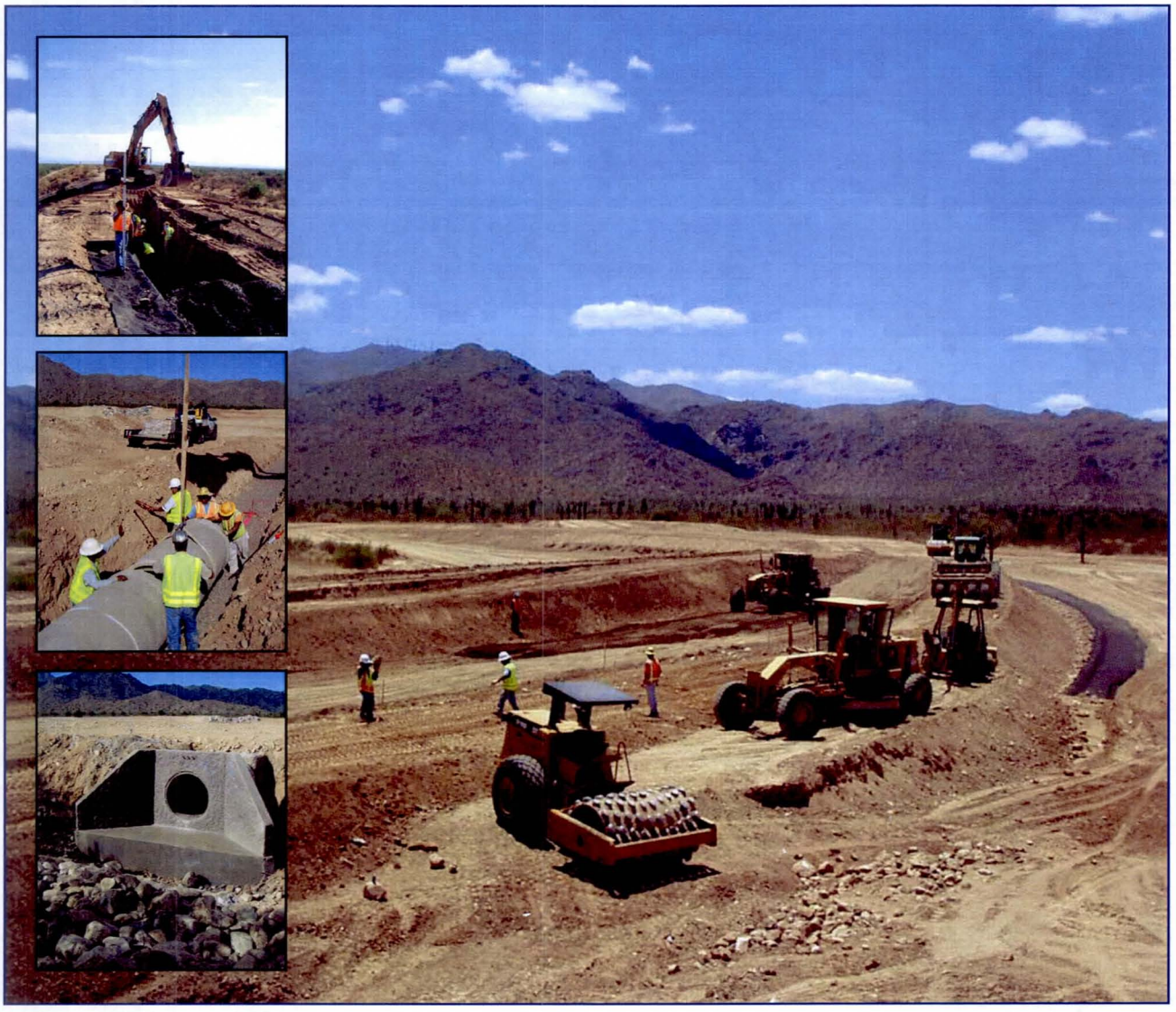
# Annual Report
Fiscal Year 2005-2006

Project Highlight:

## McMicken Dam Fissure Risk Zone Remediation Project

In 2002, a District dam safety inspection revealed signs of earth fissures, or deep cracks in the soil, near the southern end of McMicken Dam, a 10-mile-long, 30-foot-tall structure located in Surprise protecting homes, commercial property, agriculture and Luke Air Force Base. Earth fissures are detrimental to the integrity of a dam structure. The District and its contractor realigned the southernmost 1.5 miles of the dam to place the embankment away from the zone of known fissures. A new dam segment was constructed with an erosion-resistant soil cement core designed to withstand damage from potential future fissure activity in the area. In addition, a new flood control basin was constructed at the southernmost end of the project to provide flood protection in the area where a segment of the old dam was removed.



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## Board of Directors

Per Arizona Revised Statute 48-3602, the Flood Control District is governed by a five-member Board of Directors that also serves as the Board of Supervisors for Maricopa County. The Board of Directors exercises all the powers and duties as ordinarily exercised by governing bodies in the acquisition and operation of property, contracting, and regulatory functions. Board members elect a new chairman each year:

- Don Stapley, Chairman, District 2
- Fulton Brock, District 1
- Andrew Kunasek, District 3
- Max Wilson, District 4
- Mary Rose Wilcox, District 5

## Flood Control Advisory Board

The Flood Control Advisory Board (FCAB) advises the Board of Directors on flood control, floodplain management, drainage and related matters. The FCAB reviews the District's planning studies, projects and operations/maintenance activities, and recommends to the Board of Directors an annual budget, including the five-year Capital Improvement Program (CIP).

The FCAB consists of seven members. Five of the seven members are appointed by the Board of Directors for five-year terms. The final two members are ex officio representatives from Salt River Project and the City of Phoenix. FCAB members also serve the District as members of the Floodplain Review Board and Board of Hearing Review.

- Scott Ward, Chairman, District 1
- DeWayne Justice, Vice Chairman, District 4
- Melvin Martin, Secretary, District 5
- Kent Cooper, District 2
- Hemant Patel, District 3
- Ray Acuña, Ex Officio, City of Phoenix
- Paul Cherrington, Ex Officio, Salt River Project

## Engineering

The Engineering Division manages projects and programs in structure design, hydrology and hydraulics (quantity, depth and flow of stormwater), engineering applications development, river mechanics, flood warning systems, mapping/surveying, sand and gravel mining regulation, and water quality.

- Performed in-house engineering design work for 2-D flow modeling to assist in development regulation and public information regarding Rio Verde
- Flood Warning Branch issued 85 weather alerts, 18 weather watches and 10 weather warnings via e-mail, and 36 weather warnings via telephone
- Sixteen new ALERT stations were installed, increasing the total number of operating stations to 310 as of June 30, 2006
- Initiated the Automated Roadway Warning Sign pilot project at two unbridged wash crossings
- Performed emergency hydrology modeling for wildfire burn areas near Cave Creek and New River
- Managed and funded a study for hydraulic roughness coefficients in Maricopa County which was published by the U.S. Geological Survey
- Created a Dam Safety Library
- Engineering Library used by 765 non-staff customers

## Planning and Project Management

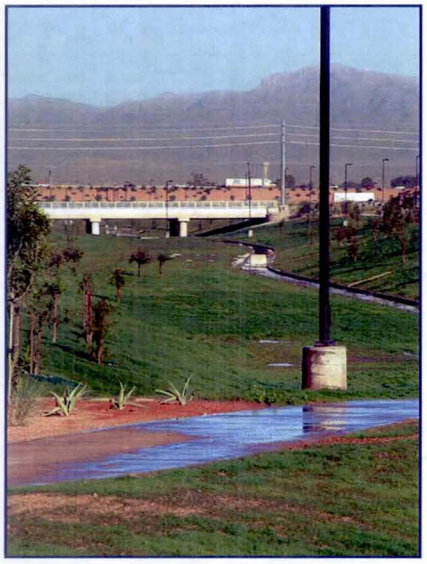
The District's Capital Improvement Program—its primary mechanism for mitigating existing regional flood hazards—accounted for 62% of its total Fiscal Year 2006 expenditures. Total expenditures consisted of $4.5 million in design costs, $11.5 million in rights-of-way acquisitions, $39.8 million in construction costs and $2.0 million in internal labor charges.

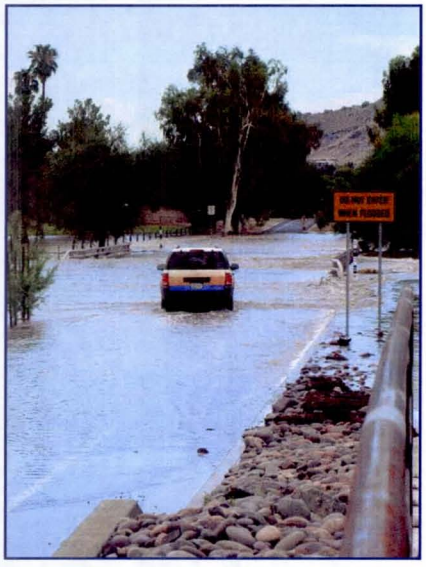
Construction projects completed or substantially completed included:

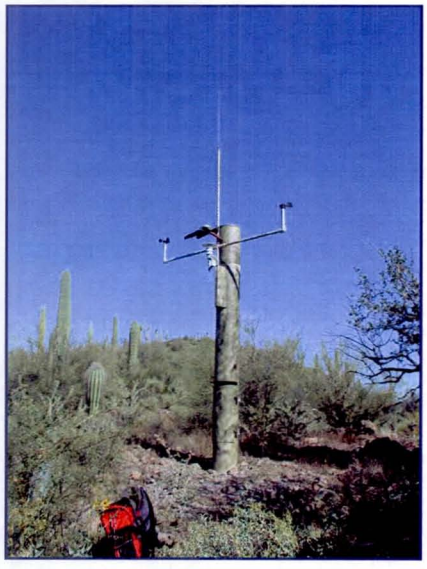
- Channelization of Queen Creek Wash to contain 100-year flood flows from Hawes Road at Ocotillo Road to Power Road at the Queen Creek Road alignment, eliminating floodplain breakouts along the north bank of the wash;
- The 71st Avenue Storm Drain and Mescal Basin project, providing 10-year and 100-year levels of protection, respectively, between Shea Road and Cactus Road;
- The first phase of excavation of the Rittenhouse Basin, designed to increase the capacity of the East Maricopa Floodway;
- Remediation of a fissure risk zone at McMicken Dam;
- Channelization of the New River, between Grand Avenue and Skunk Creek; and
- The Elliot Road Basin and Channel project, collecting and conveying storm water from the Siphon Draw Wash west of Signal Butte Road, along Elliot Road, to an outlet into the Loop 202 drainage system.

The District and its project partners achieved significant design completion on:

- Sonoqui Wash Channelization, from Higley Road to Chandler Heights Road, intended to provide a 100-year level of protection for surrounding Queen Creek and Gilbert residents; and
- 26th Avenue and Verde Lane Basin, providing a 100-year storm retention volume for flows intercepted along Interstate 17 frontage roads.







The District initiated floodplain delineations for the following watersheds: Wittmann (Phase 2), Lower Painted Rock Watershed (Zone A), and Sentinel Watershed (Zone A). Floodplain delineations were completed for: Lower Centennial Watershed (Zone A); New River West Tributaries; Lower Hassayampa River Tributaries; Cave Creek (Central Arizona Project Canal to Loop 101); Moon Valley Wash; and New River at New River Road Bridge.

Dam rehabilitation planning efforts were conducted on White Tanks Flood Retarding Structure No.4 and Buckeye Flood Retarding Structure No.1, and earth fissure investigations were initiated on Powerline Flood Retarding Structure. Additionally, regular inspections were completed on the District's 22 dams, emergency action plans were updated, and dam surveys were performed.

## Operations and Maintenance

Regular maintenance activities by the Operations and Maintenance Division (O&M) for District structures were performed during the year. Regular maintenance included mitigating the effects of erosion and sedimentation; vegetation and vector control; maintenance of channels, floodways and outflow devices; and storm damage repair. Structure features were maintained to design standards. Floodways were kept free and clear of silt, debris and obstructive vegetation. Protective linings of banks and dikes for the long-term functional life of the structures were also maintained. The inspection team conducted annual inspections of each structure. Quarterly dam operational inspections were also conducted to guarantee the proper operation of outlets and spillways.

O&M staff also maintained excess property obtained from severances and/or buy-out programs and responded to 34 citizen complaints regarding trash removal, insects, odors, dust, gates, and other nuisances.

During this fiscal year the O&M Division developed a comprehensive weed abatement, rodent and vector treatment program. An integrated approach was developed to control these threats to our flood control structures and the public.

## Regulatory

By enforcing the federal, state and local rules regarding development in areas where flooding may occur, the Division can prevent adverse effects to the environment, and safeguard the lives and property of county residents. Regulatory functions include floodplain management, floodplain use permits, code/regulation enforcement, and floodplain map information.

- County and community permits processed: 905 applications; $108,426 in fees collected
- Inspections and enforcement: 1,220 inspections for county permits completed; 56 violation cases opened
- Started manning the One Stop Shop full-time and contracted with Maricopa County Planning and Development to process drainage permits
- Web application added to the District's Web site for Rio Verde for citizens to look up floodplain information

# 2006 Financial Highlights

Preliminary and Unaudited

## Revenue Collection Status

| | Full Year Revised Budget | Collections Full Year | Collections Remaining | Percent Remaining |
|---|---|---|---|---|
| Property Taxes | $62,733,411 | $61,173,495 | $1,559,916 | 2.5% |
| Licenses & Permits | 3,168,079 | 3,641,058 | (472,979) | -14.9% |
| Partnership Reimbursements | 19,656,000 | 19,111,476 | 544,524 | 2.8% |
| Payments in Lieu | 221,514 | 221,513 | 1 | 0.0% |
| Interest Earnings | 860,317 | 1,021,017 | (160,700) | -18.7% |
| Miscellaneous Revenue | 2,555,293 | 2,625,075 | (69,782) | -2.7% |
| | **$89,194,614** | **$87,793,634** | **$1,400,980** | |

## Operating Budget – Financial Comparative

| | Full Year Budget | Full Year Actual | Funds Remaining |
|---|---|---|---|
| Payroll | $14,777,174 | $11,682,376 | $3,094,798 |
| Transfers | (1,855,653) | 827,308 | (2,682,961) |
| Supplies | 1,629,522 | 1,463,551 | 165,971 |
| Outside Services | 18,118,573 | 16,765,825 | 1,352,748 |
| Non-Labor Transfers | (30,515) | 36,163 | (66,678) |
| Capital Acquisitions | 1,774,426 | 1,081,783 | 692,643 |
| Debt Service | 199,500 | 175,757 | 23,743 |
| | **$34,613,027** | **$32,032,763** | **$2,580,264** |

## Capital Improvement Program

| | Full Year Budget | Full Year Actual | Funds Remaining |
|---|---|---|---|
| Force Account Payroll | $2,442,000 | $2,031,832 | $410,168 |
| Supplies | 0 | 56,333 | (56,333) |
| Engineering | 3,653,000 | 4,642,172 | (989,172) |
| Land Acquisition | 12,158,666 | 11,474,385 | 684,281 |
| Capital Equipment | 13,000 | 0 | 13,000 |
| Construction | 45,975,334 | 39,801,571 | 6,173,763 |
| | **$64,242,000** | **$58,006,294** | **$6,235,706** |

## Beginning/Ending Fund Balance Reserves

| | Operating Fund | CIP Fund | Total Fund Reserve |
|---|---|---|---|
| Beginning Fund Balance | $16,671,496 | $15,537,185 | $32,208,681 |
| Total Revenue Collected | 87,793,634 | 0 | 87,793,634 |
| Operating Transfers to CIP Fund | (61,792,583) | 0 | (61,792,583) |
| Funds Transferred to CIP | 0 | 61,792,583 | 61,792,583 |
| **Total Funds Available** | **$42,672,547** | **$77,329,768** | **$120,002,315** |
| Less: | | | |
| Operating Expenditures | $31,852,004 | $0 | $0 |
| CIP Expenditures | 0 | 58,006,294 | 0 |
| **Ending Fund Balance** | **$10,820,543** | **$19,323,474** | **$30,144,017** |