain, Local Drainage Project.....July 2013

CITY OF HENDERSON

Pittman Wash, UPRR to Santiago, Phase I.....April 2014

CITY OF NORTH LAS VEGAS

Freeway Channel - Owens Avenue to Miller Avenue, Phase II August 2013
Las Vegas Wash Main Branch, Lake Mead Boulevard to Las Vegas Boulevard September 2013



PROJECTS UNDER / ABOUT TO START CONSTRUCTION (AS OF JUNE 30, 2014)

Estimated Completion Date

CITY OF BOULDER CITY

Bootleg Canyon Detention Basin, Phase II	February 2015
Buchanan Blvd., Phase III Improvements	April 2015

CLARK COUNTY

Las Vegas Wash - Sloan Channel to Bonanza Road and Flamingo Wash below Nellis*	January 2016
Orchard Detention Basin	November 2015
Outlying Areas - Muddy River Cooper Street Bridge	February 2015
Tropicana Wash at Swenson Street	July 2014

CITY OF HENDERSON

Equestrian Detention Basin Expansion	March 2015
Equestrian Tributary, Phase II	November 2014
Pioneer Detention Basin Expansion and Inflow	August 2015
Pittman Wash, UPRR to Santiago, Phase II	May 2015

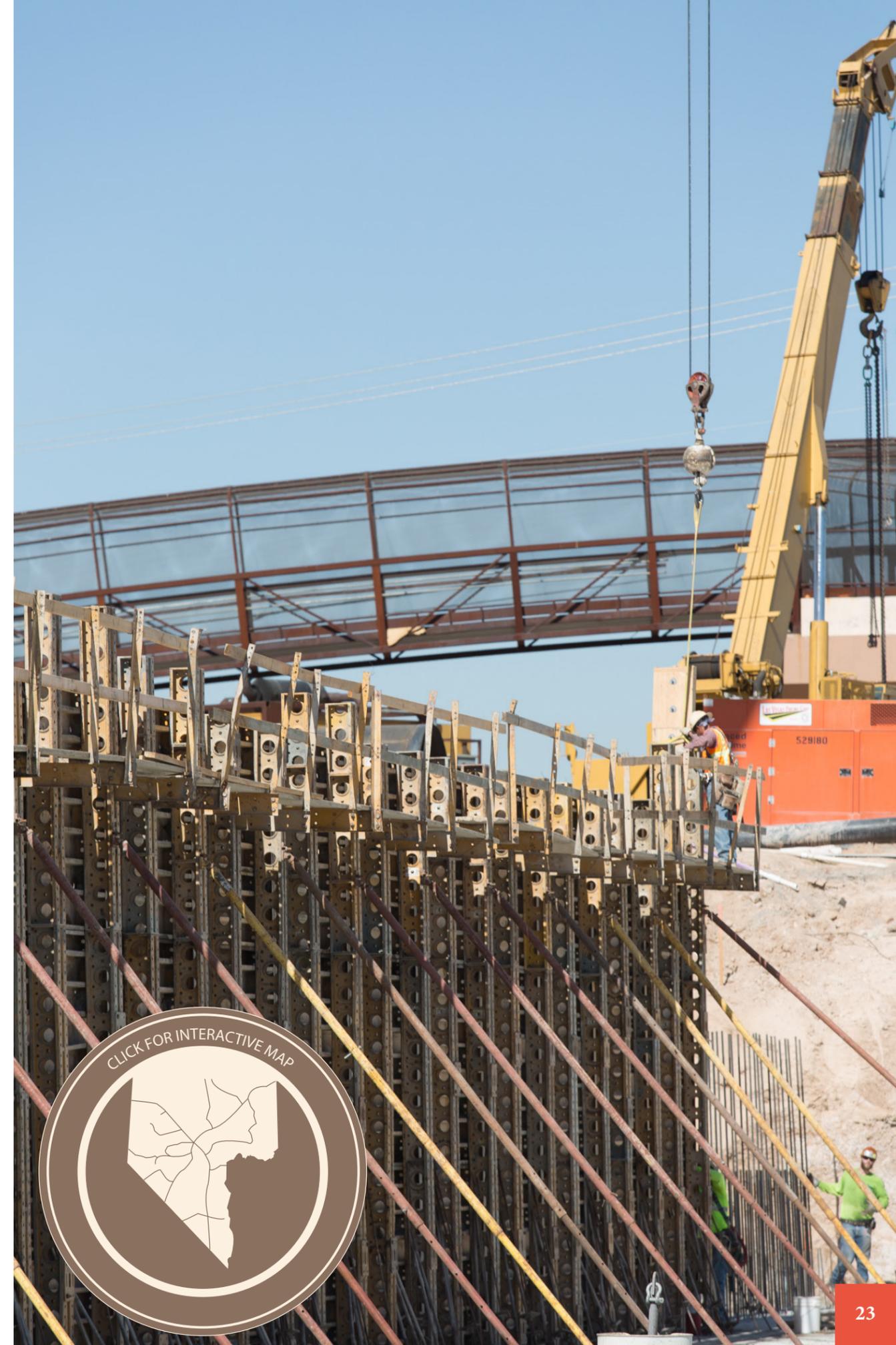
CITY OF LAS VEGAS

Angel Park Detention Basin Expansion	November 2014
Ann Road Channel West - Rainbow Boulevard	October 2014
Centennial Parkway Channel West - US 95 Crossing	September 2015
Grand Teton - Hualapai to Tee Pee	October 2014
LVW - Grand Teton, Mountain Spa to Durango Drive	May 2015
Racel Storm Drain Extension	December 2014
Rancho Road System - Beltway to Elkhorn Road	July 2015
Vegas Drive Storm Drain - Rancho to Shadow Mountain	August 2014

CITY OF NORTH LAS VEGAS

Centennial Collector	October 2015
Colton Channel Flood Control Improvements	October 2015

*The first phases, including golf course channels and Sahara Bridge, have an estimated completion date of January 2015.



PROJECTS SCHEDULED FOR WORK IN FY 2014-15

Estimated Completion Date

CITY OF BOULDER CITY

Hemenway System, Phase II Improvements, Design.....	April 2015
Hemenway System, Phase II Improvements, Construction	April 2016

CLARK COUNTY

Airport Channel - Naples, Design	August 2015
Airport Channel - Naples, Construction	August 2016
Blue Diamond Wash Railroad, Right-of-Way	June 2015
Duck Creek at Dean Martin, Design.....	December 2014
Duck Creek at Dean Martin, Construction.....	December 2015
Duck Creek Las Vegas Boulevard, Design	November 2014
Duck Creek Las Vegas Boulevard, Construction	November 2015
F-4 Patrick Lane/Ft. Apache Road Lateral, Design	August 2015
Flamingo Diversion - Rainbow Branch, Design	September 2014
Flamingo Diversion - Rainbow Branch, Construction	September 2015
Flamingo Wash, Industrial Road to Hotel Rio Drive, Design	March 2016
Las Vegas Wash - Sloan Channel to Bonanza Road and Flamingo Wash below Nellis Boulevard, Design.....	November 2014
Las Vegas Wash - Sloan Channel to Bonanza & Flamingo Wash below Nellis, (CC Segment), Construction Mgmt.....	November 2015
Orchard Detention Basin, Design	July 2014
Orchard Collector - Charleston to Linden, Construction	August 2015
Outlying Areas - Fairgrounds Detention Basin, Design	November 2015
Outlying Areas - Goodsprings - Phase I, Design.....	January 2016
Outlying Areas - Laughlin - SR 163 to Casino Drive, Design	January 2015
Outlying Areas - Laughlin - SR 163 to Casino Drive, Construction	January 2016
Outlying Areas - Muddy River Logandale Levee, Design.....	December 2014
Outlying Areas - Muddy River Logandale Levee, Construction.....	April 2016
Outlying Areas - Rainbow Canyon Boulevard Bridge, Design.....	November 2015
Outlying Areas - Searchlight - South, Encinitas St. Storm Drain, Design.....	January 2015
Outlying Areas - Searchlight - South, Encinitas St. Storm Drain, Construction.....	January 2016
Outlying Areas - Windmill Wash Detention Basin Expansion, Design.....	January 2015
Silverado Ranch Detention Basin, Design	September 2016
Silverado Ranch Detention Basin, Construction	September 2017
Tropicana Avenue Conveyance - Las Vegas Wash to Mountain Vista, Design	July 2016
Washington/Hollywood Street Storm Drain, Local Drainage Project	October 2014

CITY OF MESQUITE

Town Wash - Mesa Boulevard, Pioneer to Town Wash, Design	March 2016
Town Wash Mesa Boulevard, Chaparral to Pioneer, Right-of-Way.....	March 2016
Virgin River Flood Wall, Design.....	December 2016



PROJECTS SCHEDULED FOR WORK IN FY 2014-15 (CONTINUED)

Estimated Completion Date

CITY OF HENDERSON

Anthem Parkway Channel, Horizon Ridge to Sienna Heights, Design.....	March 2015
Anthem Parkway Channel - Horizon Ridge to Sienna Heights, Construction.....	March 2016
Center Street Storm Drain, Design.....	August 2015
Duck Creek - Sunset to Sandhill, Design.....	September 2014
Duck Creek - Sunset to Sandhill, Construction.....	September 2015
Horizon Ridge Debris Basin & Outfall at Sumner Ranch Road, Design.....	June 2015
Horizon Ridge Debris Basin & Outfall at Sumner Ranch Road, Construction.....	June 2016
Pittman Burns, Sunset to Galleria, Design.....	November 2016
Pittman North Detention Basin and Outfall, Design.....	July 2015
Pittman North Detention Basin and Outfall, Construction.....	September 2016
Pittman North Detention Basin Outfall - St. Rose to Spencer, Right-of-Way.....	July 2015
Pittman Wash, Duck Creek at I-515, Design.....	January 2015
Pittman Wash, Duck Creek at I-515, Construction.....	January 2017
Pittman West Horizon - Palm Hills, Design.....	June 2015
Pittman West Horizon - Palm Hills, Construction.....	June 2016
Racetrack Channel - Drake to Burkholder, Design.....	January 2015
Racetrack Channel - Drake to Burkholder, Construction.....	January 2016
St. Rose to Starr Avenue, Design.....	February 2016
St. Rose to Starr Avenue, Construction.....	February 2017

CITY OF LAS VEGAS

Boulder Highway Sahara Avenue, Mojave Road to Boulder Highway, Design.....	March 2016
Brent Drainage System - Floyd Lamb Park to Durango Drive, Design.....	September 2015
Brent Drainage System - Floyd Lamb Park to Durango Drive, Construction.....	September 2016
Buckskin Avenue Storm Drain, Local Drainage Improvements, Construction.....	September 2015
Cedar Avenue Channel Improvements, Design.....	December 2015
Centennial Parkway Channel West - CC 215, Pioneer Way to US 95, Design.....	July 2015
Centennial Parkway Channel West - CC 215, Pioneer Way to US 95, Construction.....	September 2016
Concord Street Storm Drain, Local Drainage Project, Construction.....	December 2014
Flamingo Wash, Boulder Highway North - Main Street, Design.....	December 2016
Freeway Channel - Washington, MLK to Rancho Drive, Design.....	September 2014
Freeway Channel - Washington, MLK to Rancho Drive, Construction.....	September 2015
Gowan Outfall - Alexander Road, Rancho Drive to Decatur Boulevard, Design.....	October 2015
Gowan North - Buffalo Branch, Lone Mountain to Washburn Road, Design.....	June 2015
Gowan North - Buffalo Branch, Lone Mountain to Washburn Road, Construction.....	June 2016
Las Vegas Wash - Sloan Channel to Bonanza & Flamingo Wash below Nellis, Design.....	November 2014
Oakey - Meadows Storm Drain, Construction.....	April 2016
Rancho Road System - Elkhorn, Fort Apache to Grand Canyon, Design.....	July 2014
Rancho Road System - Elkhorn, Fort Apache to Grand Canyon, Construction.....	March 2016

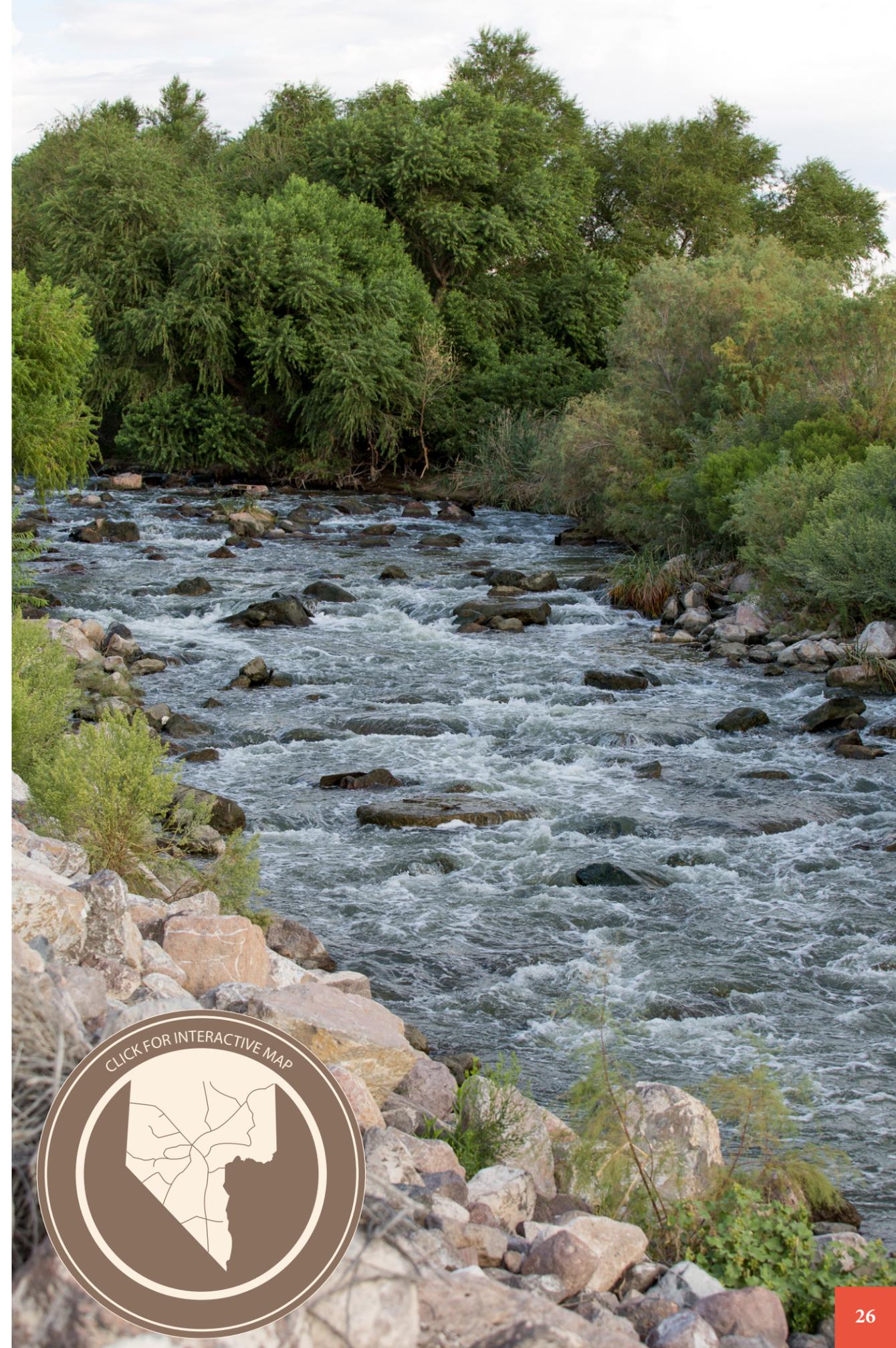


PROJECTS SCHEDULED FOR WORK IN FY 2014-15 (CONTINUED)

Estimated Completion Date

CITY OF NORTH LAS VEGAS

Ann Road Channel East, ULVW to Fifth Street, Design	September 2014
Ann Road Channel East, ULVW to Fifth Street, Construction	October 2015
Beltway Detention Basin and Channel, Design	September 2015
Beltway Detention Basin and Channel, Right-of-Way.....	September 2015
Beltway Detention Basin and Channel, Construction.....	September 2016
Brooks Channel, Design.....	December 2014
Brooks Channel, Right-of-Way.....	December 2014
Brooks Channel, Construction.....	December 2015
Central Freeway Channel at Cheyenne, Design	November 2015
Central Freeway Channel at Cheyenne, Construction	November 2016
Fifth Street Collector - Centennial to Deer Springs, Right-of-Way.....	June 2016
Hollywood System, Azure to Speedway #2 Detention Basin, Right-of-Way.....	September 2015
Hollywood System, Las Vegas Boulevard to Azure Avenue, Design.....	September 2016
Hollywood System, Las Vegas Boulevard to Azure Avenue, Right-of-Way.....	September 2016
Hollywood System, Las Vegas Boulevard to Azure Avenue, Construction.....	September 2016
Las Vegas Wash - N Channel, Cheyenne to Gowan, Design.....	September 2015
Las Vegas Wash - N Channel, Cheyenne to Gowan, Construction.....	September 2016
Las Vegas Wash - Sloan Channel to Bonanza & Flamingo Wash below Nellis (NLV Segment), Construction Mgmt.....	November 2016
Simmons Street Drainage Improvements, Carey to Craig, Design.....	September 2014
Simmons Street Drainage Improvements, Alexander Road to Gowan Outfall Channel, Construction.....	December 2015
Vandenberg North Detention Basin, Collection & Outfall, Design.....	April 2016





Las Vegas Wash • Sloan to Bonanza and Flamingo Wash • Confluence to Nellis







Las Vegas Wash • Sloan to Bonanza and Flamingo Wash • Confluence to Nellis

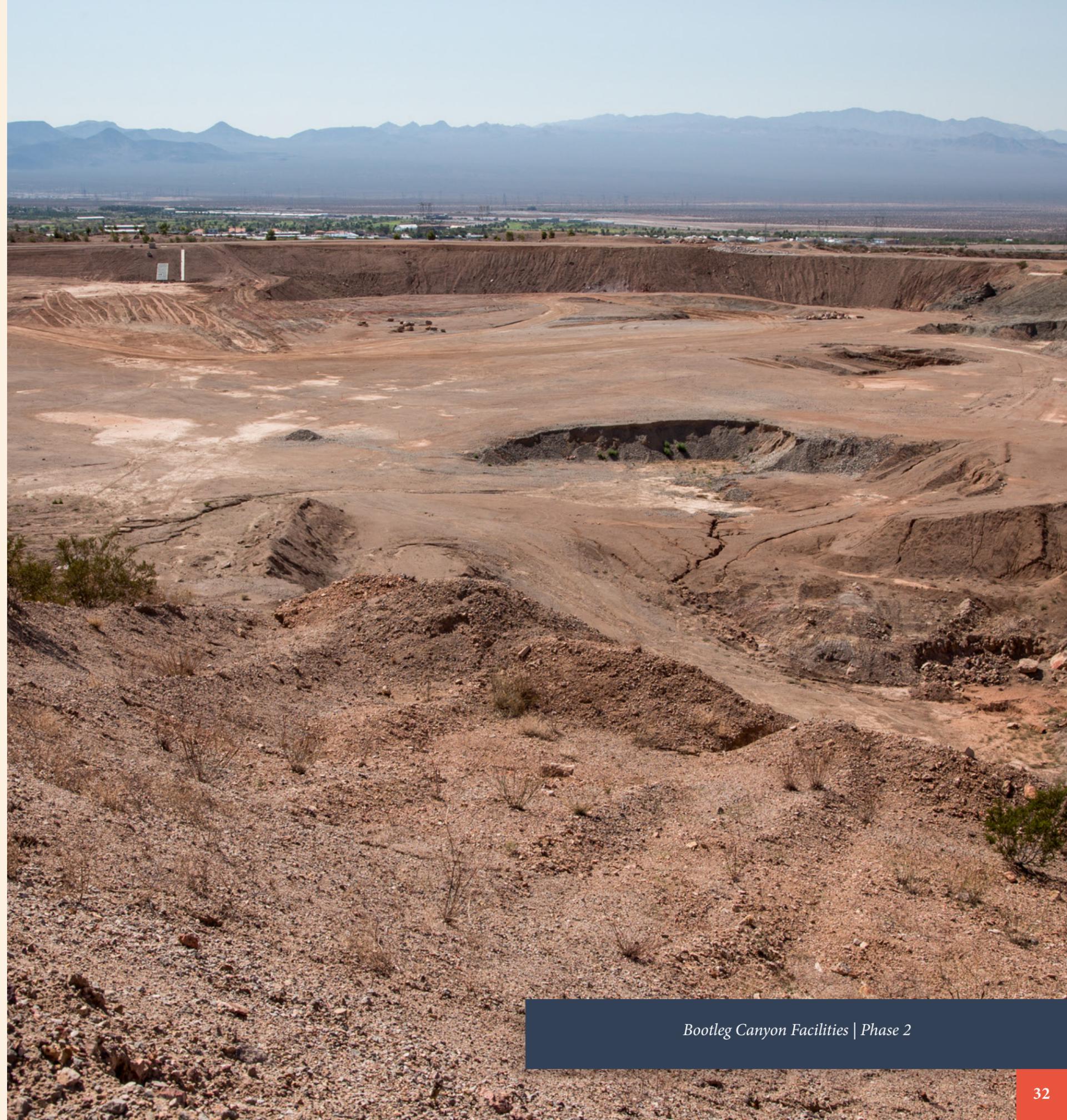






Angel Park North Detention Basin

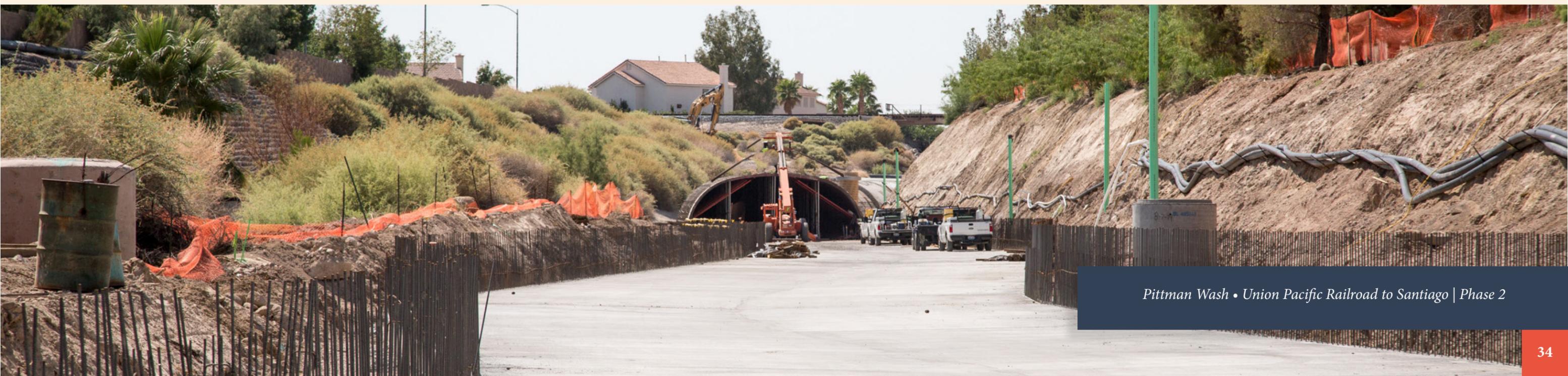






Las Vegas Wash • Grand Teton, Mountain Spa to Durango





Pittman Wash • Union Pacific Railroad to Santiago | Phase 2

REGIONAL FLOOD CONTROL DISTRICT MEMBERSHIPS

ALERT User's Group • American Meteorological Society • American Public Works Association
American Society for Public Administration • American Society of Civil Engineers • Arizona Floodplain
Management Association • Association of State Dam Safety Officials • Association of State Floodplain
Managers • Construction Managers Association of America • City-County Communications and
Marketing Association • Floodplain Management Association • Government Finance Officers
Association • International Association of Business Communicators • Las Vegas Valley Watershed
Advisory Committee • National Association of Flood and Storm Water Management Agencies
National • Association of Government Communicators • National Hydrologic Warning Council
National Society of Professional Engineers • Nevada Hazard Mitigation Planning Committee •
Nevada Taxpayers Association • Public Relations Society of America • Southern Nevada Home
Builders Association • State of Nevada Entity Technical Alliance • UNLV Civil and Environmental
Engineering and Construction Advisory Board

SPECIAL DISTRICT RECOGNITION

2013 Government Finance Officers Association (GFOA)

The Distinguished Budget Presentation Award for the District's Fiscal Year 2013-14 Budget and
Financial Plan. This is the 20th consecutive year the District has received this honor.

2013 ALERT Users Group Operational Excellence Award for the District's Flood Threat Recognition
System and rain map web application.



REGIONAL FLOOD CONTROL DISTRICT



WWW.REGIONALFLOOD.ORG

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702.685.0000

