

# 5-Year Capital Improvement Program

Fiscal Years 2006 to 2010



Renderings are of the New River Channel (Grand Ave. to Skunk Creek)

Project Manager:  
Scott Vogel, P.E.

Construction Manager:  
Consultant Engineering, Inc.

Project Sponsors:  
City of Peoria and FCD

General Contractor:  
FNF Construction, Inc.

Designer:  
J2 Engineering and Environmental  
Design



Existing Condition



Proposed Condition

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10th St. Wash Improvements (Alice - ACDC)	580.05.31	66
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24 <sup>th</sup> Avenue/Camelback Road Basin	625.02.31	71
24 <sup>th</sup> Avenue/Camelback Road Basin	625.xx.xx	72
26th Avenue/Verde Lane Basin	620.05.31	70
67 <sup>th</sup> Avenue Storm Drain	450.05.30	49
75 <sup>th</sup> Ave. Storm Drain/Durango Regional Conveyance Channel	565.04.31	64
83 <sup>rd</sup> Ave./Pinnacle Peak Road Improvements	450.02.33	48
Adobe Dam/Desert Hills ADMP	520.xx.xx	62
ADOT Pit Modifications	035.xx.xx	26
Bethany Home Outfall Channel	620.03.32	69
Buckeye #1 FRS Rehabilitation	207.02.26	36
Bullard Wash Phase II	470.13.31	55
Durango ADMP	565.02.31	65
Elliot Basin and Channel	442.04.31	44
Ellsworth Road Channel	442.08.31	45
EMF- Chandler Heights Basin	121.03.33	32
EMF - Rittenhouse Basin	121.03.32	31
Floodprone Properties Acquisition Program	various	73
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McMicken Dam Fissure Risk Zone Remediation Project	202.01.31	35
New River (Grand Ave to Skunk Creek)	400.06.31	39
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Queen Creek Road Basin	491.04.31	61
Reems Road Channel	470.12.31	54
Rose Garden Lane Channel	450.02.32	47
Scatter Wash Basin Improvements	590.03.31	68
Scottsdale Road Corridor Drainage Improvements	120.03.31	30
Siphon Draw Drainage Improvements	442.11.31	46
Skunk Creek Channel @ 35 <sup>th</sup> Avenue	520.xx.xx	63
Sonoqui Wash Channelization (Chandler Heights – Riggs Road)	480.04.xx	59
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South Phoenix Detention Basins	117.xx.xx	29
Spook Hill ADMP	420.xx.xx	43
Spook Hill Basin Acquisition	420.01.32	40
Spook Hill FRS/ Red Mountain Freeway (Loop 202L) Modification	300.01.31	37
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White Tanks ADMP/Loop 303	470.xx.xx	56
Wickenburg Downtown Flooding Mitigation	343.01.31	38

## **Board of Directors**

The Board of Supervisors for Maricopa County also serves as the Board of Directors for the Flood Control District of Maricopa County. There is one elected official from each of the five County districts. The Board of Directors makes the final decision regarding projects to be included in the Capital Improvement Program.

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

## **Flood Control Advisory Board**

The Flood Control Advisory Board (FCAB) acts in an advisory role to the Board of Directors on flood control, floodplain management, and related matters. The FCAB reviews planning, operations, and maintenance of flood control facilities, and recommends an annual budget, which includes a Five-Year Capital Improvement Program (CIP) to the Board of Directors. The FCAB, in close coordination with the District staff, reviews program priorities and new policies, and provides their recommendations to the Board of Directors. The FCAB members also serve the District as members of the Floodplain Review Board. The Advisory Board consists of seven members, five are appointed by the Board of Supervisors to five-year terms. In addition to those five members, the Salt River Project and the City of Phoenix appoint representatives who are ex-officio members of the FCAB with all rights and privileges granted to other members. Regular FCAB meetings are held on the 4th Wednesday of each month, and/or the first Wednesday in December. These meetings begin at 2:00 p.m. in the Flood Control District Administrative Building. Please contact the Flood Control District at (602) 506-1501 to confirm that a meeting is scheduled to occur.

District 1	Scott Ward
District 2	Kent Cooper
District 3	Hemant Patel, P.E.
District 4	Robert “Dewayne” Justice
District 5	Melvin Martin
Ex-Officio	Paul Cherrington, P.E. (SRP)
Ex-Officio	Raymond Acuna, P.E. (City of Phoenix)

## **Chief Engineer & General Manager**

Timothy S. Phillips serves as the Acting Chief Engineer & General Manager for the Flood Control District of Maricopa County. Mr. Phillips has over 24 years of water resources experience in the irrigation and flood control field. He has worked as a staff engineer, project manager and general manager for local and regional public water resource agencies within Arizona to include the Salt River Project, New Magma Irrigation and Drainage District, Central Arizona Irrigation and Drainage District and most recently the Flood Control District of Maricopa County.

Mr. Phillips received a Bachelor Degree in Civil Engineering from Arizona State University in 1980 and is a registered professional engineer in Civil Engineering in the State of Arizona. He further has a Masters of Arts Degree in Organizational Management and a Masters Degree of Strategic Studies. Mr. Phillips has also served actively as an officer in the Arizona Army National Guard for more than twenty-four years and resides in the Town of Gilbert with his wife Teresa and two children, Lisa and Chris.

## **Project Evaluation Committee**

The Project Evaluation Committee, comprised of experienced District managers, make CIP recommendations to the Chief Engineer and General Manager and the FCAB Program and Budget Committee. Their recommendations are developed using a system that allocates points to individual projects based on specific criteria. For more information, see Section 2.4 Prioritization Criteria.

The committee members are:

Charlie Klenner: Operations & Maintenance Division Manager  
Amir Motamedi, P.E.: Acting Regulatory Division Manager  
Dick Perreault: CIP/Policy Branch Manager  
Ed Raleigh, P.E.: Engineering Division Manager  
Mike Wilson: Land Management Division Manager

## **Mission/Vision/Pledge**

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

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.

## **Introduction**

### ***1.1 FCD Description and General Context***

The Flood Control District was formed on August 3, 1959, following passage of State legislation empowering counties to set up special districts to provide flood protection. Flood control districts are political subdivisions of the State and have the same powers, privileges and immunities generally given to incorporated cities and towns. The District is governed by a Board of Directors who is also the elected Board of Supervisors for Maricopa County. This Board, in turn, is advised by a seven-

member Flood Control Advisory Board. The activities of the District are funded primarily by a flood control tax levy assessed on real property within Maricopa County and a variety of cost-sharing arrangements with federal, state, county and local governments. The tax levy rate for the previous fiscal year (2004/2005) was \$0.2119 per \$100 of assessed value. The tax levy rate for Fiscal Year 2005/2006 remained constant at \$0.2119 per \$100.00 of assessed valuation.

The District is organized into seven functional areas arranged in the following divisions: Administration, Operations & Maintenance, Engineering, Regulatory, Land Management, Geographic Information Systems, and Planning & Project Management. The Capital Improvement Program (CIP) serves as the cornerstone of the District's efforts to resolve flooding problems in Maricopa County. This booklet provides information on the anticipated expenditures for flood control projects and programs for the next five years, from July 2005 through June 2010.

## ***1.2 The Capital Improvement Program Defined***

The Capital Improvement Program (CIP) for the Flood Control District is a revolving Five-Year Plan that identifies spending for anticipated capital projects. The Plan addresses both modification and replacement of existing infrastructure as well as the development of new facilities to accommodate future growth. This Plan also enables the District and its stakeholders to identify needed capital projects and coordinate financing and construction timing. To increase effectiveness, the CIP consists of two crucial segments; an administrative process to identify and prioritize future capital projects (the Prioritization Procedure) and the fiscal plan to provide for the funding of those projects.

The CIP links the planning and budget activities of the District. It can support not only past policy decisions by establishing priorities between existing and competing projects, but can also measure and evaluate the merits of new proposals. Typically, a CIP describes each capital project proposed for development over the forthcoming five-year period by listing the year that it is to be started, the cost per year, and, when applicable, the proposed method of cost-sharing. Based on these details about each project, the District has developed annual cost schedules for capital expenditures. Thus, the capital improvement program presents both the cost and funding for all the project requirements for flood control purposes as tempered by current and future financial capability.

## ***1.3 The Difference between the Capital Budget and the CIP***

The capital budget represents the first year of the capital improvement plan. The primary difference between the capital budget and the Capital Improvement Program (CIP) is that the Board of Directors (BOD) approved capital budget gives the District staff authority to spend funds and proceed with specific projects. The CIP includes both authorized first-year projects as well as future projects for which financing has not been secured or authorized. The "out years" of the plan are thus partially projected and not authorized and hence are subject to change. Every item in the capital budget must be approved by the BOD and is closely reviewed by the Maricopa County Office of Management and Budget to ensure that it meets with the fiscal policies of the County. As a result, the capital budget must be prepared with great care owing to the need for accuracy as well as consistency with County revenue and expenditure forecasts for the upcoming year(s). The Five-Year CIP is developed and managed by the Planning and Project Management Division for the Chief Engineer and General Manager, the Flood Control Advisory Board, and the Board of Directors. Because it is not formally tied to the County's budgeting process, it can be altered to reflect future requirements and expectations associated with flood control capital projects.

## **1.4 Undertaking CIP Planning**

The CIP process is dynamic and is continually reviewed and adjusted to account for revised forecasts for major expenditures in the future and adjusted project schedules. The CIP's five-year perspective allows projects to be planned and programmed ahead of actual authorization. But the yearly repetition of the Prioritization Procedure and the CIP process ensures that each project undergoes several stages of review before it is finally approved and funded. This approach to capital planning is particularly meaningful in the rapid growth environment of Maricopa County. It ensures that new facilities will be evaluated within the context of County and municipal land use plans and weighed against safety and maintenance requirements for existing structures.

Among its many advantages, an effective capital improvement program:

- Focuses attention on goals, needs, and objectives. It ensures that the District's capital projects are consistent with changing community objectives, anticipated growth, and financial capabilities.
- Requires the scheduling of major investments and reduces the possibility of costly mistakes. It provides specific project information that assists the Flood Control Advisory Board and the Board of Directors in making sound budget decisions.
- Facilitates more efficient administration and management. Focused review of necessary capital improvements can reduce scheduling problems, conflicting and overlapping projects, and overemphasis on any single function or geographic area.
- Promotes cooperation with other jurisdictions. The capital planning process gives all jurisdictions the opportunity to coordinate location, timing, and financing of related projects.
- Allows leveraging of FCD funds with other funding sources.
- Maintains a sound and stable financial program. Dramatic changes in the County's tax structure can be avoided when capital projects are planned and implemented over several years.

## **Flood Control Planning & the CIP**

### **2.1 Overview**

The District maintains the Five-Year Capital Improvement Program (CIP) as mandated by State Statutes and directed by the District's General Policies. The Five-Year CIP includes all costs associated with the implementation of projects or elements of projects that have been proposed by federal, state, District or local programs. The selected projects are reviewed through the District's Prioritization Procedure that was first approved by the Board of Directors in 1993 and put into effect for the Fiscal Year 1994/1995. These procedures were amended in 1995 and 1997, and 2001. The prioritization process solicits project requests from the District's client communities and other agencies. The process allows comparisons to be made between competing projects to ensure that CIP expenditures are allocated toward the greatest need.

Following the allocation of funds necessary for maintenance and other mandatory programs, the District budgets its remaining revenues for capital improvement projects and the related planning programs. When possible, multi-purpose uses of flood control projects and property are promoted



and accommodated. This is possible provided the use does not diminish the flood control project's primary purposes. In addition, the project costs to the District and the facility's maintenance requirements should not be significantly increased.

## ***2.2 The Planning Process***

The Planning Program promotes the District's mission of "...reducing flood risks for the people of Maricopa County..." by preparing comprehensive regional studies and analyses identifying locations and property at risk from potential flooding. Following an analysis of flooding problems, alternative solutions are developed to determine the most cost effective and publicly acceptable project. Recommended projects are then prioritized for inclusion in the District's CIP. The CIP allocates resources and provides a timetable for the implementation of individual projects. This process usually includes the project design, relocation of conflicting facilities, acquisition of property and construction phases.

The Capital Improvement Program accounts for approximately 65% of the total Flood Control District annual budget. The District will initiate new projects during the year by pursuing Board of Directors' authorization and consummating Inter-Governmental Agreements with other agencies and municipalities. Activities in the Planning Program include: Area Drainage Master Studies (ADMSs); Watercourse Master Plans; the Comprehensive Flood Control Program Report; as well as, project pre-design studies; and the coordination of interagency cooperative projects and agreements. The District will continue the close historical working relationship it presently enjoys with the other municipal, county, state and federal agencies involved in furthering the District's mission.

Information on flooding and flood-prone areas is generated through the Area Drainage Master Study (ADMS) Program. The ADMS program was conceived in 1983 to provide the District with a proactive and leadership role in developing uniform, comprehensive inventories and models of the features influencing rainfall-runoff in selected areas. There are forty-eight ADMS areas ranging from 15 to 580 square miles. Area Drainage Master Plans (ADMPs) are then undertaken for each of the ADMS areas. These plans utilize the information provided by ADMSs and recommend specific, project-oriented or avoidance solutions for flooding problems. The ADMPs, along with requests from cities, towns and other agencies, are the primary sources of projects for the CIP.

The ADMS Program supports the planning effort by providing the physical characteristics and hydrology for a specific area. This Program utilizes a comprehensive watershed perspective, which is used to identify drainage and flooding problems reported by individual communities. Selected and approved alternatives to solve these problems are identified through the ADMPs and are implemented through the CIP. Watercourse Master Plans (WCMP) are similar to ADMPs, except that a WCMP has more of a focus on the management of a particular river, stream, creek or wash and its banks and nearby flood zones, while an ADMP focuses on flooding issues over a wider drainage area.

## ***2.3 Prioritization Procedure***

The Prioritization Procedure, employed by the District, was initially implemented for the FY 1994/1995 budget cycle and has been used since that time. It serves as the mechanism for evaluating new projects for possible inclusion into the CIP. Potential CIP projects are identified either by local cities, towns and other agencies, or through other District programs. The potential projects are evaluated on an annual basis for inclusion in the latter years of the CIP.

An important aspect of the Prioritization Procedure is the District's cooperation with its client communities in defining the criteria for project reviews. Tables included in Appendix 1 show the specific criteria and weights used in identifying project priorities, as determined through workshops attended by participating agencies and approved by the FCAB. The most recent workshop was held in May 2003.

The primary benefits of the Prioritization Procedure have been its ability to:

- Reduce uncertainty by applying District-approved and community-reviewed criteria during the project review process;
- Improve fiscal efficiency by requiring concurrent review of all project proposals annually and timing this review with the District's budget cycle;
- Eliminate duplication and improve community commitment by focusing planning efforts on projects approved for pre-design/feasibility analysis; and,
- Provide a means for reconstructing or reprioritizing the budget and Five-Year CIP with a minimum of disruption to ongoing activities by using an objective rank ordering system.

The prioritization procedure is accomplished in two major steps. First, all newly proposed projects are evaluated according to predetermined and weighted criteria by a committee of senior District staff members. The selected projects may be included in a District-funded and prioritized pre-design study program, if necessary. Requesting agencies may complete prioritized pre-design studies using consultants or in-house resources, provided the information produced meets the minimum requirements of District-sponsored studies. The purpose of the pre-design study program is to develop more detailed information on potential CIP projects. This includes design and construction costs, land acquisition requirements, required permits, mitigation and multiple-use potential.

The second step includes the evaluation and prioritization of projects for inclusion in the District's Five-Year CIP. For projects requiring an Intergovernmental Agreement (IGA), the information developed in the pre-design study will serve as the basis for negotiations. When ADMPs are completed, a number of future pre-design studies and CIP project requests are identified. Input regarding the priorities for projects identified within these plans, will continue to be provided to local cities, towns and other agencies. When a CIP project has progressed to the stage where the engineering design, plans and construction specifications are being prepared, its place in the Five-Year CIP is generally maintained. The stability and timeliness of CIP project implementation are important to the timing of interrelated projects.

## ***2.4 Prioritization Criteria***

The Project Evaluation Committee that makes recommendations to the Chief Engineer and General Manager and the FCAB Program and Budget Committee develops their recommendations using a system that allocates points to individual projects based on specific criteria. These criteria include:

- Submitting Agency Priority
- Master Plan Element
- Hydrologic/Hydraulic Significance

- Level of Protection
- Area Protected
- Environmental Quality
- Area-Wide Benefits
- Total Project Cost
- Level of Partner(s) Participation
- Operation and Maintenance Costs
- Operation and Maintenance Responsibility

The prioritization criteria were developed with the goal of promoting a balanced approach to the evaluation of proposed projects. The District tries to identify and support flood control and regional drainage projects that not only provide long-term protection to individuals and property from flash floods and seasonal flooding, but that contribute to community development, protection of natural habitat, and maintenance of watercourse flow paths. The District also leverages its limited resources by entering into joint efforts with other agencies, municipalities or the private sector to fund flood control projects, and this is reflected in the prioritization criteria. Higher scores are given to projects that involve cost-sharing partnerships for the construction phase and/or that involve agreements by other agencies or municipalities to take responsibility for post-construction operations and maintenance.

Although the relative weighting given to each criterion (total points per category) and the points actually assigned to each criterion for a given project by an Evaluation Committee member is somewhat subjective in nature, the evaluation procedure provides a uniform degree of objectivity to the process. The costs and benefits of the proposed projects are explicitly identified and documented. Proposed projects can be more easily compared once individual types of benefits and costs are separately quantified or otherwise evaluated. The inclusion of at least five senior staff representing different functional responsibilities on the Evaluation Committee further reduces the degree of subjectivity by ensuring that no one individual's personal biases excessively influence the evaluation process.

## ***2.5 Integrating Projects into the Natural & Urban Environment***

The District has made an additional commitment to ensuring that new flood control projects not only protect people and property from flooding threats, but also provide additional benefits. These benefits can include increased protection for natural habitat, new recreational facilities and open space, and aesthetically pleasing designs that contribute to the revitalization of urban areas. Although Maricopa County is located in a largely desert environment, much of the County is subdivided by canals, rivers, creeks and washes, and these linear attributes are significant features in defining the physical character of the area. Dams, retention basins, channels and outfalls can also be found throughout the County, and can have a major beneficial or negative impact on adjacent neighborhoods and natural areas depending on the design and management of these facilities as noted by the following projects.

The **East Maricopa Floodway (EMF) Mitigation Basins Project** is the result of studies done on the EMF channel as part of the Flood Control District's Queen Creek/Sonoqui Wash Hydraulic Master Plan. The EMF was designed and constructed by the Soil Conservation Service, now known as the Natural Resources Conservation Service (NRCS), to serve as the major regional storm water outfall for the east valley. The floodway was originally designed to accommodate storm water runoff

from then existing rural conditions. As land use transitioned from farmland to development, the facility is now undersized for the current and future 100-year storm events. The floodway accepts drainage from an approximately 260 square mile watershed, including major watercourses such as the Queen Creek Wash and Sonoqui Wash urban storm drain systems, as well as the District's Rittenhouse Channel, Guadalupe Channel and drainage from portions of the Superstition Freeway (US60).

The project consists of two large off-line detention basins known as the Rittenhouse Basin (RBasin) and the Chandler Heights Basin (CHBasin). Included with the CHBasin will be improvements to the Queen Creek Wash from downstream of Higley Road to the EMF. The RBasin encompasses approximately 147 acres, has a 100-year storage volume of 530 acre-feet, and accepts floodwaters directly from the EMF. The CHBasin, including the Queen Creek Wash improvements encompasses approximately 233 acres, has a 100-year storage volume of 1,325 acre-feet, and accepts floodwaters directly from the Queen Creek and Sonoqui Washes.

This project consisting of these two basins is the largest single project undertaken by the District solely at its cost and without project partners. The 2004 engineer's estimate for construction of these two basins, not including landscaping and irrigation improvements around the basin perimeters, is approximately \$42,300,000.00. Because of the physical size of the projects and their cost, construction of the basins will be accomplished in phases. The RBasin will require two phases for construction plus a third phase for landscaping and irrigation. The CHBasin will require at least four phases for construction plus a fifth phase for landscaping and irrigation. As of the end of fiscal year 2004/2005, the first phase of the CHBasin project was complete, and preparations were underway for start of construction of the second phase in the fall of 2005. And, the first phase of the RBasin project was underway, with completion expected in the spring of 2006.

The size and location of the two basins provides a great opportunity for multi-use facilities, rather than providing only flood protection. Both of the basins are located within the Town of Gilbert and the District has been working with the Town to develop Intergovernmental Agreements (IGA) that would allow the Town to obtain easements over the basins and then develop the basins into multi-use regional park facilities for the Town. It is anticipated that the first IGA between the District and the Town for development of the RBasin could be in place by the end of 2005.

Completion of the two basins over the next five to six years, coupled with the Town's efforts to develop the basins into multi-use facilities, will provide the east valley with substantial flood control benefits while also providing the area with large multi-use regional park facilities.

One of the recommended projects from the Middle New River Watercourse Master Plan is the reach of **New River from Grand Avenue to the Skunk Creek confluence with New River**. The project, a joint effort between the Flood Control District and the City of Peoria, provides flood protection by channelization and bank protection for approximately two miles of New River.

The channel maintenance roads are intended to become part of a trail system being developed by the City along several miles of New River. The multi-use trail system is planned to connect the Arizona Canal Diversion Channel and Skunk Creek trails with the New River trail, extending south into the City of Glendale.

Although a significant amount of mature vegetation within the channel will be protected during construction, the project required that several acres of vegetation and wildlife habitat on the banks of the channel be removed. As part of the mitigation requirements for removing the habitat, the disturbed areas of the channel will be hydroseeded with native trees, shrubs, and grasses. Re-establishing the vegetation is important to provide wildlife habitat and an enjoyable experience for the planned public uses in the corridor. Construction of the project began in April 2005, and will be complete in early 2006.

The **McMicken Dam Fissure Risk Zone Remediation (FRZR) Project** was identified under the District's Structures Assessment Program Phase I studies for McMicken Dam and several geotechnical investigations for McMicken Dam. The McMicken Dam FRZR Project is located north of Olive Avenue and west of the Beardsley Canal within unincorporated Maricopa County. McMicken Dam provides significant flood protection to the west valley and to Luke Air Force Base.

McMicken Dam was constructed by the U.S. Army Corps of Engineers (Corps) in 1954 to alleviate significant flooding in the west valley and to protect Luke Air Force Base. The District rehabilitated the dam in 1985 based on the results of a geotechnical investigation that determined that significant ground subsidence had occurred in the area and that the embankment has significant transverse cracks. Portions of the dam had settled three to four feet. In addition, ground fissures were found within a quarter of a mile of the south end of the dam. The modifications that were completed in 1985 included reconstruction of the dam to its original design elevation and the installation of a central geofabric filter to protect the dam from piping failure of the embankment. Additional geotechnical investigations completed in 2000 indicated that additional ground subsidence has occurred at the site and that earth fissuring has continued with earth fissures found both upstream and downstream of McMicken Dam.

The District analyzed 23 alternative designs before selecting a preferred alternative that isolates the fissure risk zone and its associated 0.6 square mile drainage area from McMicken Dam. The selected alternative includes a new 1,500 foot long dam segment constructed of soil cement and a basin to replace the isolated section of McMicken Dam found to be within the fissure risk zone. The basin will contain flows up to the 500-year storm event or approximately 50 to 70 acre-feet. Final design of the project was completed by AMEC Earth and Environmental, Inc. and included data collection, data review, geotechnical investigations, engineering studies, engineering analysis, and permitting for the project. Additional technical services included aerial survey mapping, biological sciences, archaeology, and environmental surveys. In addition, because the Maricopa Regional Trail Corridor is located within the project area, the designer coordinated with a landscape architect to assure the project was fully compatible with the future design and construction of the trail by others.

Construction began on March 15, 2005 and is schedule to be completed by December of 2005. Current estimates for the project including planning and design is approximately \$4.7 million with actual cost of construction estimated at \$2.9 million. The project is fully funded by the District.

## Financial Issues & the CIP

### ***3.1 Balancing Future Revenues & Expenditures – Budgetary Challenges***

The District operates on a “pay-as-you-go” basis. This means that the District’s entire capital budget is funded from current revenues, and that no borrowing takes place to finance capital projects like dams, channels and levees. The major advantages of this are that the District carries no debt load, that County taxpayers do not have to pay for interest charges on District structures, and that there is no need to try to match future debt and interest repayments with future revenues. Since a majority of the District’s revenues are spent on the CIP and long-term capital expenditures on flood control protection, taxpayers are in effect investing in the future of the County and their property and safety. This policy is quite different from that utilized by most government entities, which usually spend current revenues on operating expenses and debt repayment associated with past capital expenditures.

Most large government and private sector organizations that plan and construct very large projects over extended periods of time borrow funds to finance these large projects, and then pay for them over many years. Because these principal and interest costs can be distributed over many years, and the necessary funds are obtained from lenders at the beginning of projects, it is relatively easy for these organizations to plan their long-term capital budgets. The majority of the District’s revenue is derived from a secondary tax whose revenues can be difficult to predict because tax valuations based on property values and tax rates can fluctuate from year to year. The rate of growth in urban areas, and thus total tax revenues, can also have a major impact on total District revenues obtained in any given year. A strong economy, high levels of residential, commercial and industrial development, and rising property values will all lead to higher District revenues; conversely a poor economy and falling property values would lead to reduced tax revenue for the District, for a given tax rate.

Because the District’s capital spending is affected by strong fluctuations in tax revenue, the CIP must be constantly reviewed and adjusted to reflect the most recent information on current revenues and expected revenues over the coming years. In the early 1990’s, a weak economy led to lower District tax revenues, and capital spending had to be reduced to reflect this reality. More recently, high levels of housing, industrial and commercial development and rising property values have led to increased needs for flood control projects and increased assessment values. This has necessitated an expansion in the capital budget to initiate required projects while funds are available. The members of the Board of Directors, who are also the members of the County Board of Supervisors, sometimes alter the secondary tax rate to meet overall County fiscal objectives, and this too can have a major financial impact on the District.

### 3.2 Revenue Trends and Issues

Funding availability for the CIP is based on estimates that combine anticipated revenues from numerous sources with the District's anticipated flood control tax revenues. The District's tax revenues are a function of the tax rate, which is recommended by the Board of Directors and set annually by the Board of Supervisors. The Flood Control District tax applies to the assessed real property valuations, which are also set annually by the County Board of Supervisors. The majority of the District's Operating and CIP revenues come from the flood control tax that is levied County-wide.

Additional revenue results from the sale or lease of District rights-of-way and reimbursements from project cost-share partners. Over the past ten years, the inflation-adjusted revenues provided by the Secondary Tax to the District have slowly increased, however, when the increased size of the County's population and increased flood control needs associated with this larger urban area are taken into account, it is apparent that the District is being asked to do more with less. Most recently land appreciation has significantly increased the District's cost for project rights-of-way.

Table 1—FCD Tax Rates by Fiscal Year

<u>Fiscal Year</u>	<u>Tax Rate</u>	<u>Tax Revenue</u>
'04/05	0.2119	\$55,544,623
'03/04	0.2119	\$50,050,367
'02/03	0.2119	\$44,302,534
'01/02	0.2319	\$44,622,753
'00/01	0.2534	\$43,874,335
'99/00	0.2858	\$43,992,461
'98/99	0.3270	\$44,995,000
'97/98	0.3425	\$42,697,000
'96/97	0.3413	\$38,501,000
'95/96	0.3632	\$36,085,500
'94/95	0.3332	\$35,300,000
'93/94	0.3632	\$35,400,000
'92/93	0.3901	\$39,715,000
'91/92	0.4447	\$46,879,000
'90/91	0.4235	\$45,797,000
'89/90	0.4303	\$46,408,000
'88/89	0.5000	\$51,345,000
'87/88	0.5000	\$46,059,000

The CIP amounts shown in Table 2 reflect the District's FY 05/06-09/10 CIP forecasts. Annually, District staff will recommend that the Board of Directors set the secondary Flood Control tax rate sufficient to generate the required tax revenue to accomplish the CIP.

**Table 2 – Estimated 5-Year CIP Funding**

<u>Fiscal Year</u>	<u>CIP Amount</u>
05/06	\$62,142,000
06/07	\$65,000,000
07/08	\$65,000,000
08/09	\$65,000,000
09/10	\$60,000,000
<b>Total:</b>	<b>\$317,000,000</b>

### ***3.3 Increased Cost Sharing with Municipalities***

Throughout the history of the Flood Control District of Maricopa County, the District has had to adapt to the evolution of the fiscal, political and institutional environment in which it operates. For most of the 1970s and 1980s, the District was heavily involved in cost-sharing partnerships with the Federal and State governments, initiating and participating in flood control projects that were planned and funded in large part by higher levels of government. With the virtual end of large-scale participation in regional flood control activities by the Federal Government and the State, the District was left in the position of being the primary source of technical expertise and financial resources for flood control in Maricopa County. As a result, the District must deal with a wide range of regional flood control challenges with a limited budget.

The District has adopted a number of strategies to address regional flood control problems while minimizing financial requirements. Under the direction of the Board of Directors and Flood Control Advisory Board, District staff have made a concerted effort to make maximum use of every dollar spent. A strategy used to obtain the “most bang for the buck” has been to leverage District capital program expenditures with contributions from municipalities and other agencies. One of the selection criteria for potential projects is the degree to which the projects will be paid for by other government entities; if a higher level of cost sharing can be negotiated, the projects are given a higher priority ranking by the District. A District goal is that it should only have to pay for half to two-thirds of the design and construction costs and that a municipality or other agency will be responsible for the remainder of those costs and for future operations and maintenance.

Reviewing the total dollar amount of reimbursements provided by the District’s partners during the 1980s, it is clearly evident that the trend is towards rising reimbursements. While total reimbursements were only approximately \$2.4 million in FY 1992/93, they had grown to approximately \$7 million by FY 1996/97, to more than \$25 million forecasted for FY 2005/2006. Similarly, an examination of reimbursements as a percentage of total capital program expenditures indicates that the long-term trend is towards higher levels of cost-sharing. While in FY 1992/93 less than 10% of the District’s capital program was funded by reimbursements from municipalities and other agencies, in FY 2003/2004 approximately one-third of the capital program budget was provided by other government entities. The trend during the last few years reflects that the cost-sharing revenue has leveled off at 30-35% of the annual CIP.



Expenditures made by the District to operate and maintain flood control structures and adjacent property are substantial; in FY 04/05 these operations and maintenance (O&M) costs were approximately \$5.5 million, or about 18% of the total budget. One of the most important strategies of the District in recent years in terms of minimizing future expenditures and of providing the most regional flood control protection at the least cost has been to enter into partnerships on projects where the District is responsible only for capital costs and not for O&M costs. To date, the District has been very successful in negotiating cost-sharing agreements in which the District is absolved of any responsibility for future maintenance or operations. A large number of new projects involve intergovernmental agreements (IGAs) that restrict District involvement to only initial capital costs. More simply put, by following a policy of not assuming O&M on most new projects since the early 1990s, the District will spend a smaller percentage of its budget on O&M annually. The District will continue to operate and maintain 22 dams, the Arizona Canal Diversion Channel, and most of its older projects.

### ***3.4 The CIP: Implementing FCD Financial Strategies and Priorities***

The District's capital spending utilizes the majority of the District's overall revenues, and the District's capital spending is directed by the Five-Year CIP. As a result, the Five-Year CIP must incorporate the District's strategies and priorities, and facilitate the achievement of the District's mission and objectives. Among the District strategies/priorities that are reflected in planned expenditures included in the Five Year CIP are:

- A continued emphasis on cost-sharing and partnerships so that the District is best able to leverage its limited financial resources into the most long-term flood control protection possible throughout the County. Partner contributions should be concurrent with District expenditures.
- A preference for partnerships in which the other partners (e.g. municipalities, agencies) assume full responsibility for operations and maintenance activities once the project has been completed.
- A continuing commitment to balance expenditures between newly-developing areas on the fringe of the urban metropolis, and existing older communities where retrofitting, repairs and project improvements are needed.
- A commitment to avoid the construction of new conventional hard structures when non-structural approaches such as flood plain delineation and management, natural watercourse improvements, and/or minor improvements to natural drainage patterns can be used just as effectively from an economic perspective to protect lives and property.
- A focus on minimizing project costs and streamlining the contract tendering and management processes using information systems that track project progress and analyze engineering, land, and construction costs.
- Use of District-developed hydrological and flood control planning information by other entities so that private development infrastructure is built to District standards.

## **How to Use This Document**

Included in this document are narrative descriptions and location maps for the four dozen projects that the Flood Control District of Maricopa County proposes to implement during the next five

years (FY 2005/2006 through FY 2009/2010) and summaries of the CIP budget that show projected expenditures by “Area” (groupings of projects) and by “Project” (individual facilities and systems). Table 3 provides a summary of the results of the FY 2005/2006 Prioritization Procedure. Included in these tables are each of the projects recommended for CIP consideration through previous prioritization procedures. The Prioritization Procedure section includes a description of the procedures and criteria used in evaluating potential CIP projects.

The figures in both tables are shown in thousands of dollars (i.e. 10 equals \$10,000), for ease of display, and are shown by fiscal year for each of the five years. A "Total" column sums all of the expenditures, by project, proposed during the five-year period. It is important to note that although most of the projects are scheduled to be completed in five years, those identified with an asterisk (\*) will be continued beyond the five-year period. Possible reasons include: availability of funding; status of design or construction plans; or incompatible schedules of other related activities. Also included in the tables are columns showing supervisor districts and the municipality where the project is located.

A description and details are provided for every project name and associated project control number appearing in the Five-Year CIP. Each project can thus be found in this document. Every project description includes basic information such as project name, project control number, the municipality or municipalities in which the project is located, partners involved with the design, administration, construction and/or funding of the project, anticipated beneficial results of the project, and the timing and cost of the project. The projects are listed in order of their project control numbers, or PCNs. An alphabetical list of projects is also provided at the beginning of this document that provides the PCN and page number for each project. Included with each project description is the name of the responsible project manager and information on how they can be contacted. The project managers may also be contacted through the general District switchboard at (602)506-1501.

In some cases, such as those in which the planning and design work is complete and construction is already underway, the scope and cost of the project are almost entirely known. In others, a project might only be in the planning and design stage, and the exact physical design, geographical location, and total cost of the project are still unknown. As a result, the further along the project is, the more likely the project description is to be a complete and dependable guide to the specifics of the project. It should be noted that projects still in the early stages of the development process will be subject to change, and that significant increases or decreases in project costs do occur well into the design stage. In some cases District projects can be combined with other projects undertaken by ADOT or MCDOT, leading to major reductions in project costs, while in others, unforeseen land acquisition or project engineering costs can greatly increase project costs.

Questions or comments concerning this document or the District’s 5-year Capital Improvement Program may be sent to:

R. G. Perreault, CIP/Policy Branch Manager  
rgp@mail.maricopa.gov (602)506-4774

or

K. L. Presson, CIP Management Analyst  
klp@mail.maricopa.gov (602)506-4489

This information is available on the District web site at: <http://www.fcd.maricopa.gov>

**Flood Control District of Maricopa County  
CIP Budget/Schedule FY 2006-2010**

CITY	DIST.	ACT #	DESCRIPTION	x \$1000					
				FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	5-Yr TOTAL
			Tax Rate:	0.2119					
<b>Tempe</b>	<b>5</b>	<b>C035</b>	<b>TOWN OF GUADALUPE</b>	<b>0</b>	<b>0</b>	<b>385</b>	<b>0</b>	<b>0</b>	<b>385</b>
Tempe	5	035.xx.xx	ADOT Pit Modifications	0	0	385	0	0	385
<b>Phoenix/UMC</b>	<b>5</b>	<b>C117</b>	<b>SOUTH PHOENIX DRAINAGE IMPROVEMENT</b>	<b>1,037</b>	<b>1,210</b>	<b>440</b>	<b>3,620</b>	<b>3,660</b>	<b>9,967</b>
Phoenix/UMC	5	117.08.31	Laveen Area Conveyance Channel	247	0	0	0	0	247
Phoenix/UMC	5	117.09.31	23rd Ave/Roeser Basin	770	770	0	0	0	1,540
Phoenix/UMC	5	117.xx.xx	South Phoenix Detention Basins	20	440	440	3,620	3,660	8,180
<b>Scottsdale</b>	<b>2</b>	<b>C120</b>	<b>PVSP</b>	<b>1,817</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,817</b>
Scottsdale	2	120.03.31	Scottsdale Road Corridor Drain	1,817	0	0	0	0	1,817
<b>Gilbert/Mesa/Queen Creek</b>	<b>1</b>	<b>C121</b>	<b>EAST MARICOPA FLOODWAY</b>	<b>4,709</b>	<b>6,515</b>	<b>9,120</b>	<b>9,160</b>	<b>5,250</b>	<b>34,754</b>
Gilbert	1	121.03.32	Rittenhouse Basin	1,529	10	3,940	3,960	0	9,439
Gilbert	1	121.03.33	Chandler Heights Basin	3,180	6,505	5,180	5,200	5,250	25,315
<b>Phoenix/Avondale/UMC</b>	<b>5</b>	<b>C126</b>	<b>SALT/GILA RIVER</b>	<b>50</b>	<b>1,040</b>	<b>40</b>	<b>40</b>	<b>0</b>	<b>1,170</b>
Phoenix/Avondale/UMC	5	126.01.31	Tres Rios	50	1,040	40	40	0	1,170
<b>Buckeye</b>	<b>4</b>	<b>C201</b>	<b>WHITE TANKS DAM #4</b>	<b>20</b>	<b>1,510</b>	<b>3,970</b>	<b>4,110</b>	<b>0</b>	<b>9,610</b>
Buckeye	4	201.xx.xx	White Tanks #4 FRS Rehab	20	1,510	3,970	4,110	0	9,610
<b>Surprise</b>	<b>4</b>	<b>C202</b>	<b>McMICKEN DAM</b>	<b>2,665</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,665</b>
Surprise	4	202.01.31	McMicken Dam FRZR	2,665	0	0	0	0	2,665
<b>Buckeye/UMC</b>	<b>4</b>	<b>C207</b>	<b>BUCKEYE #1</b>	<b>20</b>	<b>810</b>	<b>1,820</b>	<b>8,180</b>	<b>8,260</b>	<b>19,090</b>
Buckeye/UMC	4	207.xx.xx	Buckeye #1 FRS Rehab	20	810	1,820	8,180	8,260	19,090
<b>Wickenburg</b>	<b>4</b>	<b>C343</b>	<b>WICKENBURG ADMP</b>	<b>650</b>	<b>340</b>	<b>1,040</b>	<b>4,200</b>	<b>0</b>	<b>6,230</b>
Wickenburg	4	343.01.31	Wickenburg Downtown Flooding Mitigation	650	340	1,040	4,200	0	6,230
<b>Peoria</b>	<b>4</b>	<b>C400</b>	<b>SKUNK CREEK/NEW RIVER</b>	<b>9,853</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,863</b>
Peoria	4	400.06.31	New River (Grand - Skunk Creek)	9,853	10	0	0	0	9,863

**Flood Control District of Maricopa County  
CIP Budget/Schedule FY 2006-2010**

CITY	DIST.	ACT #	DESCRIPTION	x \$1000					
				FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	5-Yr TOTAL
			Tax Rate:	0.2119					
<b>Mesa/UMC</b>	<b>2</b>	<b>C420</b>	<b>SPOOK HILL ADMP</b>	<b>1,162</b>	<b>2,620</b>	<b>4,910</b>	<b>4,750</b>	<b>4,200</b>	<b>17,642</b>
Mesa/UMC	2	420.01.32	Spook Hill Basin Acquisition	88	0	0	0	0	88
Mesa/UMC	2	420.02.31	Hermosa Vista/Hawes Road Storm Drain & Basin	464	430	1,990	4,200	0	7,084
Mesa/UMC	2	420.03.31	McDowell Road Basin & Storm Drain	590	2,170	2,370	0		
Mesa/UMC	2	420.xx.xx	Spook Hill ADMP (future projects)	20	20	550	550	4,200	5,340
<b>Mesa/UMC</b>	<b>1,2</b>	<b>C442</b>	<b>EAST MESA ADMP</b>	<b>2,861</b>	<b>5,400</b>	<b>6,220</b>	<b>0</b>	<b>0</b>	<b>14,481</b>
Mesa/UMC	1	442.04.31	Elliot Basin and Channel	38	0	0	0	0	38
Mesa/UMC	1	442.08.31	Ellsworth Channel	2,223	0	0	0	0	2,223
Mesa	1	442.11.31	Siphon Draw Drainage Improvements	600	5,400	6,220	0	0	12,220
<b>Glendale/Peoria</b>	<b>4</b>	<b>C450</b>	<b>GLENDALE/PEORIA ADMP</b>	<b>4,028</b>	<b>5,180</b>	<b>2,465</b>	<b>4,080</b>	<b>5,250</b>	<b>21,003</b>
Glendale/Peoria	4	450.02.32	Rose Garden Lane Channel	1,405	2,040	0	0	0	3,445
Glendale/Peoria	4	450.02.33	83rd Ave/Pinnacle Peak Rd Improvements	2,623	3,120	0	0	0	5,743
Glendale	4	450.05.30	67th Ave. Storm Drain	0	0	1,415	0	0	1,415
Glendale/Peoria	4	450.xx.xx	Glendale/Peoria ADMP Update (future projects)	0	20	1,050	4,080	5,250	10,400
<b>Multiple</b>	<b>4</b>	<b>C470</b>	<b>WHITE TANKS ADMP</b>	<b>12,227</b>	<b>11,466</b>	<b>10,730</b>	<b>8,080</b>	<b>9,210</b>	<b>51,713</b>
Buckeye/UMC	4	470.04.30	White Tanks #3 FRS Modification	9,582	5,526	0	0	0	15,108
Buckeye/UMC	4	470.04.31	White Tanks #3 North Inlet Channel	1,812	3,640	0	0	0	5,452
Surprise/UMC	4	470.12.31	Reems Road Channel	790	2,250	2,920	170	0	6,130
Goodyear	4	470.13.31	Bullard Wash Phase II	23	20	4,750	4,830	4,050	13,673
Avondale/Tolleson/Goodyear	4	470.xx.xx	White Tanks ADMP/Loop 303	20	30	3,060	3,080	5,160	11,350
<b>Queen Creek/Gilbert</b>	<b>1</b>	<b>C480</b>	<b>QUEEN CREEK ADMP</b>	<b>580</b>	<b>5,700</b>	<b>3,890</b>	<b>1,060</b>	<b>1,600</b>	<b>12,830</b>
Queen Creek	1	480.02.31	Queen Creek Channelization (Hawes to Power)	20	0	0	0	0	20
Gilbert/Queen Creek	1	480.04.31	Sonoqui Wash Channelization	20	5,170	3,440	0	0	8,630
Gilbert/Queen Creek	1	480.04.xx	Sonoqui Wash Channelization (Chandler Heights - Riggs)	20	20	450	1,060	1,600	3,150
Gilbert	1	480.05.31	Queen Creek Channel (Recker-Higley)	520	510	0	0	0	1,030
<b>Chandler</b>	<b>1</b>	<b>C491</b>	<b>HIGLEY ADMP</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>
Chandler	1	491.04.31	Queen Creek Road Basin	10	0	0	0	0	10

**Flood Control District of Maricopa County  
CIP Budget/Schedule FY 2006-2010**

CITY	DIST.	ACT #	DESCRIPTION	x \$1000					
				FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	5-Yr TOTAL
			Tax Rate:	0.2119					
<b>Phoenix/UMC</b>	<b>3</b>	<b>C520</b>	<b>ADOBE DAM ADMP</b>	<b>20</b>	<b>330</b>	<b>2,780</b>	<b>1,050</b>	<b>5,200</b>	<b>9,380</b>
Phoenix/UMC	3	520.xx.xx	Adobe Dam/Desert Hills ADMP	10	10	20	1,050	5,200	6,290
Phoenix/UMC	3	520.xx.xx	Skunk Creek Channel @ 35th Avenue	10	320	2,760	0	0	3,090
<b>Multiple</b>	<b>5</b>	<b>C565</b>	<b>DURANGO ADMP</b>	<b>4,315</b>	<b>4,690</b>	<b>2,080</b>	<b>4,160</b>	<b>6,300</b>	<b>21,545</b>
Phoenix/UMC	5	565.04.31	75th Ave. Storm Drain/DRCC	4,295	4,150	0	0	0	8,445
Toll/Phx/Avon/UMC	5	565.xx.xx	Durango ADMP	20	540	2,080	4,160	6,300	13,100
<b>Phoenix</b>	<b>3</b>	<b>C580</b>	<b>ACDC ADMP</b>	<b>335</b>	<b>1,570</b>	<b>1,060</b>	<b>0</b>	<b>0</b>	<b>2,965</b>
Phoenix	3	580.05.31	10th Street Wash Improvements (Alice - ACDC)	315	1,570	1,060	0	0	2,945
Phoenix	3	580.07.31	9th Avenue Storm Drain	20	0	0	0	0	20
<b>Phoenix</b>	<b>2</b>	<b>C590</b>	<b>SCATTER WASH CHANNEL</b>	<b>630</b>	<b>400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,030</b>
Phoenix	2	590.03.31	Scatter Wash Basin	630	400	0	0	0	1,030
<b>Glendale/Phoenix</b>	<b>4,5</b>	<b>C620</b>	<b>MARYVALE ADMP</b>	<b>10,433</b>	<b>7,550</b>	<b>5,510</b>	<b>3,460</b>	<b>0</b>	<b>26,953</b>
Glendale/Phoenix	4,5	620.03.32	Bethany Home Outfall Channel	9,195	7,550	5,510	3,460	0	25,715
Phoenix	5	620.05.31	26th Ave/Verde Lane Basin	1,238	0	0	0	0	1,238
<b>Phoenix</b>	<b>3</b>	<b>C625</b>	<b>METRO ADMP</b>	<b>1,118</b>	<b>1,260</b>	<b>1,140</b>	<b>540</b>	<b>1,060</b>	<b>5,118</b>
Phoenix	3	625.02.31	24th Ave./Camelback Basin	1,118	1,260	1,140	0	0	3,518
Phoenix	3	625.xx.xx	24th Ave./Camelback Basin Phase 4	0	0	0	540	1,060	1,600
<b>Multiple</b>	<b>All</b>		<b>FLOODPRONE PROPERTIES ACQUISITION</b>	<b>3,110</b>	<b>5,200</b>	<b>5,200</b>	<b>5,220</b>	<b>5,260</b>	<b>23,990</b>
Multiple	All	various	Floodprone Properties Acquisition Program	3,110	5,200	5,200	5,220	5,260	23,990

<b>SUBTOTAL PROJECTS</b>	<b>61,650</b>	<b>62,801</b>	<b>62,800</b>	<b>61,710</b>	<b>55,250</b>	<b>304,211</b>
PROJECT RESERVE	350	2,199	2,200	3,290	4,750	12,789
PUBLIC WORKS FORCE	142					142
<b>CIP PROJECTS TOTAL</b>	<b>62,142</b>	<b>65,000</b>	<b>65,000</b>	<b>65,000</b>	<b>60,000</b>	<b>317,142</b>

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Flood Control District of Maricopa County  
CIP Budget/Schedule Summary  
FY 2006-2010

CITY	DIST.	ACT #	DESCRIPTION	x \$1000					
				FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	5-Yr TOTAL
			<b>Tax Rate:</b>	<b>0.2119</b>					
Tempe	5	C035	TOWN OF GUADALUPE	0	0	385	0	0	385
Phoenix/UMC	5	C117	SOUTH PHOENIX DRAINAGE IMPROVEMENT	1,037	1,210	440	3,620	3,660	9,967
Scottsdale	2	C120	PVSP	1,817	0	0	0	0	1,817
Gilbert/Mesa/Queen Creek	1	C121	EAST MARICOPA FLOODWAY	4,709	6,515	9,120	9,160	5,250	34,754
Phoenix/Avondale/UMC	5	C126	SALT/GILA RIVER	50	1,040	40	40	0	1,170
Buckeye	4	C201	WHITE TANKS DAM #4	20	1,510	3,970	4,110	0	9,610
Surprise	4	C202	McMICKEN DAM	2,665	0	0	0	0	2,665
Buckeye/UMC	4	C207	BUCKEYE #1	20	810	1,820	8,180	8,260	19,090
Wickenburg	4	C343	WICKENBURG ADMP	650	340	1,040	4,200	0	6,230
Peoria	4	C400	SKUNK CREEK/NEW RIVER	9,853	10	0	0	0	9,863
Mesa/UMC	2	C420	SPOOK HILL ADMP	1,162	2,620	4,910	4,750	4,200	17,642
Mesa/UMC	1,2	C442	EAST MESA ADMP	2,861	5,400	6,220	0	0	14,481
Glendale/Peoria	4	C450	GLENDALE/PEORIA ADMP	4,028	5,180	2,465	4,080	5,250	21,003
Multiple	4	C470	WHITE TANKS ADMP	12,227	11,466	10,730	8,080	9,210	51,713
Queen Creek/Gilbert	1	C480	QUEEN CREEK ADMP	580	5,700	3,890	1,060	1,600	12,830
Chandler	1	C491	HIGLEY ADMP	10	0	0	0	0	10
Phoenix/UMC	3	C520	ADOBE DAM ADMP	20	330	2,780	1,050	5,200	9,380
Multiple	5	C565	DURANGO ADMP	4,315	4,690	2,080	4,160	6,300	21,545
Phoenix	3	C580	ACDC ADMP	335	1,570	1,060	0	0	2,965
Phoenix	2	C590	SCATTER WASH CHANNEL	630	400	0	0	0	1,030
Glendale/Phoenix	4,5	C620	MARYVALE ADMP	10,433	7,550	5,510	3,460	0	26,953
Phoenix	3	C625	METRO ADMP	1,118	1,260	1,140	540	1,060	5,118
Multiple	All	various	FLOODPRONE PROPERTIES ACQUISITION	3,110	5,200	5,200	5,220	5,260	23,990
<b>SUBTOTAL PROJECTS</b>				<b>61,650</b>	<b>62,801</b>	<b>62,800</b>	<b>61,710</b>	<b>55,250</b>	<b>304,211</b>
PROJECT RESERVE				350	2,199	2,200	3,290	4,750	12,789
PUBLIC WORKS FORCE				142					142
<b>CIP PROJECTS TOTAL</b>				<b>62,142</b>	<b>65,000</b>	<b>65,000</b>	<b>65,000</b>	<b>60,000</b>	<b>317,142</b>

CIP REIMBURSEMENT SCHEDULE  
FY 2006-2010

CITY				x \$1000					
				FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	5-Yr TOTAL
			Tax Rate:	0.2119					
Phoenix	5	C117	SOUTH PHOENIX DRAINAGE IMPROVEMENT	(1,670)	(200)	(200)	(1,750)	(1,750)	(5,570)
Scottsdale	2	C120	PVSP	(524)					(524)
Gilbert, Queen Creek	1	C121	EAST MARICOPA FLOODWAY (EMF)	(250)					(250)
NRCS	4	C201	WHITE TANKS DAM #4			(3,250)	(3,910)		(7,160)
NRCS	5	C207	BUCKEYE DAM #1			(1,210)	(6,440)	(6,440)	(14,090)
Wickenburg	4	C343	WICKENBURG ADMP		(750)	(750)			(1,500)
Peoria	4	C400	SKUNK CREEK/NEW RIVER	(2,924)					(2,924)
Mesa	2	C420	SPOOK HILL ADMP	(250)	(1,677)	(2,728)	(1,225)		(5,880)
Mesa	1,2	C442	EAST MESA ADMP	(564)	(160)	(1,600)	(1,600)		(3,924)
Glendale/Peoria	4	C450	GLENDALE/PEORIA ADMP	(1,445)	(728)	(500)	(2,000)	(2,500)	(7,173)
Multiple	4	C470	WHITE TANKS ADMP	(10,171)	(8,543)	(1,600)	(2,225)	(4,035)	(26,574)
Queen Creek/Gilbert	1	C480	QUEEN CREEK ADMP	(505)	(1,760)	(2,160)			(4,425)
Multiple	5	C565	DURANGO ADMP	(1,865)	(1,763)	(1,000)	(2,000)	(3,000)	(9,628)
Phoenix	3	C580	ACDC ADMP	(248)	(750)	(552)			(1,550)
Glendale/Phoenix	4,5	C620	MARYVALE ADMP	(4,872)	(4,390)	(2,071)	(1,614)	(1,755)	(14,702)
CIP REIMBURSEMENT TOTAL:				(25,288)	(20,721)	(17,621)	(22,764)	(19,480)	(105,874)

## Summary of CIP Recommendations for FY '05/06

Table 3a (Active)  
Recommended Prioritization Projects in FY 2006-2010 Proposed 5-Year CIP

Project Name	Status this FY	Proposed by	Initial Cost Est.	Remaining FCD		Projected FYs
				Costs	Score	
Queen Creek Wash (Power to Hawes) - FY 2001	C	Queen Creek	\$4,916,000	\$452,000	81	2001-2005
Reems Road Channel & Basin - FY 2001	DL	Surprise	\$1,524,000	\$3,466,000	79	2005-2009
Ellsworth Channel - FY 2001	DLC	MCDOT	\$6,000,000	\$4,542,000	78	2001-2006
Bullard Wash Channelization (Phase II) - FY 2002	D	Goodyear	\$25,000,000	\$7,491,000	78	2002-2010
10th Street Wash Improvement Project - FY 2004 & 2006	D	Phoenix	\$1,500,000	\$1,363,000	78	2005-2008
New River Channelization & Erosion Protection - FY 2003 <sup>2</sup>	DLC	Peoria	\$8,500,000	\$3,727,000	77	2003-2006
Sonoqui Wash Channelization - FY 2002 & 2003	DL	Queen Creek	\$9,000,000	\$6,178,000	77	2003-2008
Queen Creek Wash (Recker Road - Higley Road) - FY 2005	P	Gilbert	\$2,400,000	\$1,000,000	77	2006-2007
Queen Creek Road Basin (Design, Excavation, Grading, L/S) - FY 2004	P	Chandler	\$2,300,000	\$1,500,000	76	2005-2006
Buckeye Flood Retarding Structure #1 Rehabilitation - FY2006	P	FCD	\$20,500,000	\$7,175,000	76	2007-TBD
Sonoqui Wash (Chandler Heights Rd.-Riggs Rd.) - FY 2006	P	Queen Creek	\$4,868,000	\$2,900,000	75	2008-2010
EMF Mitigation Basins - FY 2001	C	FCD	\$45,000,000	\$37,190,000	74	2000-2010
White Tanks Flood Retarding Structure #4 Rehabilitation - FY2006	P	FCD	\$14,600,000	\$5,100,000	74	2007-2009
Durango Area Conveyance Channel - FY 2002 & FY 2003	P	Phoenix/ Avondale	\$58,000,000	TBD	73	2004-TBD
Wickenburg Downtown Flooding Hazard Mitigation - FY 2006	P	Wickenburg	\$5,200,000	\$2,600,000	73	2005-TBD
Laveen Area Conveyance Channel - FY 2002	C	Phoenix	\$10,000,000	\$334,000	72	2002-2006
75th Avenue Storm Drain and Durango ADMP - FY 2004	DLC	Phoenix	\$16,769,000	\$7,582,000	72	2004-2007
White Tanks #3 Basin Modifications - FY 2001	DLC	FCD	\$11,800,000	\$5,500,000	71	1998-2007
Bethany Home/Grand Canal Outfall Channel - FY 1999 & 2002 <sup>3</sup>	DLC	Glendale/ Phoenix	\$64,200,000	\$11,883,000	71	1997-2009
27th Ave./S. Mountain Ave. Detention Basin - FY2006	P	Phoenix	\$3,600,000	\$1,950,000	71	2007-2010
Siphon Draw Drainage Improvements - FY 2000 & FY 2002 <sup>4</sup>	PD	Mesa	\$17,000,000	\$9,140,000	70	2003-TBD
I-17 Widening - Scatter Wash Detention Basin - FY 2005	P	ADOT	\$3,020,000	\$1,000,000	70	2006-2007
Skunk Creek Channel (at 35th Ave.) - FY 2006	P	Phoenix	\$8,500,000	\$3,000,000	70	2006-2008
24th Ave./ Camelback Road Drainage Improvements, Phase IV - FY2006	P	Phoenix	\$2,500,000	\$1,500,000	70	2009-2010
Elliot Road Detention Basin - FY 1997 & FY 1999	C	Mesa	\$21,000,000	\$605,000	69	1999-2006
McDowell Road/Hermosa Vista Drainage Improvements - FY 2004 <sup>9</sup>	DL	Mesa	\$9,300,000	\$7,761,000	69	2005-2009
24th Ave./Camelback Detention Basin - FY 2001	DL	Phoenix	\$7,000,000	\$3,410,000	68	2004-2008
43rd Ave./Baseline Road Detention Basin- FY2006	P	Phoenix	\$3,600,000	\$1,950,000	67	2008-2010
9th Avenue Storm Drain - FY2006	D	Phoenix	\$1,530,000	\$765,000	65	2006
26th Avenue/Verde Lane Detention Basin - FY 2001 & 2003	DL	Phoenix	\$10,000,000	\$3,500,000	64	2005-2007



## Summary of CIP Recommendations for FY '05/06

Table 3a (Active)

Recommended Prioritization Projects in FY 2006-2010 Proposed 5-Year CIP

Project Name	Status this FY	Proposed by	Initial Cost Est.	Remaining FCD		Projected FYs
				Costs	Score	
Central Chandler Area Drainage System - FY 2001 <sup>5</sup>	C	Chandler	\$13,204,000	\$617,000	63	2000-2005
Scottsdale Road Corridor - FY 1996 <sup>6</sup>	DLC	Scottsdale	\$3,318,000	\$2,483,000	63	2003-2006
ADOT Pit Modifications - FY 1999	P	Tempe	\$750,000	\$375,000	63	2008
83rd Ave/Pinnacle Peak Road Drainage Improvements - FY 2003	DL	Peoria	\$12,200,000	\$2,210,000	63	2005-2007
Rose Garden Lane Channel - FY 2003	DL	Peoria	\$2,800,000	\$3,752,000	62	2005-2007
67th Avenue/Peoria to ACDC - FY 2000	P	Glendale	\$3,000,000	\$1,385,000	62	2000-2008
23rd Ave. & Roeser Rd. Detention Basin - FY 2002, 2004 & 2005	DL	Phoenix	\$4,200,000	\$1,973,000	59	2005-2007
Total Active:			<b>\$438,599,000</b>	<b>\$157,359,000</b>		

Status Codes: P=Planning, D=Design, L=Land, C=Construction

Shaded projects are newly added FY 05/06

Projects with \* are linked under single pre-design study recommendations due to their proximity.

TBD = To Be Determined

## Summary of CIP Recommendations for FY '05/06

Table 3b (Not Active)  
Recommended Prioritization Projects with Potential Inclusion in Future CIP

Project Name	Status	Proposed by	Initial Cost Est.	Remaining FCD		Score	Projected FYs
				Costs			
West Cactus Rd Detention Basin & Channels - FY 2000 & 2002 <sup>1</sup>	NA	El Mirage	\$5,086,000	TBD		80	TBD
Granite Reef Watershed Mitigation - FY 1999	NA	Scottsdale	\$3,400,000	TBD		77	2002-TBD
Highline/Western Canal Storm Drain Improvements FY 2006	NA	Tempe	\$3,440,000	\$1,720,000		75	TBD
Cloud Road Channel - FY 2006	NA	Queen Creek	\$1,846,000	\$288,000		74	TBD
Gila River Bank Stabilization/Levee - FY 2005	NA	BWCDD <sup>10</sup>	\$4,500,000	\$2,925,000		73	TBD
SR303L Drainage Improvements - FY 2005 & 2006	NA	MCDOT	\$130,000,000	\$30,000,000		73	TBD
Higley Outfall Basins - FY 2001 & 2002	NA	Chandler	\$9,121,000	TBD		72	1999-TBD
Land Acq for the Consolidated Canal Diversion Channel - FY 2004	NA	Chandler	\$4,800,000	TBD		71	TBD
Gila River Floodway Channel at Cotton Lane - FY 2006	NA	MCDOT	\$15,360,000	TBD		70	TBD
Higley Outfall Channels - FY 2001 & FY 2002	NA	Chandler	\$12,888,000	TBD		68	1999-TBD
Arcadia Area Drainage Project - FY 2001	NA	Phoenix	\$12,000,000	\$6,000,000		68	1999-TBD
Bethany Home Road Storm Drain (59th-51st Ave) - FY 2002	NA	Glendale	\$3,150,000	\$1,575,000		67	2002-TBD
Sand Tank Wash Flood Control Improvements - FY 2002	NA	Gila Bend	\$11,707,000	\$10,534,000		66	TBD
Ellsworth Road Detention Basin System Upper Ellsworth Road Storm Drain System - FY 2004	NA	Mesa	\$3,850,000	\$1,925,000		65	TBD
MC85 Detention Basins & Channels - FY 2005 & 2006	NA	Buckeye	\$3,790,000	\$1,895,000		68	TBD
Pecos North/South Detention Basins - FY 2000 <sup>4</sup>	NA	Mesa	\$15,500,000	\$11,625,000		64	TBD
Boulder Mountain Elementary School Detention Basin System East McKellips Road Drainage System Lower Ellsworth Road Storm Drain System - FY 2004	NA	Mesa	\$8,300,000	\$4,150,000		64	TBD
Oak Street Detention Basin and Storm Drain System 88th Street Detention Basin and Storm Drain System - FY 2004	NA	Mesa	\$7,400,000	\$5,550,000		63	TBD
South Gila Bend Drainage Improvements - FY 2002	NA	Gila Bend	\$283,000	\$283,000		60	TBD
Meridian North/South Channels - FY 2000 <sup>4</sup>	NA	Mesa	\$2,400,000	\$1,800,000		60	TBD
Pecos Road Channel - FY 2000 <sup>4</sup>	NA	Mesa	\$13,620,000	\$10,215,000		58	TBD
Total Not Active:			<b>\$272,441,000</b>	<b>\$90,485,000</b>			
<b>Grand Total:</b>			<b>\$711,040,000</b>	<b>\$247,844,000</b>			

<sup>1</sup> formerly called Western El Mirage Drainage System

<sup>2</sup> resubmitted 02/03 - Originally submitted as New River & Skunk Creek FY 98/99 Score: 75

<sup>3</sup> formerly called Grand Canal Basins [Maryvale ADMP]

<sup>4</sup> East Mesa ADMP

<sup>5</sup> formerly called Downtown Chandler Drainage System Improvement

<sup>6</sup> formerly East PVSP Project

<sup>9</sup> formerly called McDowell Rd Storm Drain/76th St. Detention Basin and Hermosa Vista Storm Drain/Hawes Road Storm Drain

<sup>10</sup> Buckeye Water Conservation District



# ADOT Pit Modifications

Supervisory District: 5  
Jurisdiction: Guadalupe  
PCN: 035.xx.xx

Phone: 602-506-4878

Project Manager:  
**Don Rerick, P.E.**

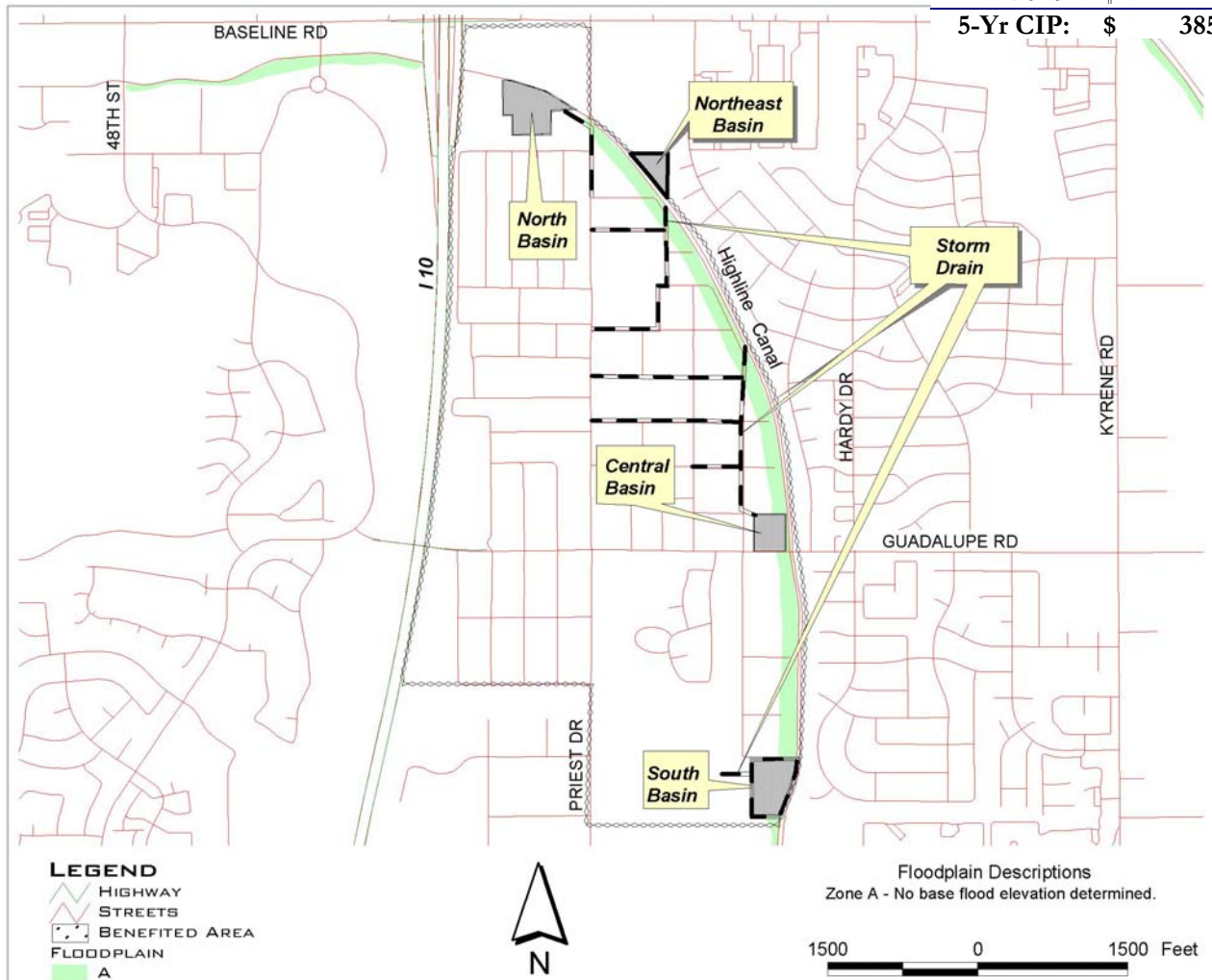
djr@mail.maricopa.gov

The project provides a storm drain collection system and four retention basins located along the Highline Canal that will capture and convey the 10-year storm event within the Town and east of Avenida Del Yaqui. Runoff from within the Town results in flooding of low-lying houses and collects along the Highline Canal where it eventually overtops the canal and causes damage to downstream properties within Tempe. Three of the basins are located within the Town, and one along the east side of the canal is in Tempe. The three basins within the Town have been landscaped and now serve as Town parks. The basin in Tempe, because of its small size and its depth has been landscaped and fenced. The project costs for design, right-of-way acquisition, utility relocation, environmental studies and construction of the project were less than \$7 million. Construction of the project has been completed with the exception of a future pump station that will be designed and constructed by the City of Tempe as part of this project. The District will share in the cost of the pump station. The ADOT Pit Modification is to include a pump station, not shown below, that will be located in a large drainage basin near I-10 & Warner Road. In accordance with the IGA the pump station must be completed by the end of FY 2008/2009. The Town owns, operates and maintains the storm drain system and the four basins.

Origination: Prioritization Process in January 1994  
Authorization: FCD 99003, 99004, 99005  
Location: T1S/R4E

FY 2006:	\$	0
FY 2007:	\$	0
FY 2008:	\$	385,000
FY 2009:	\$	0
FY 2010:	\$	0

**5-Yr CIP: \$ 385,000**





# Laveen Area Conveyance Channel

Supervisory District: 5  
Jurisdiction: Phoenix  
PCN: 117.08.31

Phone: 602-506-2943

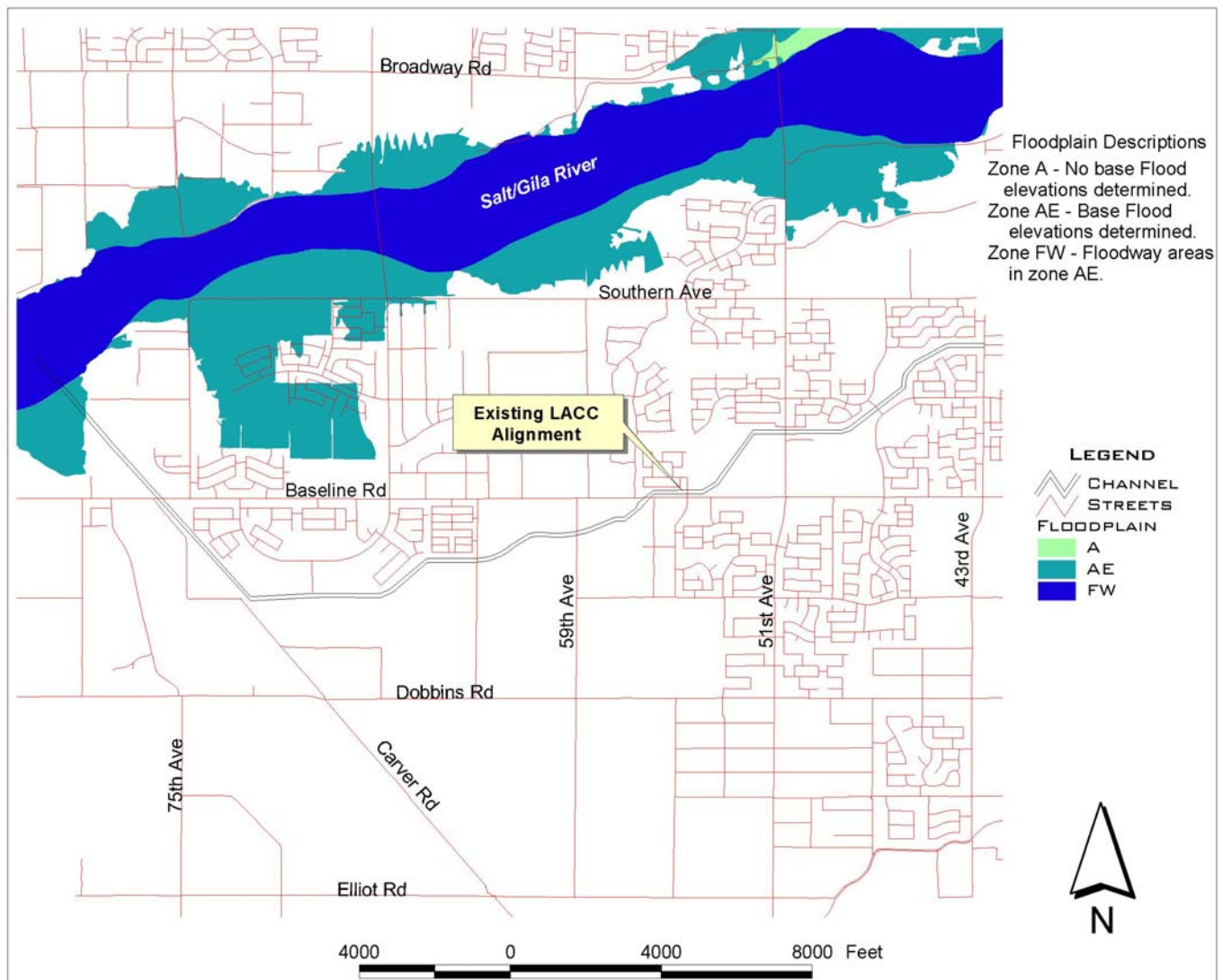
Project Manager:  
**Bobbie Ohler, P.E.**

[bao@mail.maricopa.gov](mailto:bao@mail.maricopa.gov)

The Laveen Area Conveyance Channel (LACC) is a public and private partnership that improved the Maricopa Drain into a regional flood control facility. This project, consisted of 5.8 miles of conveyance channel and a detention basin at 43rd Ave. and Southern Ave., that reduced flooding in the Laveen area. The channel and basin will also function as park facilities for the City. Construction of the channel commenced in August 2003 and was completed in September 2004. The irrigation and landscaping for the channel and basin is under construction and will be completed in Fall 2005.

Origination: 2000 Prioritization Process, Requested by City of Phoenix  
Authorization: IGA FCD 2000A021  
Location: T1S/R1E, T1S/R2E, T1N/R1E and T1N/R2E

FY 2006:	\$	247,000
FY 2007:	\$	0
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0
<b>5-Yr CIP:</b>	<b>\$</b>	<b>247,000</b>







# 23<sup>rd</sup> Avenue & Roeser Road Basin & Storm Drain

Supervisory District: 5  
Jurisdiction: Phoenix  
PCN: 117.09.31

Phone: 602-506-4486

Project Manager:  
**Emili Kolevski, P.E.**

[emk@mail.maricopa.gov](mailto:emk@mail.maricopa.gov)

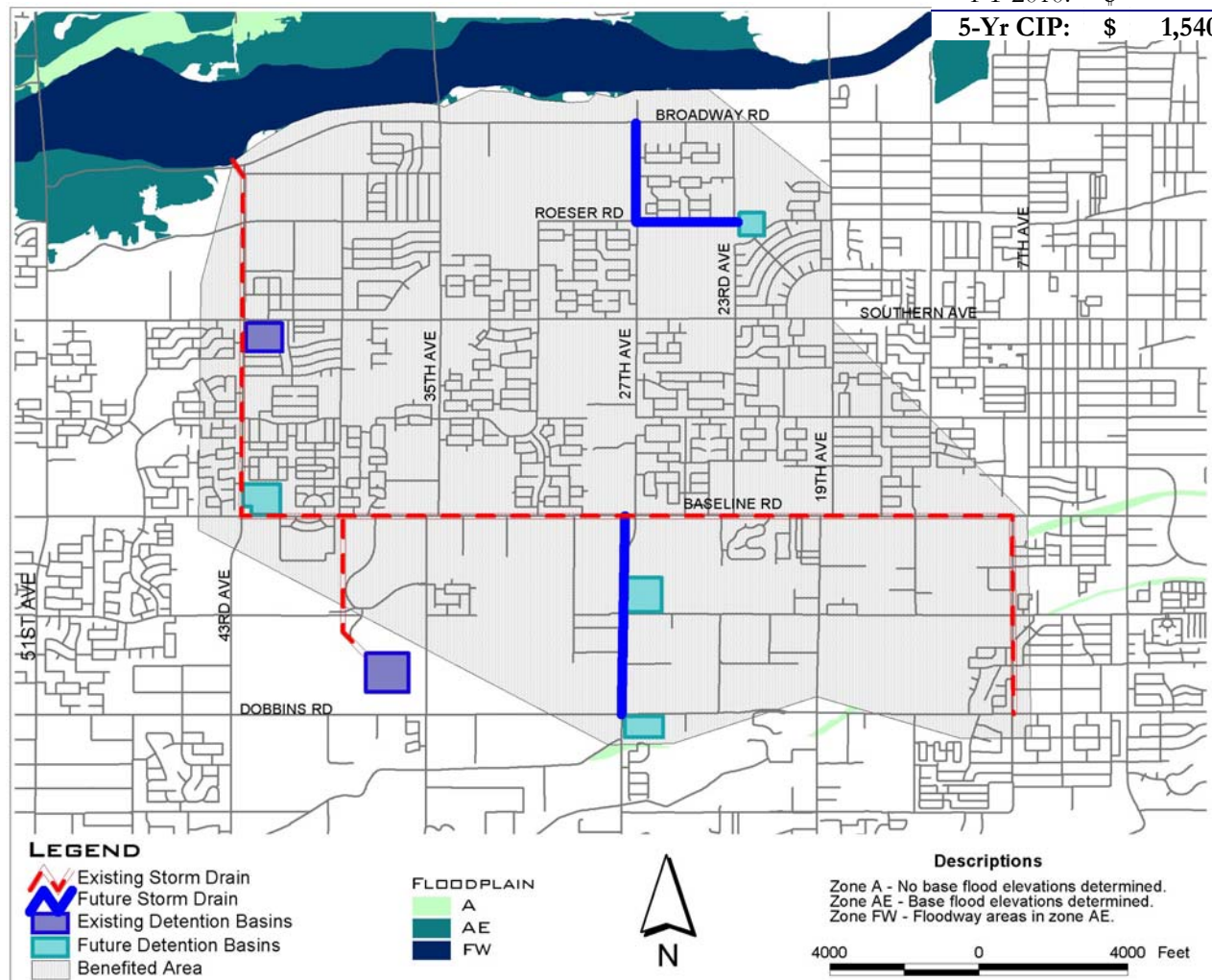
The 23<sup>rd</sup> Avenue/Roeser Road Detention Basin & Storm Drain is identified as an element for regional flood control infrastructure as defined by the recommended plan for the South Phoenix / Laveen Drainage Improvement Project. The Preliminary Design Report was completed in July 1997. A proposed 10-acre detention basin, to be located on the northeast corner of 23<sup>rd</sup> Avenue and Roeser Road, will intercept flows from the north and the east. The Basin will be designed to intercept flows from a 100-year storm and will then discharge approximately 40cfs to a storm drain that will be constructed along Roeser Road. This storm drain will then discharge to a new storm drain to be constructed along 27<sup>th</sup> Avenue from Roeser Road to Broadway Road. An existing 108-inch storm drain will then convey the flow from Broadway Road to the Salt River.

The project is currently in the 60% design stage. The 10-acre basin at 23<sup>rd</sup> Ave and Roeser Rd has been acquired and design will be completed in FY 2006. Construction is scheduled for FY 2006 and 2007. The City of Phoenix is the lead project agency.

Origination: Prioritization Procedure FY 2002 and FY 2004  
Authorization: FCD 2003C008 IGA 2003A004  
Location: T1N/R2E; T1N/R3E

FY 2006:	\$	770,000
FY 2007:	\$	770,000
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0

**5-Yr CIP: \$ 1,540,000**





# South Phoenix Detention Basins

Supervisory District: 5  
Jurisdiction: Phoenix  
PCN: 117.xx.xx

Phone: 602-506-4771

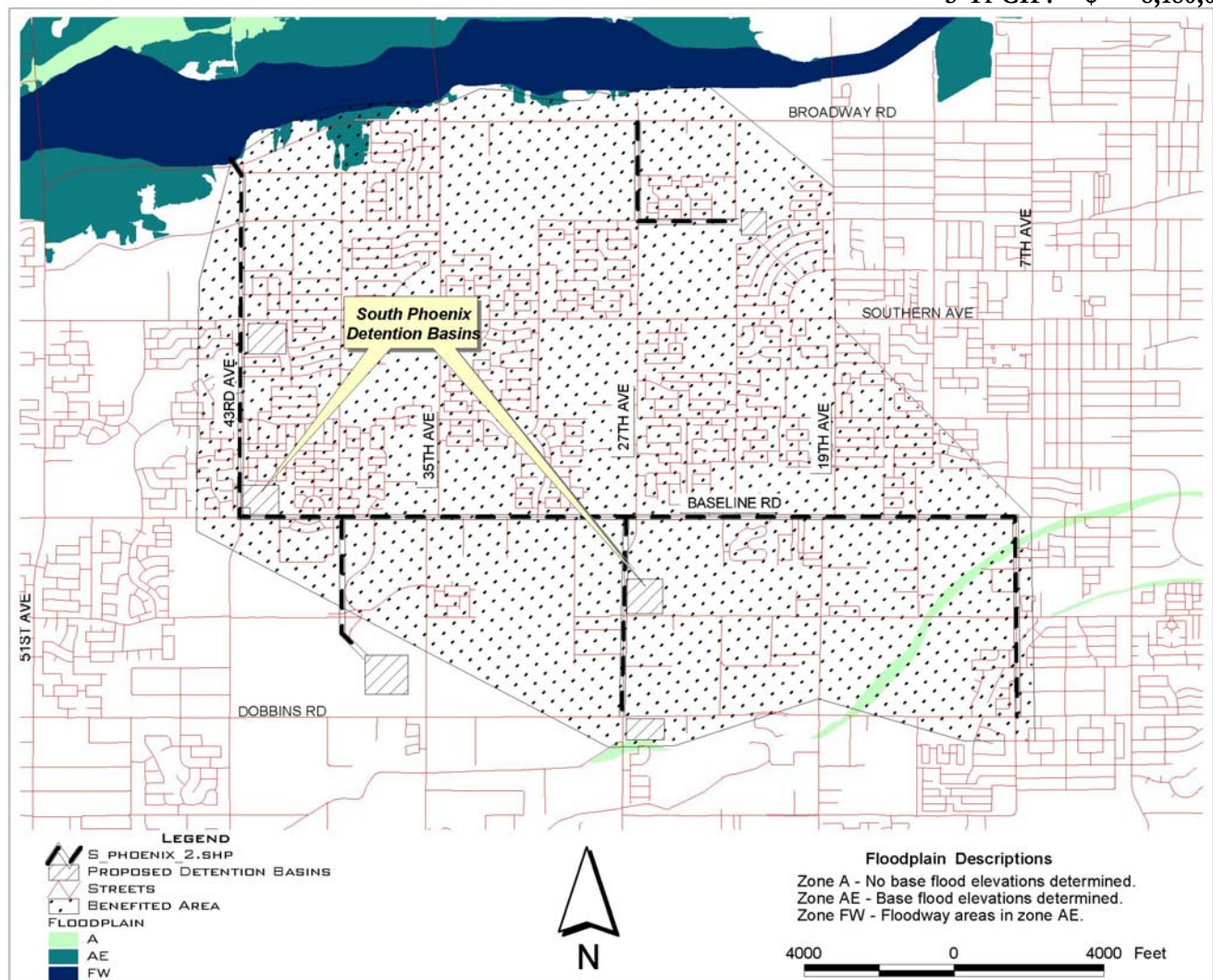
Project Manager:  
**Scott Vogel, P.E.**

csv@mail.maricopa.gov

Residents in the South Phoenix area have been flooded during relatively minor storm events, including those considered to be less than 10-year storms. The South Phoenix Drainage Improvement Project will provide protection from a 100-year flood event to residences and developing farmland within the City of Phoenix. The project will be built in phases to maximize the potential for cost sharing with other agencies. The 100-year protection will be in place once all of the phases are completed. The South Phoenix Detention Basins are located at the intersections of 43<sup>rd</sup> Avenue and Baseline Road, and 27<sup>th</sup> Avenue and South Mountain Avenue. Preliminary designs have been prepared for each of the detention basins. The Basins were submitted by the City of Phoenix in the 1999 Prioritization Procedure, and approved by the Prioritization Committee. The proposed schedule assumes that the City of Phoenix is able to appropriate funds for this project. The goal is for the District to contribute approximately 50% of the project cost of the South Phoenix Drainage Improvements. The District acquired the basin sites when Baseline Road was widened and the Baseline Road Storm Drain was constructed.

Origination: South Phoenix Drainage Improvement Project Study,  
Prioritization Procedure, November 1993  
Authorization: Resolution 97-04, Resolution 97-04A  
Location: T1N/R2E, T1S/R2E

FY 2006:	\$	20,000
FY 2007:	\$	440,000
FY 2008:	\$	440,000
FY 2009:	\$	3,620,000
FY 2010:	\$	3,660,000
<b>5-Yr CIP:</b>	<b>\$</b>	<b>8,180,000</b>





# Scottsdale Road Corridor Drainage

Supervisory District: 2  
Jurisdiction: Scottsdale  
PCN: 120.03.31

Phone: 602-506-4768

Project Manager:  
**Raju Shah, P.E.**

[rcs@mail.maricopa.gov](mailto:rcs@mail.maricopa.gov)

**71<sup>st</sup> Street Storm Drain Project:** This project is currently under construction. The project includes construction of storm drains of various sizes, inlet and outlet structures and the Mescal Basin. Most of the project will be constructed within dedicated drainage easements and roadway rights-of-way. The design frequency for the project is the 10-yr storm event. The City will own, operate and maintain the system once constructed and accepted by the City.

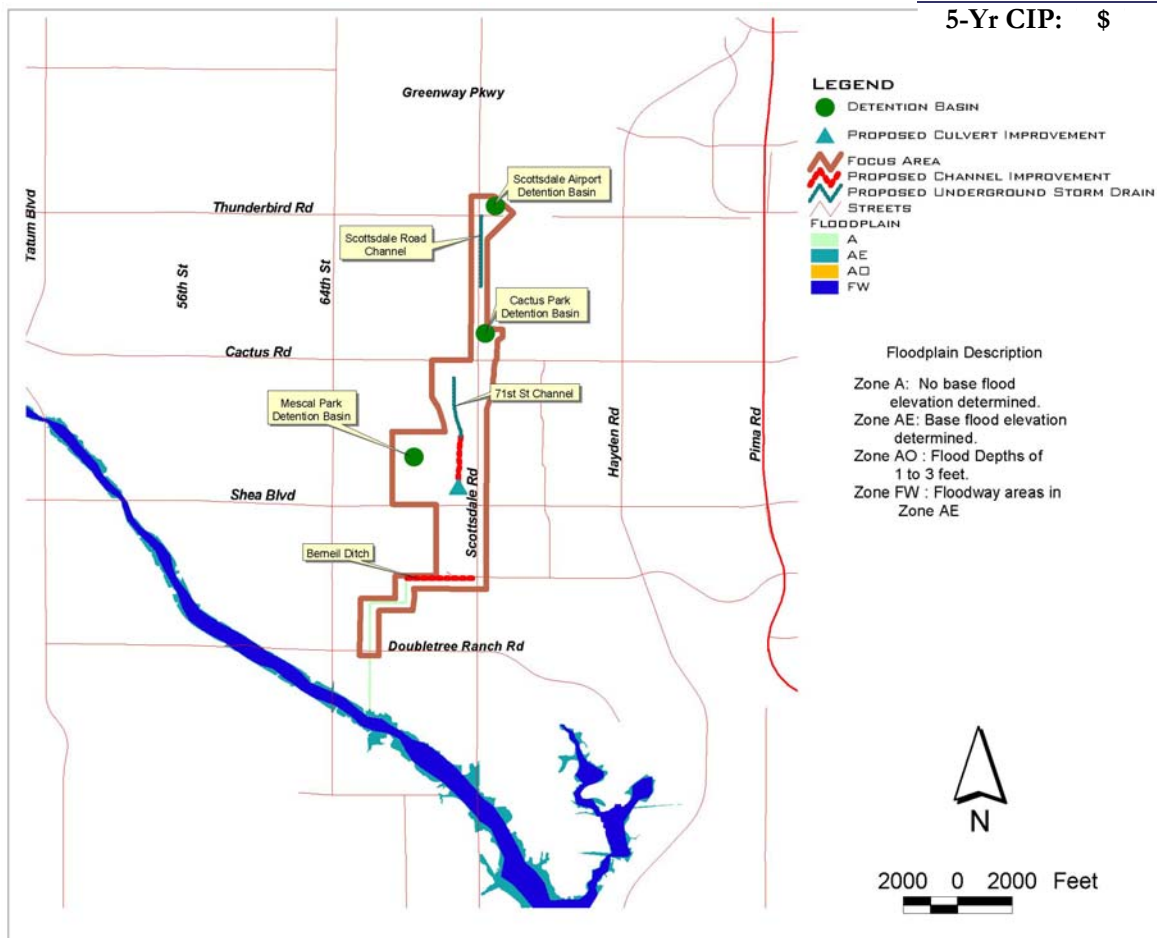
**Mescal Basin:** The basin is currently under construction. Construction includes a new emergency spillway along the south embankment to allow the controlled discharge of storm water flows higher than 100-yr flood event. The City will own, operate and maintain the basin once the improvements are completed and accepted by the City and their Parks Department.

**Scottsdale Road Drainage Channel:** This project includes improving an existing earthen drainage channel just east of Scottsdale Road from Thunderbird Road to Sweetwater Avenue with a closed system such as pipe and/or box culvert. The City is the lead agency for this project. The improvements are under design and will convey 10-yr flows. The City will own, operate and maintain the system once constructed.

Origination: Scottsdale Road Corridor Drainage Master Plan  
Authorization: IGA FCD 2002A016  
Location: T3N/R4E Sections 14 & 22

FY 2006:	\$	1,817,000
FY 2007:	\$	0
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0

**5-Yr CIP: \$ 1,817,000**







# EMF - Rittenhouse Basin

Supervisory District: 1  
Jurisdiction: Gilbert  
PCN: 121.03.32

Phone: 602-506-4878

Project Manager:  
**Don Rerick, P.E.**

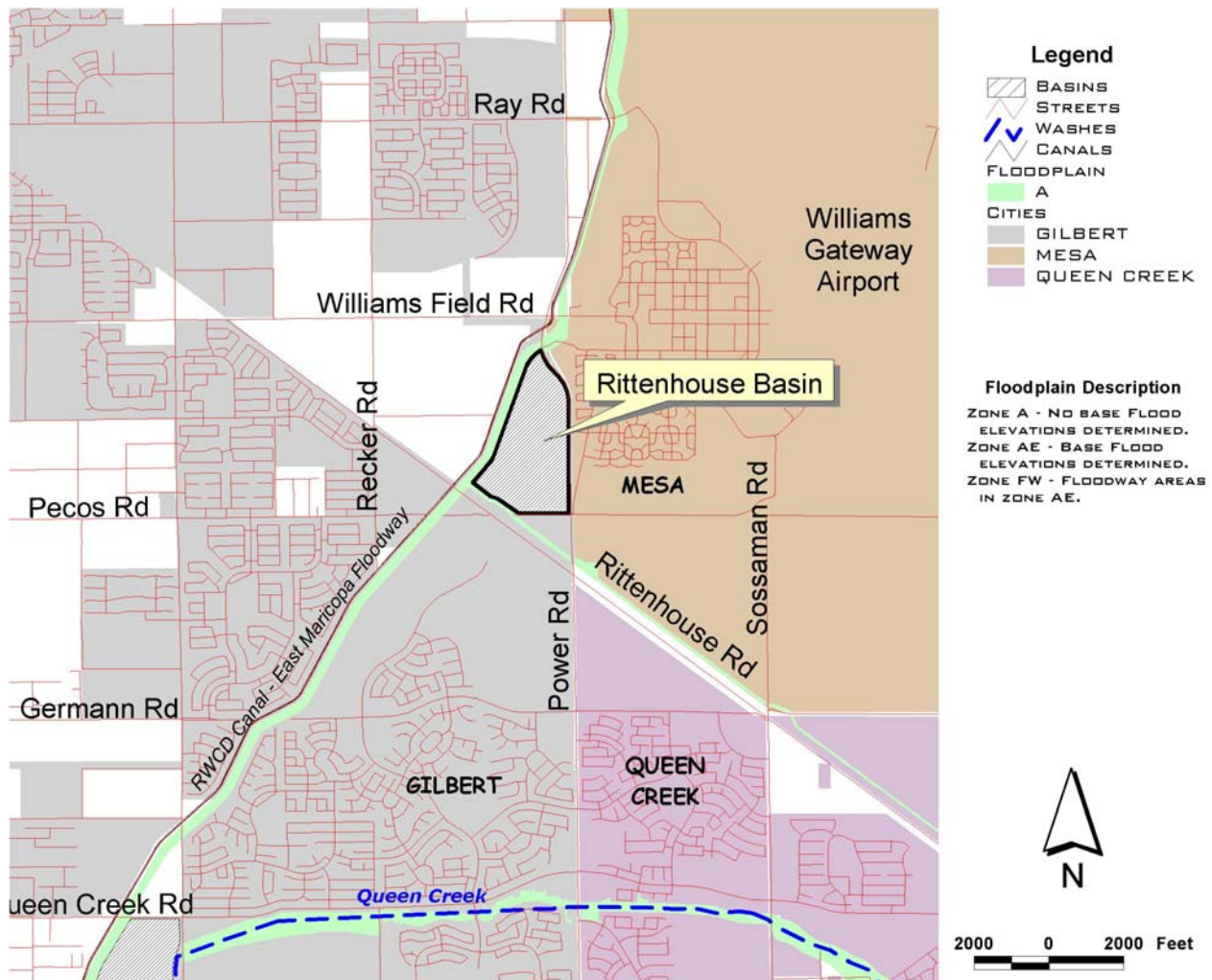
[djrr@mail.maricopa.gov](mailto:djr@mail.maricopa.gov)

The District has completed the East Maricopa Floodway (EMF) Mitigation Study. The study identified several drainage and flooding problems along the EMF. The capacity of the EMF is at about 8,500 cfs. The existing condition 100-yr. is about 15,000 cfs. The study proposed to mitigate the problem by constructing two large off line detention basins. The Rittenhouse Basin is one of those two off line basins, and it will mitigate flows from the EMF channel.

This project is being accomplished solely by the District, and consists of a pre-design, a final design and construction. The design has been completed and the first phase of construction is underway, to be completed in FY 2005/2006. Because of the size of the basin and because of the cost, construction will be accomplished in at least two phases over a number of years. The District is negotiating an Intergovernmental Agreement with the Town of Gilbert for the Town's recreational use of the basin. The Town would fund the recreation amenities and assume responsibility for certain operation and maintenance obligations.

Origination: East Maricopa Floodway Capacity Mitigation and Multi-Use  
Corridor Study - Conceptual Design Alternatives Report  
Dated August 2000  
Authorization: FCD Resolution 1999R014  
Location: T1S/R6E

FY 2006:	\$	1,529,000
FY 2007:	\$	10,000
FY 2008:	\$	3,940,000
FY 2009:	\$	3,960,000
FY 2010:	\$	0
<b>5-Yr CIP:</b>		<b>\$ 9,439,000</b>







# EMF - Chandler Heights Basin

Supervisory District: 1  
Jurisdiction: Gilbert  
PCN: 121.03.33

Phone: 602-506-4878

Project Manager:  
**Don Rerick, P.E.**

[djrr@mail.maricopa.gov](mailto:djr@mail.maricopa.gov)

The District has completed the East Maricopa Floodway (EMF) Mitigation Study. The study identified several drainage and flooding problems along the EMF. The capacity of the EMF is at about 8,500 cfs. The existing condition 100-yr. is about 15,000 cfs. The study proposed to mitigate the problem by constructing two large off line detention basins. The Chandler Heights Basin is one of those two off line basins, and it will mitigate flows from the Queen Creek and Sonoqui Washes into the EMF.

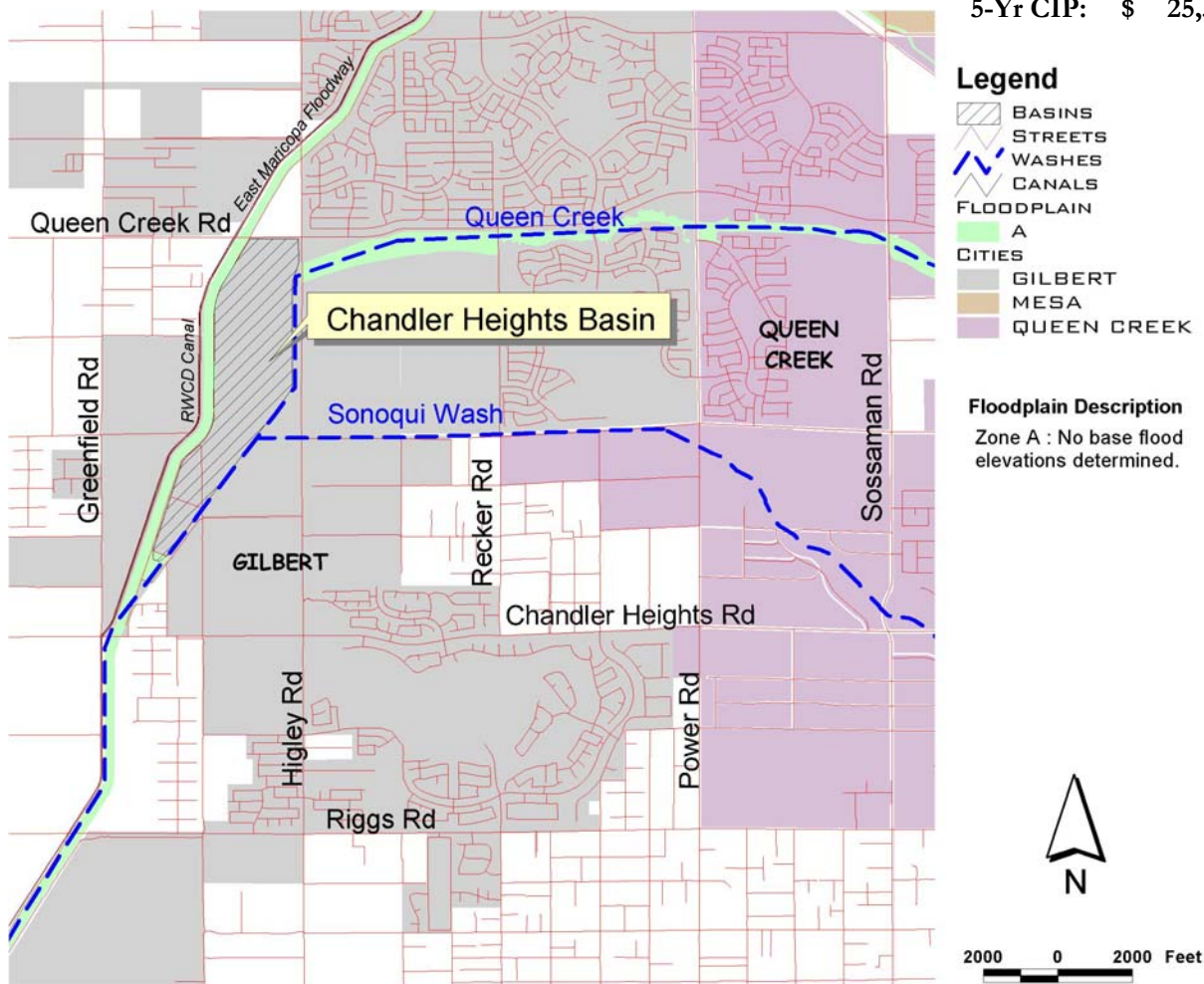
This project is being accomplished solely by the District, and consists of a pre-design, a final design and construction. The design has been completed, and the first phase of construction has been completed. The second phase of construction is underway with completion scheduled in FY 2005/2006. Because of the size of the basin and because of the cost, construction will be accomplished in at least five phases over a number of years. The District will negotiate an Intergovernmental Agreement with the Town of Gilbert for the Town's recreational use of the basin. The Town would fund the recreation amenities and assume responsibility for certain operation and maintenance obligations.

Origination: East Maricopa Floodway Capacity Mitigation and Multi-Use  
Corridor Study - Conceptual Design Alternatives Report  
Dated August 2000  
Authorization: FCD Resolution 1999R014  
Location: T2S/R6E

FY 2006:	\$	3,180,000
FY 2007:	\$	6,505,000
FY 2008:	\$	5,180,000
FY 2009:	\$	5,200,000
FY 2010:	\$	5,250,000

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**5-Yr CIP: \$ 25,315,000**





# Tres Rios

Supervisory District: 5

Jurisdiction: Phoenix, Avondale, Unincorporated Maricopa County

PCN: 126.01.31

Phone: 602-506-4878

Project Manager:  
**Don Rerick, P.E.**

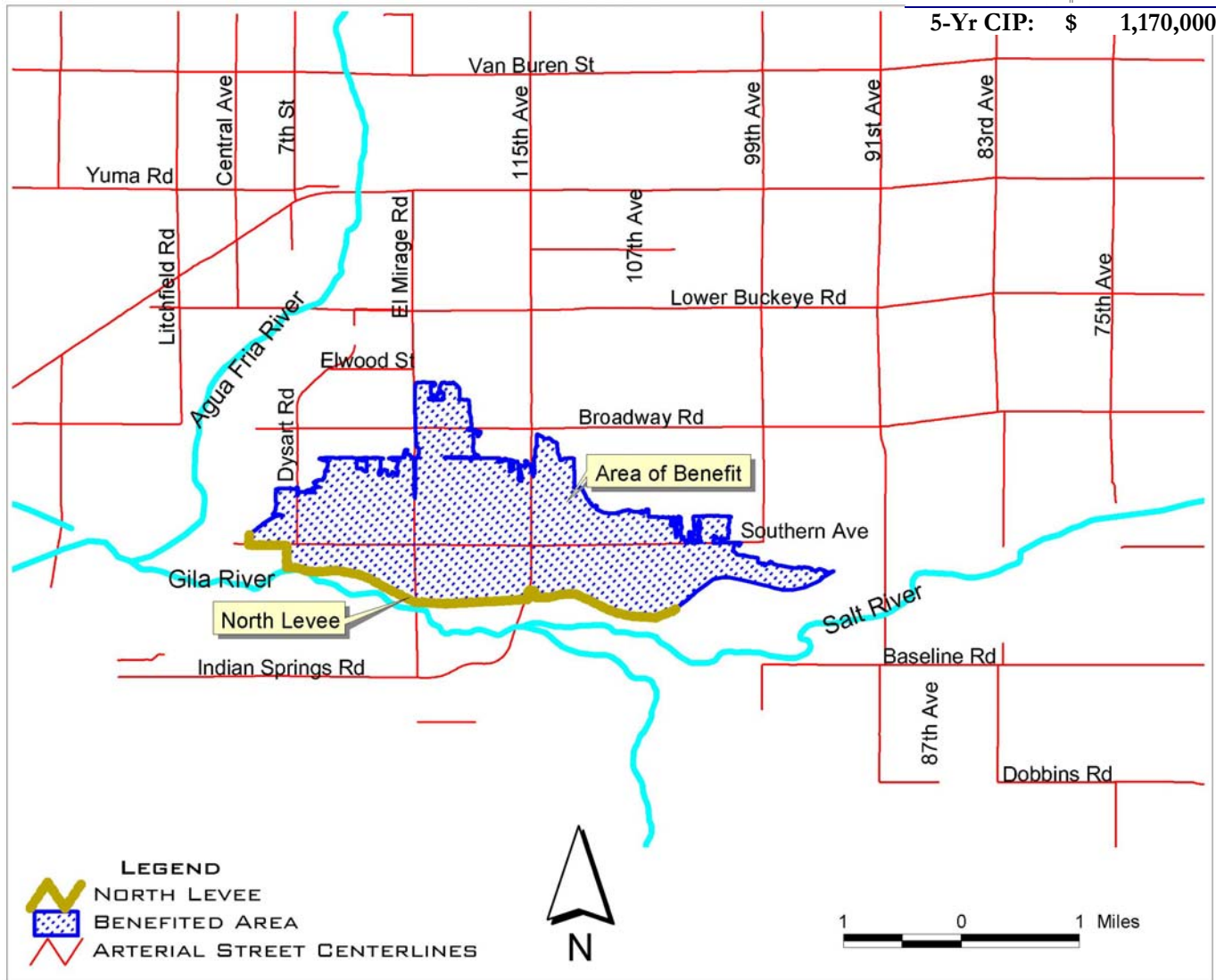
djr@mail.maricopa.gov

The Tres Rios Project is a federal project under the auspices of the U.S. Army Corps of Engineers. The local sponsor is the City of Phoenix. The project is located along the Salt and Gila Rivers from about 83rd Avenue to the Agua Fria River. The project consists of the restoration of habitat within and along the river, including constructed wetlands, open water marshes, and riparian corridors. Along the north bank of the river from approximately 105<sup>th</sup> Avenue to the Agua Fria River will be constructed a flood control levee to remove property and homes along the river from the Gila and Salt River floodplain. In accordance with the approved project Resolution and IGA, the District's participation consists of design review and coordination, funding \$2,000,000 in cash toward construction of the levee, operation and maintenance of the levee, and contribution of District owned land required for the project. The Corps has completed the design of phase 1A of the levee, and construction by the Corps is scheduled to begin in FY 2005/2006. Design on the second phase 1B of the levee continues with construction not yet scheduled.

Origination: U.S. Army Corps of Engineers Feasibility Study  
Authorization: IGA FCD2004A017  
Location: TIN/RIW, TIN/RIE

FY 2006:	\$	50,000
FY 2007:	\$	1,040,000
FY 2008:	\$	40,000
FY 2009:	\$	40,000
FY 2010:	\$	0

**5-Yr CIP: \$ 1,170,000**





# White Tanks FRS #4 Rehabilitation

Supervisory District: 4  
Jurisdiction: Buckeye  
PCN: 201.xx.xx

Phone: 602-372-6110

Project Manager:  
**Larry Lambert, P.E.**

lkl@mail.maricopa.gov

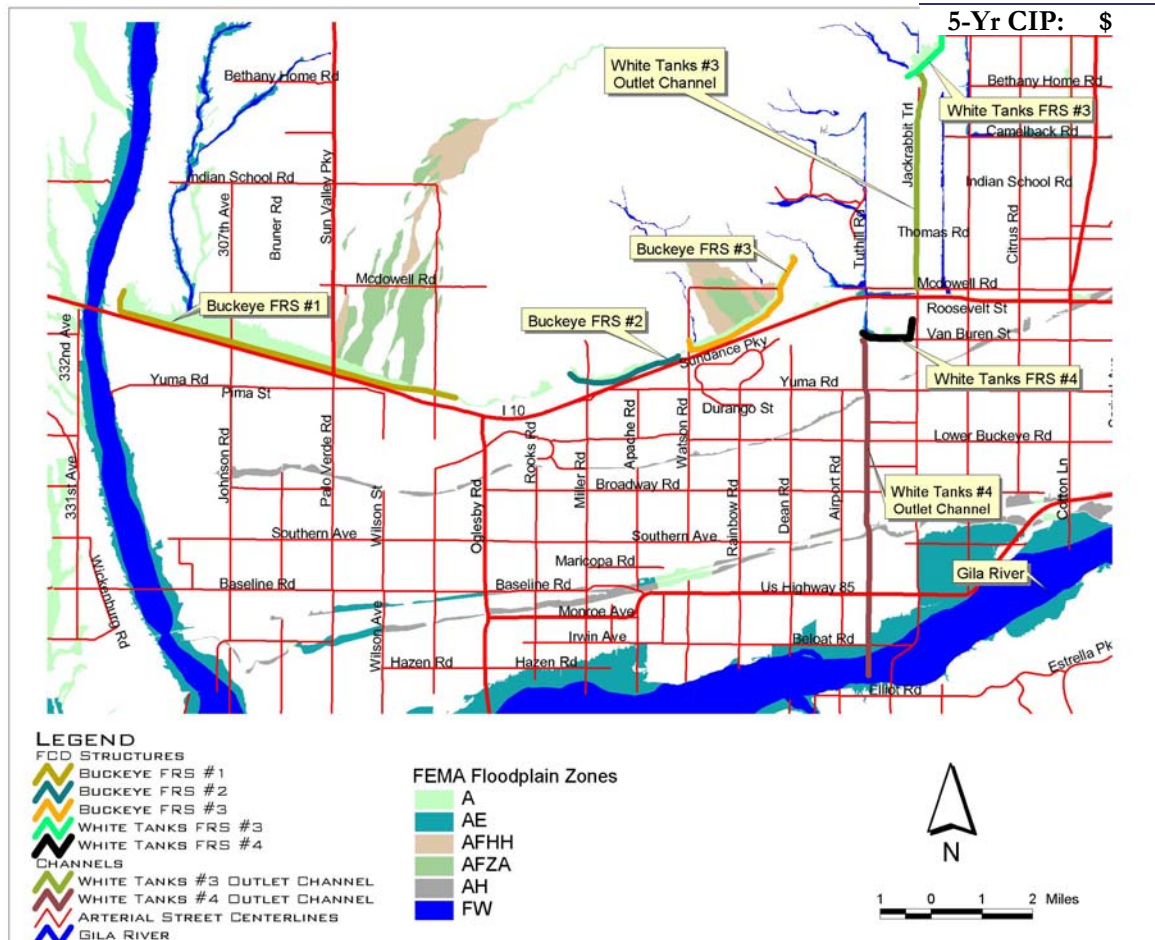
White Tanks Flood Retarding Structure No. 4 (White Tanks FRS No. 4), operated and maintained by the District, requires corrective action to bring the structure into compliance with dam safety standards and requirements. An outlet channel from White Tanks FRS No. 4 to the Gila River is required. In addition, an outlet channel from White Tanks FRS No. 3 to No. 4 is required (reference White Tanks #3 Outlet Channel for this related project).

The District has completed Phase I Assessments for White Tanks FRS #4. The Arizona Department of Water Resources (state agency with regulatory authority) has classified the dam as having safety deficiencies that require corrective action. These deficiencies include transverse cracking of the embankment, left spillway adequacy, and unprotected corrugated metal pipe outlets. The Natural Resources Conservation Service (NRCS) has also identified these same deficiencies that require corrective action. The District submitted an Application to NRCS for federal funding assistance under Public Law 106-472 (Small Watershed Amendment) in May 2004. The District has initiated the alternatives evaluation and pre-design efforts under the operating budget in FY 2004-05 and will complete the alternatives analysis in FY 2006-07. The study will result in a recommended alternative for the channels and rehabilitation of the dam.

Origination: Phase 1 Dam Safety Assessment Report for White Tanks FRS No. 4  
Authorization: Future  
Location: T1N/R2W Sections 5 & 6

FY 2006:	\$	20,000
FY 2007:	\$	1,510,000
FY 2008:	\$	3,970,000
FY 2009:	\$	4,110,000
FY 2010:	\$	0

**5-Yr CIP: \$ 9,610,000**







# McMicken Dam Fissure Risk Zone Remediation

Supervisory District: 4  
Jurisdiction: Surprise  
PCN: 202.01.31

Phone: 602-506-5426

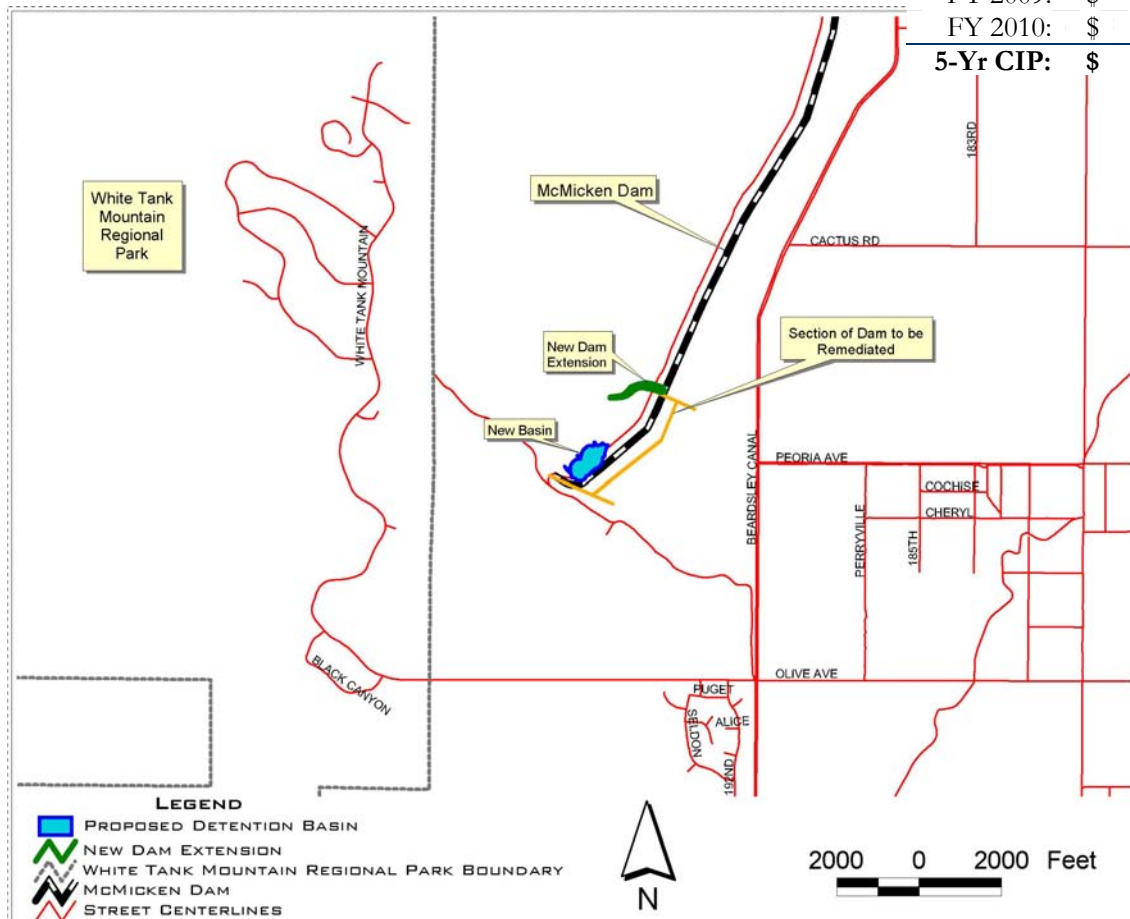
Project Manager:  
**Mike Greenslade, P.E.**

[mdg@mail.maricopa.gov](mailto:mdg@mail.maricopa.gov)

McMicken Dam was constructed by the U.S. Army Corps of Engineers (Corps) in 1954 to alleviate significant flooding in the west valley and to protect Luke Air Force Base. The District rehabilitated the dam in 1985. A geotechnical investigation had determined that significant ground subsidence had occurred in the area and that the embankment has significant transverse cracks. Portions of the dam have settled three to four feet. In addition, ground fissures were found within a quarter of a mile of the south end of the dam. The modifications that were completed in 1985 included reconstruction of the dam to its original design elevation and the installation of a central geofabric filter to protect the dam from piping failure of the embankment. The dam provides significant flood protection to the west valley and to Luke Air Force Base.

The District initiated a Structures Assessment Program Phase I studies for McMicken Dam, and several Geotechnical Investigations for McMicken Dam. The results of a geotechnical study indicate that ground subsidence has continued to occur at the site and that earth fissures have been found both upstream and downstream of McMicken Dam. The District believes the ground subsidence and presence of earth fissures in close proximity to the dam poses a risk to dam safety that necessitates corrective action in a timely manner. The District initiated an alternatives analysis and design for mitigation of the fissures. The selected alternative which consists of a new dam segment that removes a section of McMicken Dam from a fissure risk zone and includes a new basin is currently under construction.

Origination:	FCD Staff Recommendation - Phase II Structures Assessment Program	FY 2006:	\$	2,665,000
Authorization:	Resolution FCD 2002R017	FY 2007:	\$	0
Location:	T3N/R2W	FY 2008:	\$	0
		FY 2009:	\$	0
		FY 2010:	\$	0
		<b>5-Yr CIP:</b>	<b>\$</b>	<b>2,665,000</b>





# Buckeye #1 FRS Rehabilitation

Supervisory District: 4  
Jurisdiction: Communities of Buckeye, Palo Verde, and Liberty  
PCN: 207.xx.xx

Phone: 602-506-4609

Project Manager:  
**Brett Howey, P.E.**

[bah@mail.maricopa.gov](mailto:bah@mail.maricopa.gov)

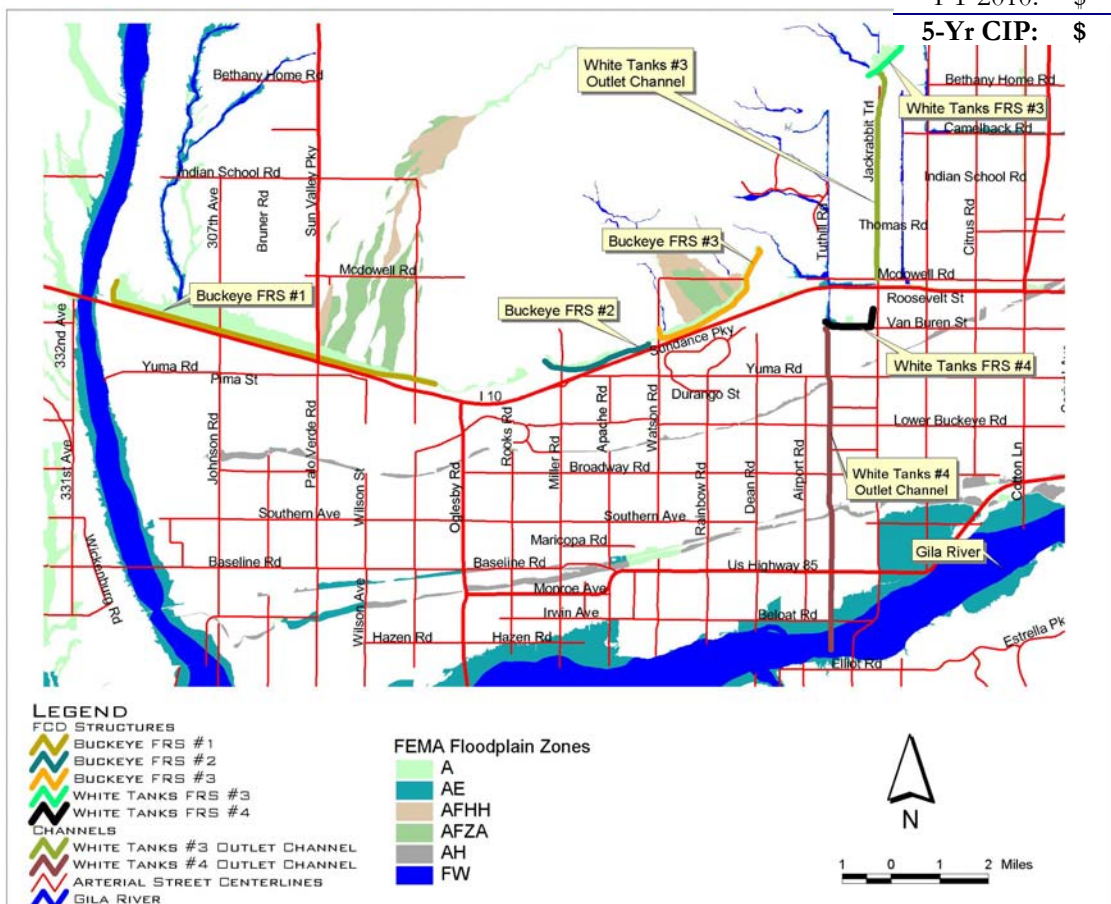
Buckeye FRS No. 1 is the western most dam of the series of three flood control dams that were all designed and built by the Soil Conservation Service (now the Natural Resources Conservation Service – NRCS) between 1973 and 1975. The dam is located along the southern slopes of the White Tank Mountains and parallels the north side of Interstate 10 for 7.1 miles west to the Hassayampa River. The dam is operated and maintained by the Flood Control District of Maricopa County (District) and is regulated under the jurisdiction of the Arizona Department of Water Resources (ADWR).

Since the dam's original construction, the dam has experienced considerable transverse cracking. ADWR has identified the transverse cracking in Buckeye FRS No.1 as a dam safety deficiency that must be corrected. The District has completed Phase I Assessments of the dam and has requested federal cost share assistance under Public Law 106-472, *The Small Watershed Amendment*, with NRCS for a rehabilitation project to address the dam safety concerns and to maintain flood control benefits to downstream properties for the next 100 years. Alternatives may include a modified dam, floodways, or basins, which will provide a minimum of 100-year flood protection.

Buckeye FRS No. 1 has been identified as a major component of the proposed Maricopa Regional Trail Phase 3 Master Plan. Project planning will include the coordination of any interested stakeholders for the incorporation of a recreational federal cost share component to the rehabilitation project.

Origination: FCD Staff Recommendation - Phase I Structures Assessment Program  
Authorization: Future  
Location: T1N/R4W Sections 7, 8, 9, 10, & 11 T1N/R5W Sections 1 & 2

FY 2006:	\$	20,000
FY 2007:	\$	810,000
FY 2008:	\$	1,820,000
FY 2009:	\$	8,180,000
FY 2010:	\$	8,260,000
<b>5-Yr CIP:</b>	<b>\$</b>	<b>19,090,000</b>





# Spook Hill FRS/Red Mountain Freeway (Loop 202L) Modification

Supervisory District: 2  
Jurisdiction: Mesa  
PCN: 300.01.31

Phone: 602-506-5426

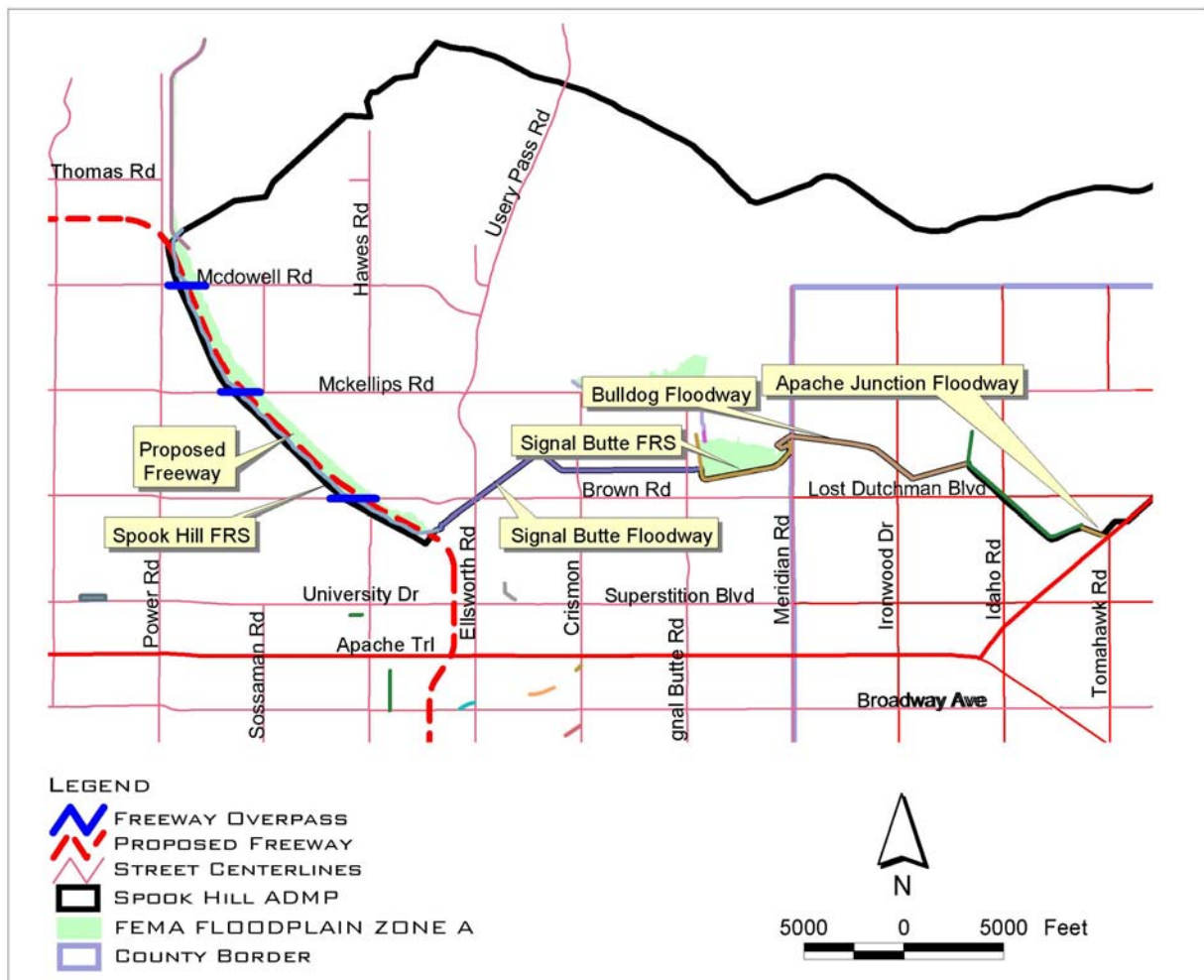
Project Manager:  
**Mike Greenslade, P.E.**

[mdg@mail.maricopa.gov](mailto:mdg@mail.maricopa.gov)

Spook Hill FRS is a structural plan element of a Watershed Work Plan, prepared by the Natural Resources Conservation Service (NRCS; formerly Soil Conservation Service) in January 1963, for the Buckhorn-Mesa Watershed Project located in Maricopa and Pinal Counties, Arizona. Spook Hill FRS was designed to impound floodwaters for a 100-year flood event and direct flows in excess of the 100-year flood event through an emergency spillway. The Loop 202L segment of the freeway, as currently being designed, will pass over Power Road, the Central Arizona Project (CAP) Canal, and the north end of Spook Hill FRS. The freeway will be located adjacent to and within the flood pool of Spook Hill FRS. The freeway will again pass over the Spook Hill FRS and CAP Canal, at the south end of the Spook Hill FRS and transition to become a depressed freeway at University Drive. ADOT will modify the Spook Hill FRS to accommodate the construction of the freeway.

Origination: FCD Staff Recommendation - Phase II Structures Assessment Program  
Authorization: Resolution FCD 2003R005  
Location: T3N/R2W

FY 2006:	\$	0
FY 2007:	\$	0
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0
<b>5-Yr CIP:</b>	<b>\$</b>	<b>0</b>







# Wickenburg Downtown Flooding Hazard Mitigation

Supervisory District: 4  
Jurisdiction: Wickenburg  
PCN: 343.01.31

Phone: 602-506-4771

Project Manager:  
**Scott Vogel, P.E.**

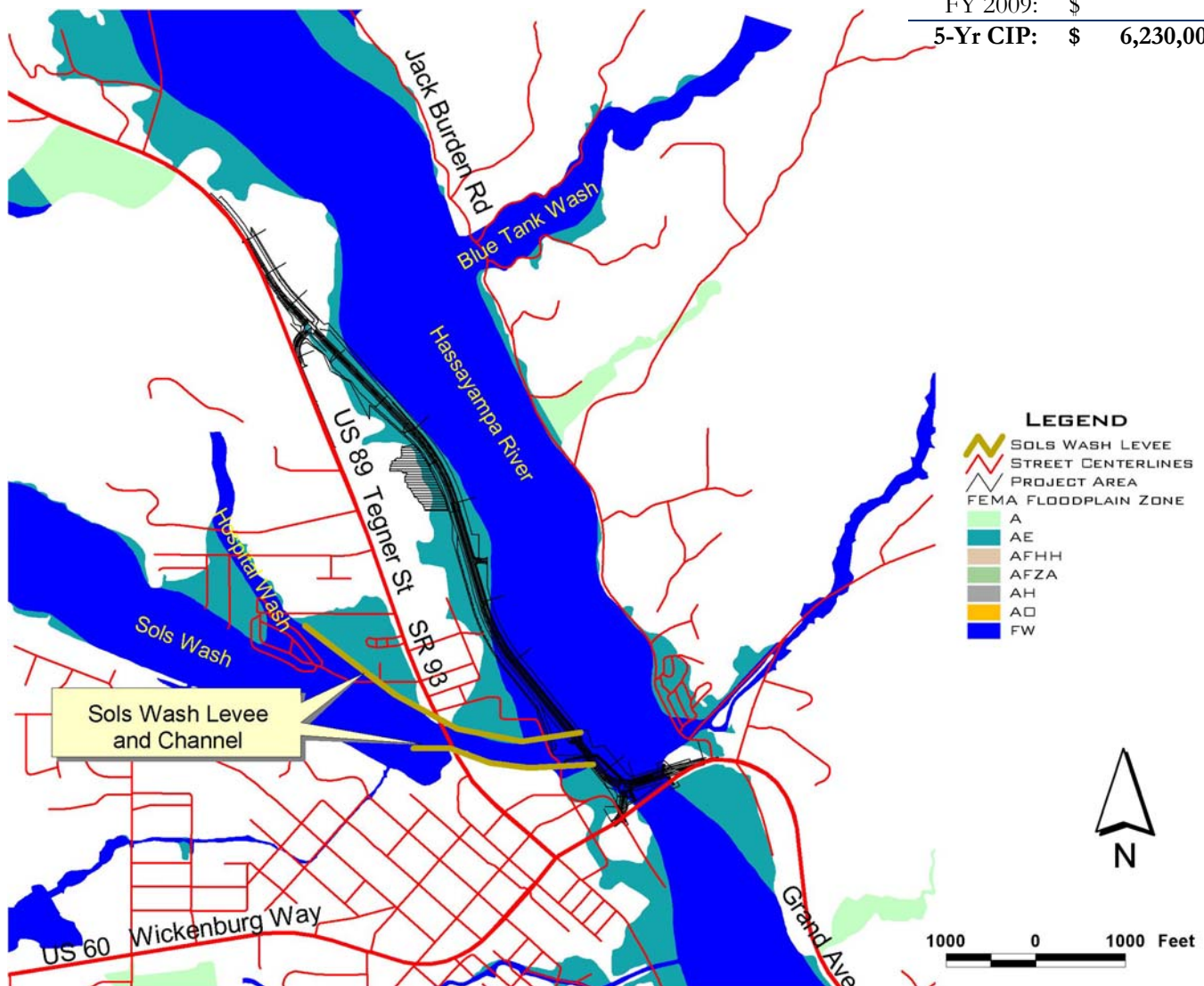
[csv@mail.maricopa.gov](mailto:csv@mail.maricopa.gov)

The project includes channel and levee improvements to capture the floodplain associated with Sols Wash and its tributary, Hospital Wash, and convey the 100-year flows from upstream of Tegner Street to the Hassayampa River. The project length is approximately 5,000 feet.

The project will provide 100-year level of protection to portions of the Wickenburg Downtown areas subject to flooding and will provide flood control benefits along much of Sols Wash within the Wickenburg Town limits. It will also convey the 100-year flood flows to the Highway 93 Interim Bypass Bridge over Sols Wash, allowing the Interim bypass embankment to be constructed as a levee to contain the Hassayampa River floodplain in the area.

Origination: Prioritization Procedure FY 2005  
Authorization: Resolution FCD 2005R008  
Location: T7N/R5W

FY 2005:	\$	650,000
FY 2006:	\$	340,000
FY 2007:	\$	1,040,000
FY 2008:	\$	4,200,000
FY 2009:	\$	0
<b>5-Yr CIP:</b>		<b>\$ 6,230,000</b>





# New River (Grand Ave. to Skunk Creek including Paradise Shores)

Supervisory District: 4  
Jurisdiction: Peoria  
PCN: 400.06.31

Phone: 602-506-4771

Project Manager:  
**Scott Vogel, P.E.**

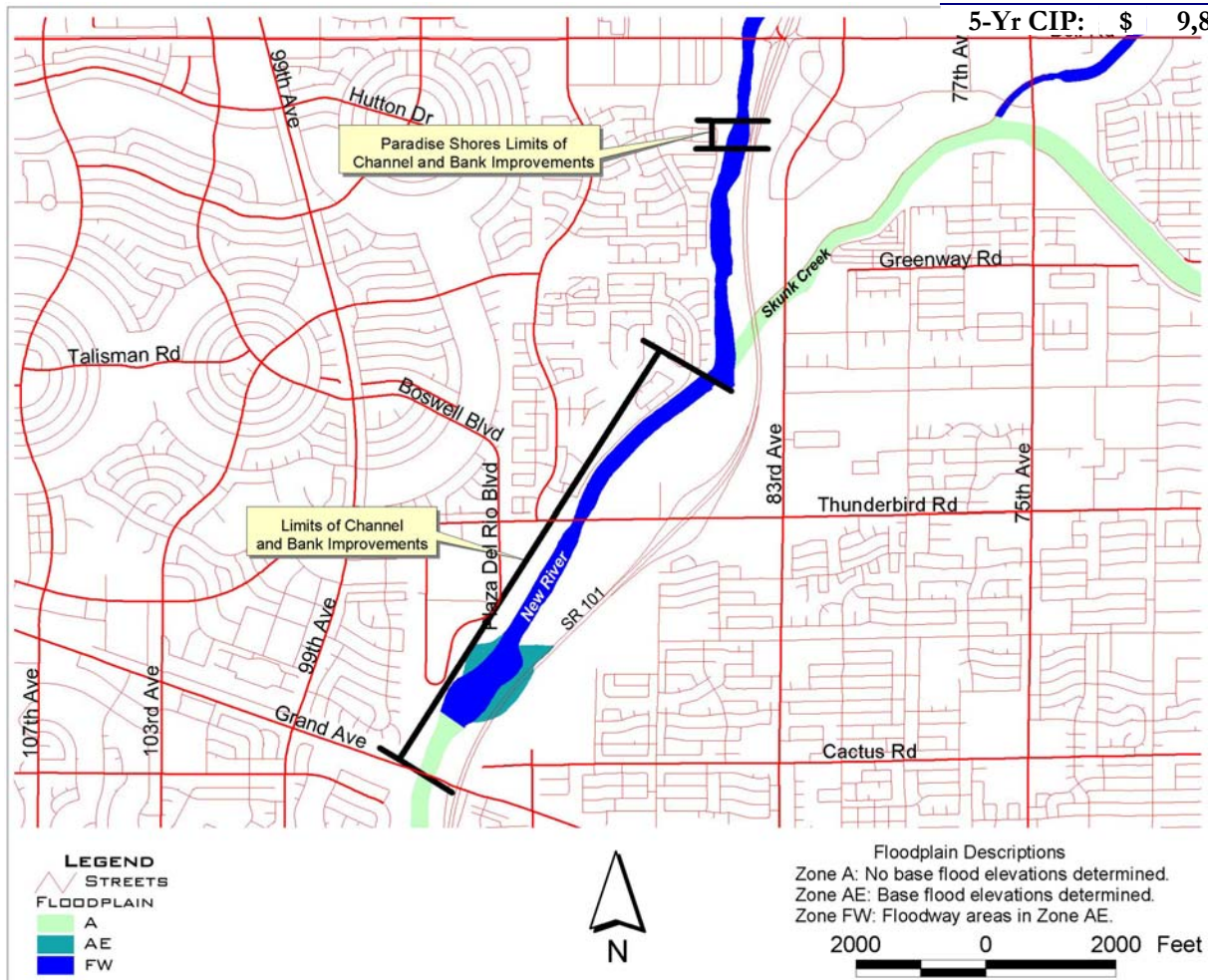
[csv@mail.maricopa.gov](mailto:csv@mail.maricopa.gov)

The Middle New River Watercourse Master Plan (MNRWCMP) study undertaken by the District identified projects to improve the conveyance capacity and provide bank protection along the New River. One of the recommended project areas is the reach of New River from Grand Avenue north to the Skunk Creek confluence with New River. Recommended improvements include channelization and bank protection for approximately 2 miles of New River, and an 800-foot reach on the west side of New River south of Bell Road. The City of Peoria is a project partner. The City and the District are property owners along and within the New River alignment. Intergovernmental agreements have been entered into with the City for design and construction of the project. Construction is scheduled for completion in April 2006. This is the last reach of the New River that has not been improved consistent with the Corps of Engineers' Phoenix, Arizona and Vicinity including New River project. The project was requested by the City of Peoria and approved for inclusion in the District's CIP.

Origination: Prioritization Procedure FY 2003  
Authorization: Resolution 2000R013, IGA 2002A010, IGA 2004A004  
Location: T3N/R1E, T4N/R1E

FY 2006:	\$	9,853,000
FY 2007:	\$	10,000
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0

**5-Yr CIP: \$ 9,863,000**







# Spook Hill Basin Acquisition

Supervisory District: 2  
Jurisdiction: Mesa, Unincorporated Maricopa County  
PCN: 420.01.32

Phone: 602-506-4486

Project Manager:  
**Emili Kolevski, P.E.**

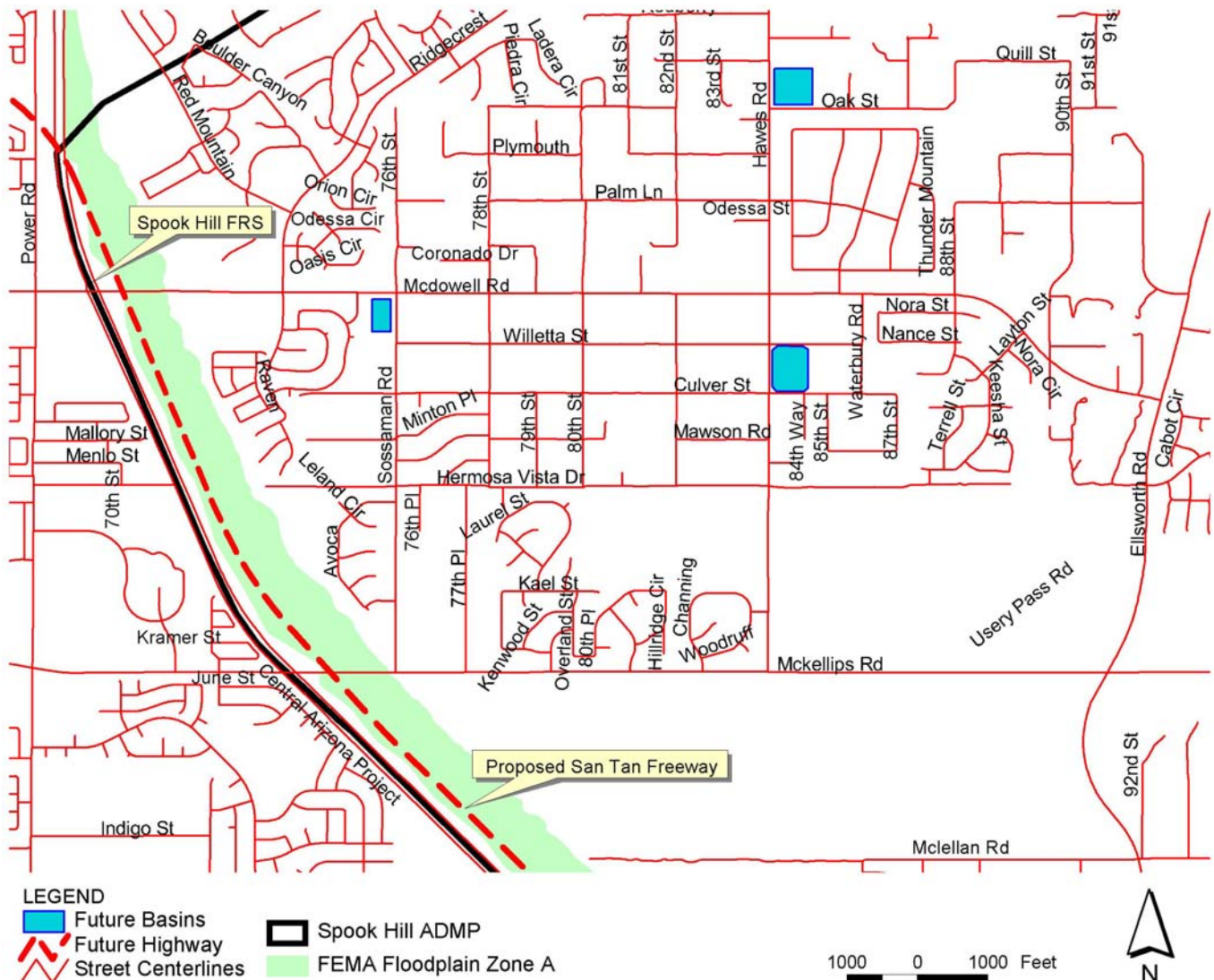
[emk@mail.maricopa.gov](mailto:emk@mail.maricopa.gov)

The Spook Hill Area Drainage Master Plan updated and expanded the existing Spook Hill Area Drainage Master Study conducted in 1987. A preferred alternative has been chosen and adopted by the City of Mesa City Council and Flood Control District Board of Directors. Several basin sites were selected and all but one site has been acquired.

Origination: Spook Hill Area Drainage Master Plan  
Authorization: Resolution 2002R008, IGA2002A013  
Location: T1N/R7E

FY 2006:	\$	88,000
FY 2007:	\$	0
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0

<b>5-Yr CIP:</b>	<b>\$</b>	<b>88,000</b>
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# Hermosa Vista/Hawes Rd Storm Drain & Basin

Supervisory District: 2  
Jurisdiction: Mesa, Unincorporated Maricopa County  
PCN: 420.02.31

Phone: 602-506-4486

Project Manager:  
**Emili Kolevski, P.E.**

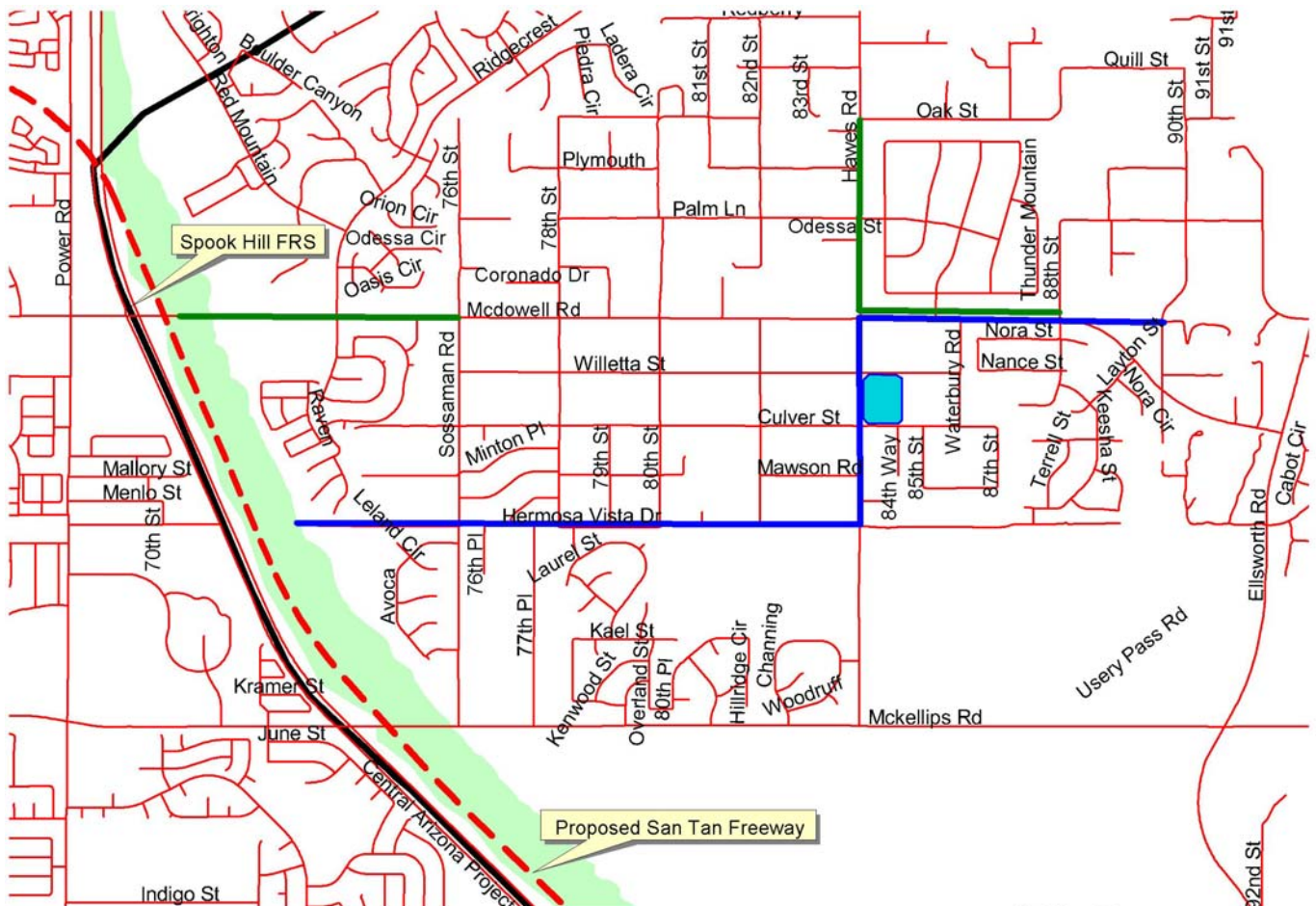
[emk@mail.maricopa.gov](mailto:emk@mail.maricopa.gov)

The Spook Hill Area Drainage Master Plan updated and expanded the existing Spook Hill Area Drainage Master Study conducted in 1987. A preferred alternative has been chosen and adopted by the City of Mesa City Council and Flood Control District Board of Directors. One element of the preferred plan is the Hermosa Vista/Hawes Road Storm Drain and Basin Project. The system includes an underground storm drain as well as an off line basin. The IGA is in place between the City and the District for design of this project. Based on the IGA, the City of Mesa and the District will work towards design and construction of these elements of the approved plan.

Origination: Spook Hill Area Drainage Master Plan  
Authorization: Resolution FCD 2002R008, IGA 2004A002  
Location: T1N/R7E

FY 2006:	\$	464,000
FY 2007:	\$	430,000
FY 2008:	\$	1,990,000
FY 2009:	\$	4,200,000
FY 2010:	\$	0

**5-Yr CIP: \$ 7,084,000**



## LEGEND

- Proposed Storm Drain
- Proposed Basin
- Existing Channel
- Future Highway
- Street Centerlines
- Spook Hill ADMP
- FEMA Floodplain Zone A

1000 0 1000 2000 Feet







# McDowell Road Basin & Storm Drain

Supervisory District: 2  
Jurisdiction: Mesa, Unincorporated Maricopa County  
PCN: 420.03.31

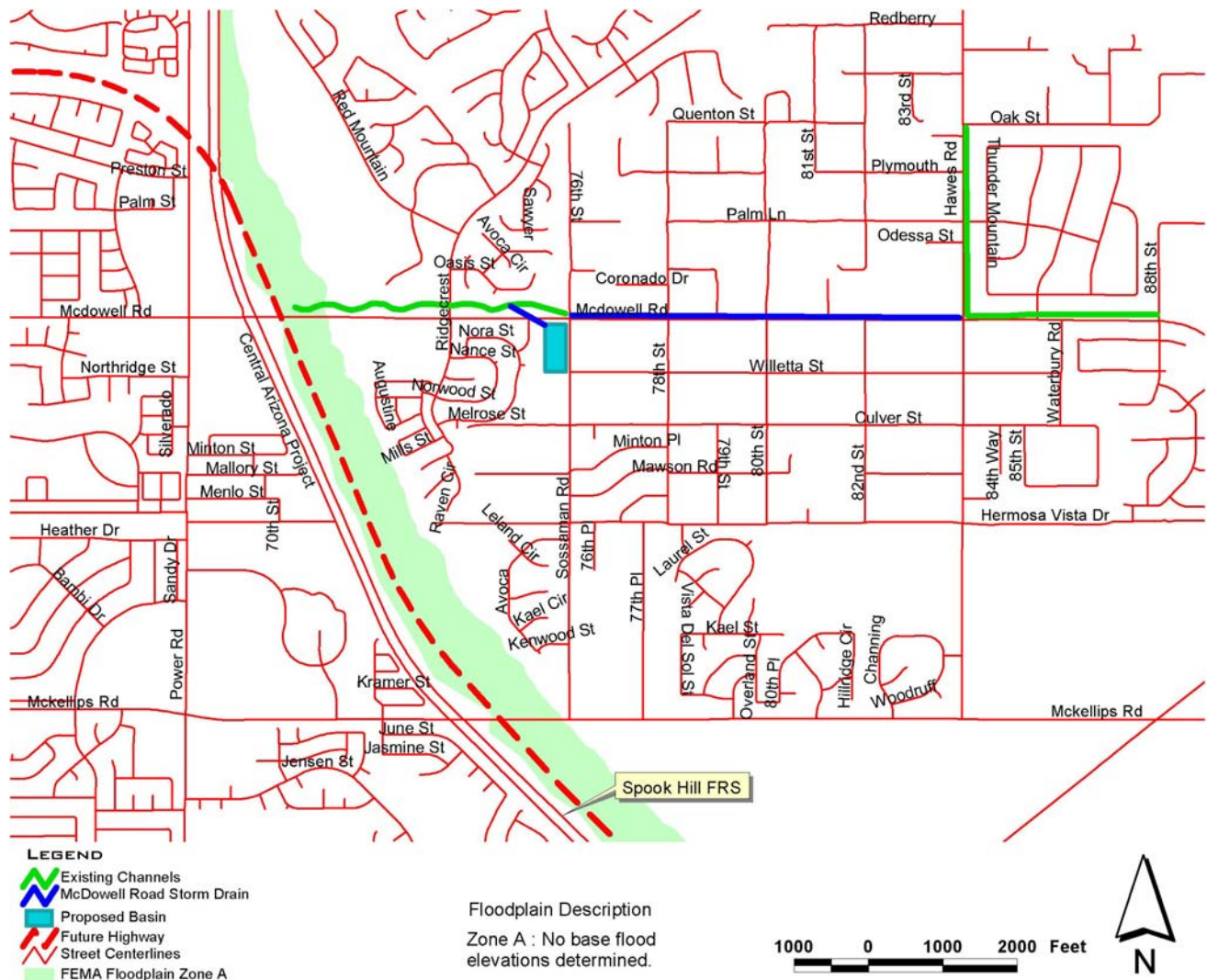
Phone: 602-506-4771

Project Manager:  
**Scott Vogel, P.E.**

csv@mail.maricopa.gov

The Spook Hill Area Drainage Master Plan (ADMP), completed in 2002, identifies regional flood control infrastructure necessary for a 35 square mile area located in northeast Mesa. The ADMP watershed extends from the Utery Mountains on the north and the Apache Trail on the east, to the Buckhorn-Mesa structures on the west and south. The ADMP improvements, consisting of detention basins, channels and storm drains, have been endorsed by District and City staff, and have received public support from the residents of the area. The project features, identified in the ADMP, include a detention basin at the corner of Sossaman Road and McDowell Road, and a storm drain along McDowell Road from Hawes Road to Sossaman Road. The design is scheduled for completion in June 2006.

Origination:	Spook Hill Area Drainage Master Plan, Prioritization Procedure FY '04	FY 2006:	\$	590,000
Authorization:	Resolution FCD 2002R008, IGA 2004A002	FY 2007:	\$	2,170,000
Location:	T1N/R7E	FY 2008:	\$	2,370,000
		FY 2009:	\$	0
		FY 2010:	\$	0
		<b>5-Yr CIP:</b>	<b>\$</b>	<b>5,130,000</b>





# Spook Hill ADMP

Supervisory District: 2  
Jurisdiction: Mesa, Unincorporated Maricopa County  
PCN: 420.xx.xx

Phone: 602-506-4519

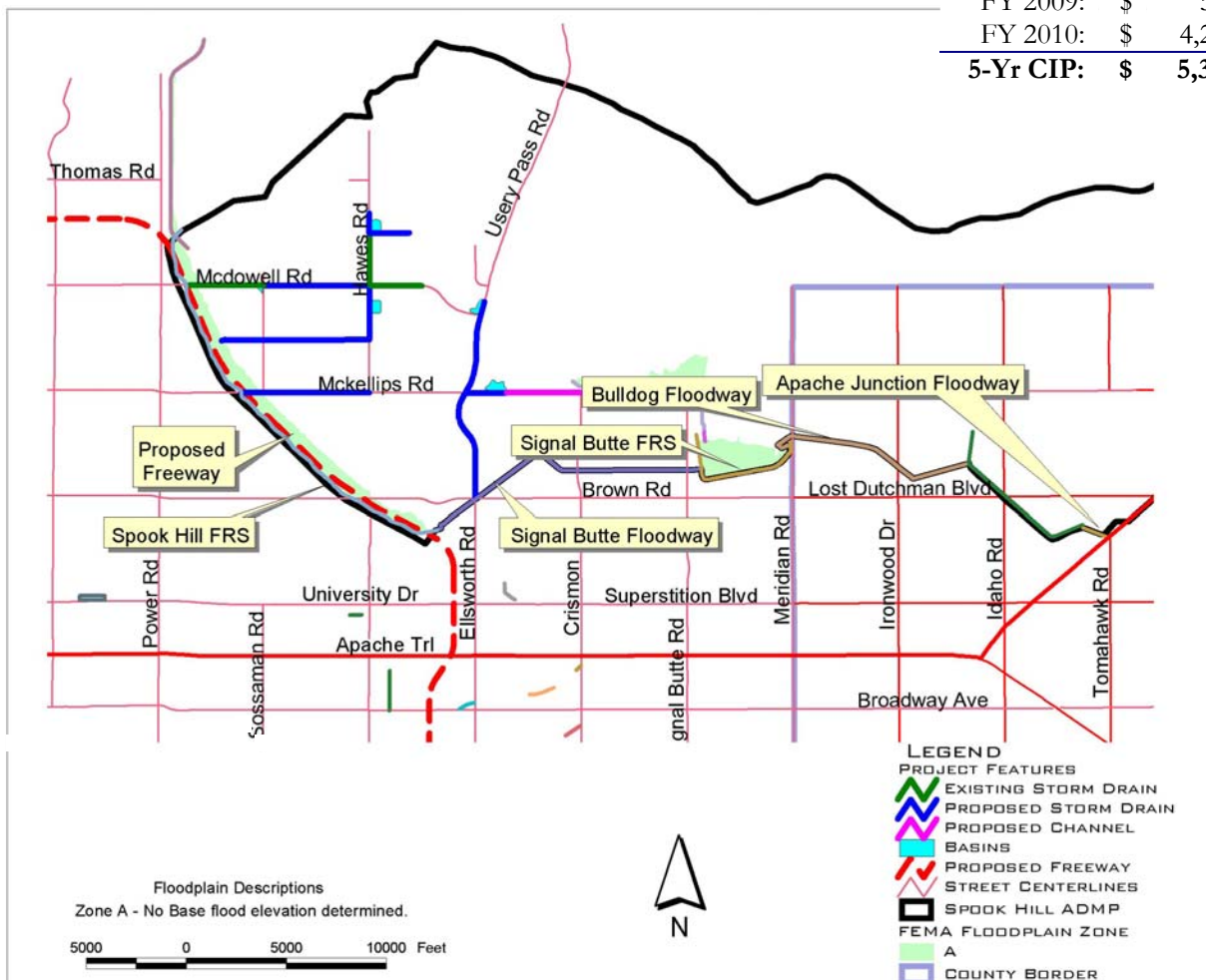
Project Manager:  
**Afshin Ahouraiyan, E.I.T.**

[afa@mail.maricopa.gov](mailto:afa@mail.maricopa.gov)

The Spook Hill Area Drainage Master Plan updated and expanded the existing Spook Hill Area Drainage Master Study conducted in 1987. Since the 1987 study, much of the watershed has been developed, additional drainage infrastructure now exists, and man-made changes have occurred in the watershed. The Spook Hill area in east Mesa currently does not have the flood control and drainage facilities in place to handle its regional flood problems. The approximate watershed area is 16 square miles. The study identified current area flooding problems and produced a recommended alternative to resolve the current flooding problems. A preferred alternative has been chosen and adopted by the City and County officials. The recommended plan is a series of underground pipes, open channels, and offline detention basins to reduce the flooding in the area and provide a 100-year level of protection. The total cost for the design and construction of the plan is estimated at \$32 million. An intergovernmental agreement (IGA) has been drafted and approved between the City of Mesa and the District for the purchase of lands necessary for the detention basins. Other IGAs are in place for design of the McDowell Road Storm Drain as well as the Culver- Hawes Basin and Hermosa Vista Storm Drain. Future IGA's will be drafted and negotiated with the City for the design and construction of the other elements of the recommended plan. Much of Mesa's funding will be out of their City bond programs.

Origination: FY 99/00 CIP Prioritization Procedure  
Authorization: Resolution 2002R008  
Location: T2N/R7E, T1N/R7E, T1N/R8E, T2N/R8E

FY 2006:	\$	20,000
FY 2007:	\$	20,000
FY 2008:	\$	550,000
FY 2009:	\$	550,000
FY 2010:	\$	4,200,000
<b>5-Yr CIP:</b>	<b>\$</b>	<b>5,340,000</b>





# Elliot Basin & Channel

Supervisory District: 1  
Jurisdiction: Mesa, Unincorporated Maricopa County  
PCN: 442.04.31

Phone: 602-506-4771

Project Manager:  
**Scott Vogel, P.E.**

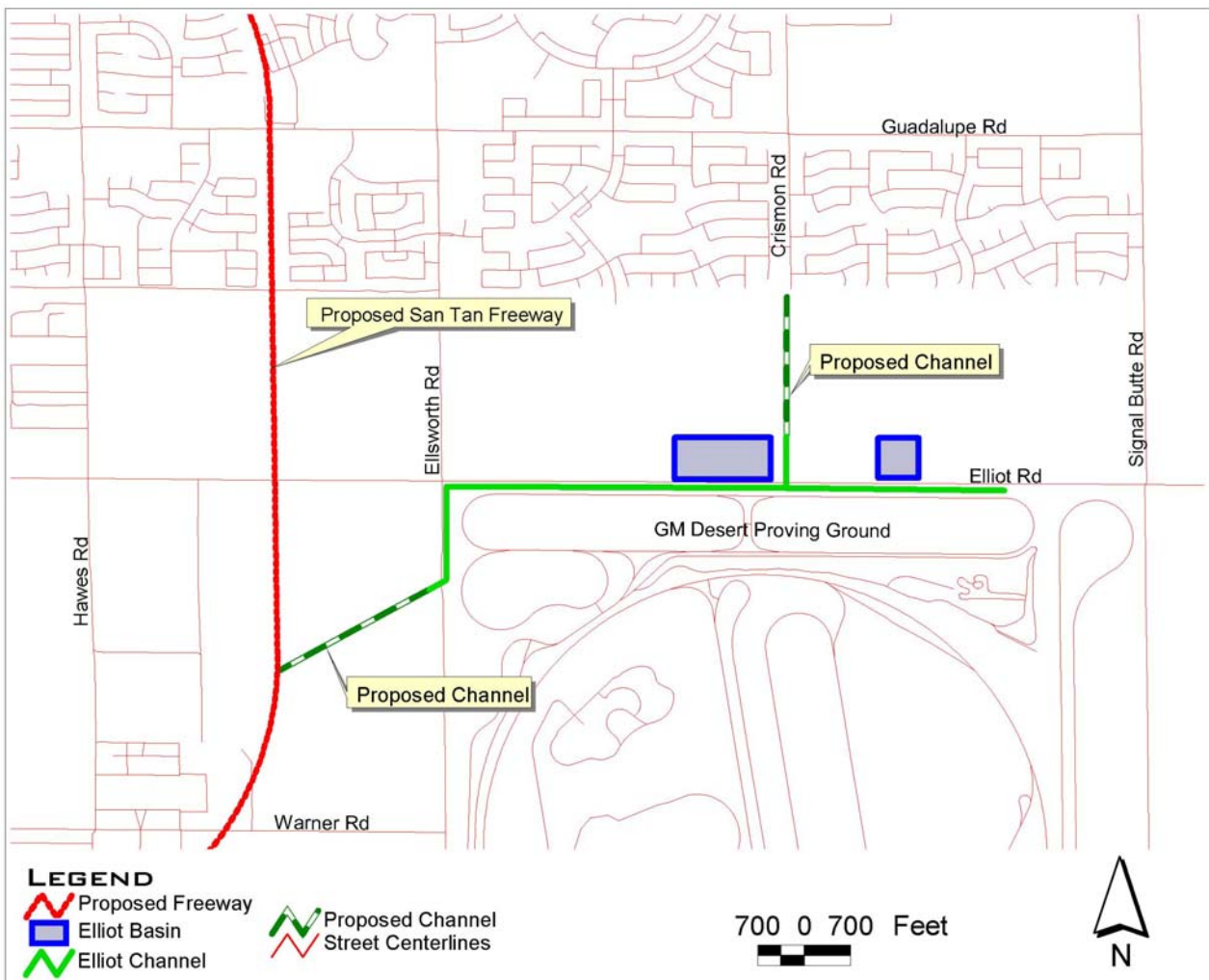
csv@mail.maricopa.gov

The Elliot Basin & Channel is a project that is identified in the East Mesa Area Drainage Master Plan. The East Mesa ADMP identifies drainage problems and develops solutions for a storm water collection and basin system for eastern Maricopa County including portions of the City of Mesa, the Town of Gilbert, the Town of Queen Creek, and unincorporated Maricopa County. The Elliot Road Channel component of the project extends along Elliot Road from the 104<sup>th</sup> Street alignment to the East Maricopa Floodway. A large diameter storm drain collects storm flow from the Siphon Draw Wash and extends west along Elliot Road, day-lighting west of Ellsworth Road into natural washes. These improvements have been constructed. The remaining features are a channel, extending from Ellsworth Road to the future San Tan Freeway, and a channel along the Crismon Road Alignment, from Paloma Avenue to Elliot Road. Mesa, MCDOT and the District have cooperated on the completed features and will share in the costs of the remaining features. Construction is scheduled for completion in Summer 2005.

Origination: East Mesa Area Drainage Master Plan & Prioritization Procedure 1997  
Authorization: Resolutions 97-11 & 98-11, IGA 1999A027  
Location: T1S/R7E

FY 2006:	\$	38,000
FY 2007:	\$	0
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0

**5-Yr CIP: \$ 38,000**







# Ellsworth Road Channel

Supervisory District: 1  
Jurisdiction: Mesa  
PCN: 442.08.31

Phone: 602-506-2943

Project Manager:  
**Bobbie Ohler, P.E.**

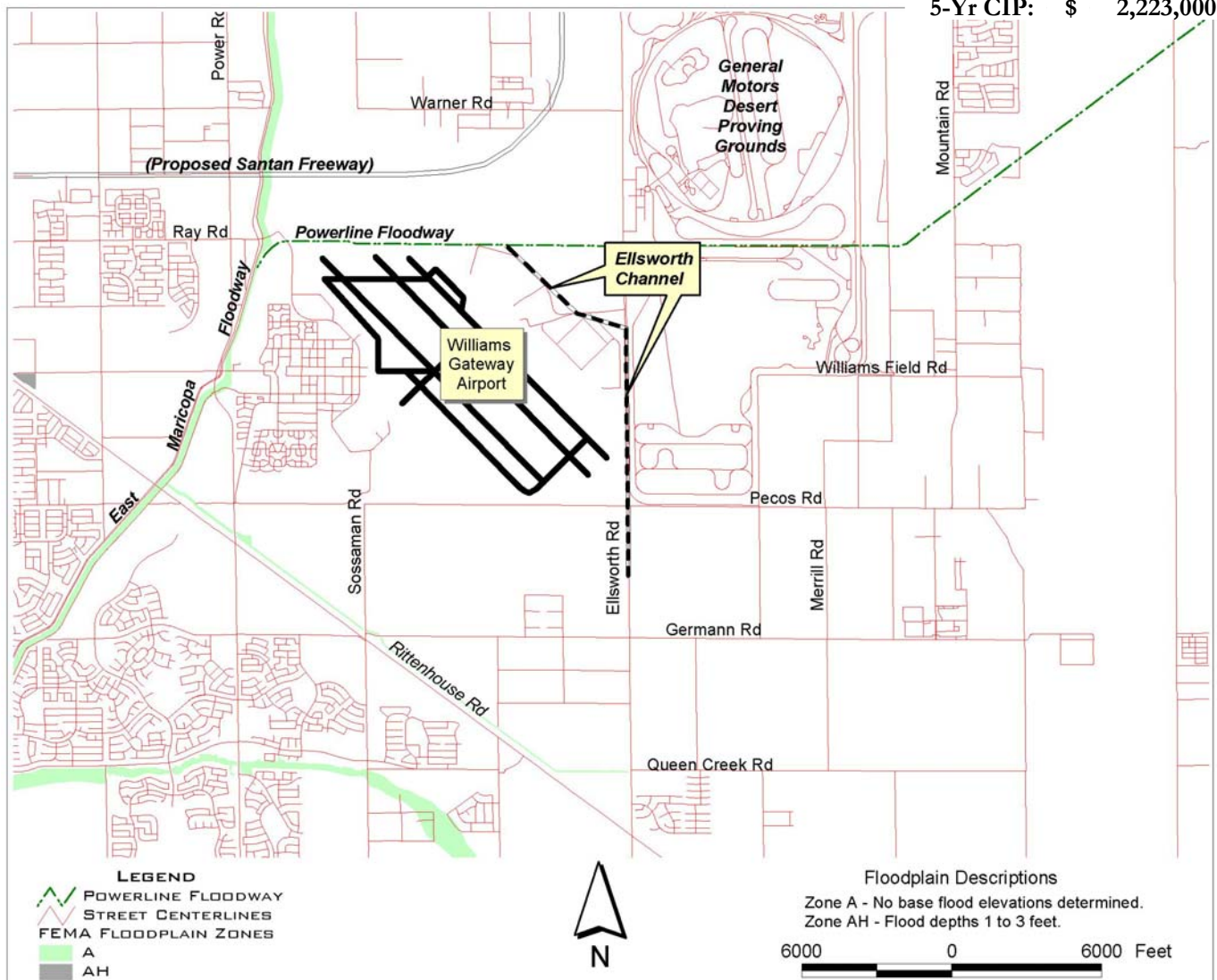
[bao@mail.maricopa.gov](mailto:bao@mail.maricopa.gov)

Design and construction of the Ellsworth Channel will be included in MCDOT's Ellsworth Road - Germann to Baseline project (Project). Ellsworth Channel was identified as a high priority component of the regional flood plan in the East Mesa Area Drainage Master Plan. MCDOT developed a Design Concept Report (DCR) for the Project, which provided a preliminary design for the flood control features. The Ellsworth Channel will begin south of Pecos and Ellsworth roads and convey the future 100-year flood to the East Maricopa Floodway, and alleviate significant flooding problems for the upgraded Ellsworth Road. MCDOT is the lead agency for the Project. IGA 2000A002 authorizes design and construction of the Ellsworth Channel, and identifies a cost share of 50 percent FCD, 40 percent City of Mesa, and 10 percent MCDOT, for the channel related features of the project. Bids were opened for the project on June 1, 2005 and construction is expected to begin in Summer 2005.

Origination: East Mesa ADMP (March 1998)  
Authorization: IGA FCD 2000A002  
Location: T1S/R7E, T2S/R7E

FY 2006:	\$	2,223,000
FY 2007:	\$	0
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0

**5-Yr CIP: \$ 2,223,000**





# Siphon Draw Drainage Improvements

Supervisory District: 1  
Jurisdiction: Mesa  
PCN: 442.11.31

Phone: 602-506-8111

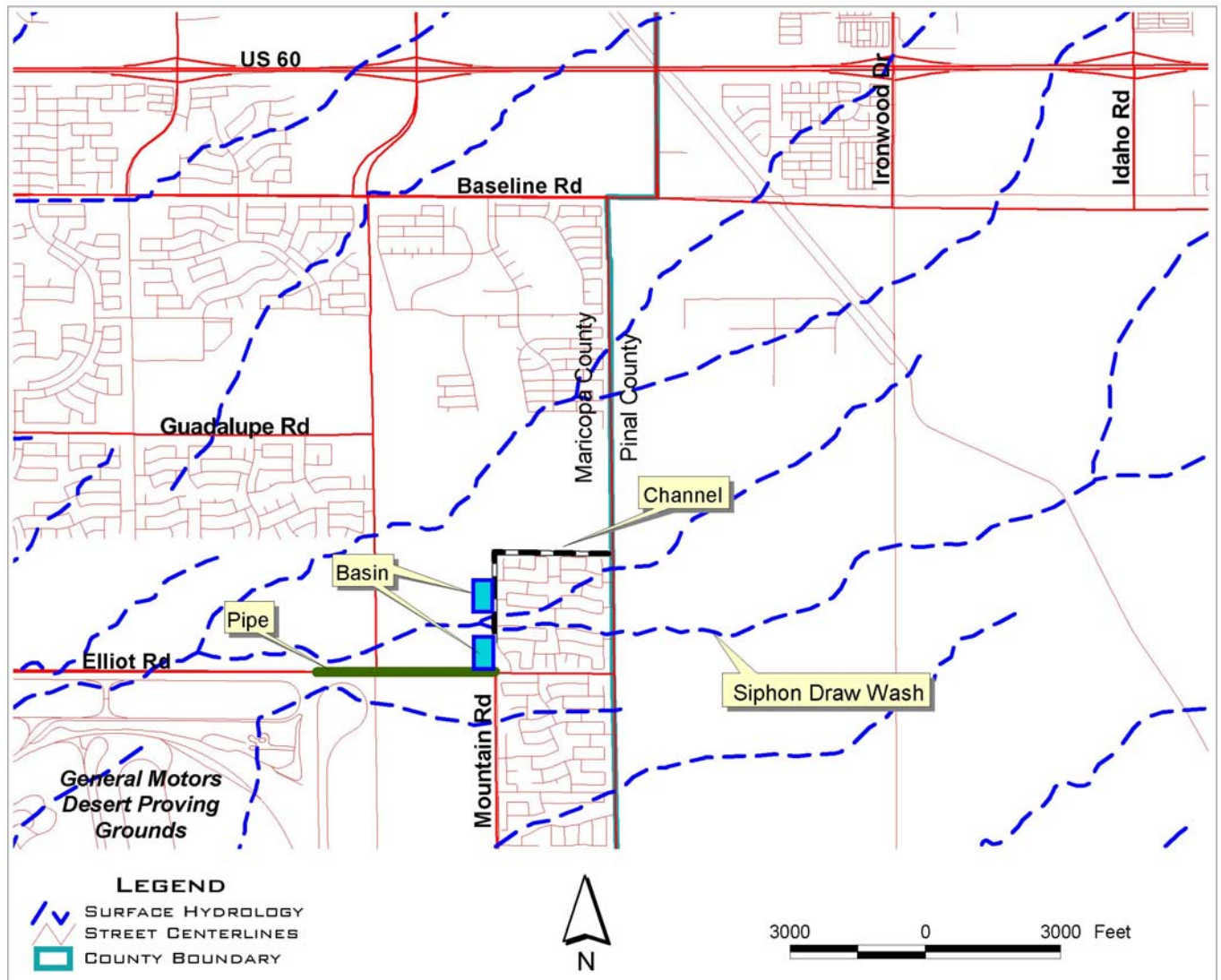
Project Manager:  
**Felicia Terry, P.E.**

[fet@mail.maricopa.gov](mailto:fet@mail.maricopa.gov)

This project is the final element of the recommended plan for the East Mesa ADMP for the area south of the Superstition Freeway and north of Warner Road. This project involves a channel/pipe system along Meridian Road to intercept flows entering Maricopa County from Pinal County and conveying the flow to detention basins. Two Detention Basins constructed east of Meridian Road will be used to reduce the flows entering Maricopa County. Bypass flow will continue to flow in Siphon Draw Wash. A pipe will be constructed along Elliot Road to convey flow from the basins to the existing storm drainpipe in Elliot Road. The City of Mesa is a project partner with the District.

Origination: East Mesa ADMP (July 1998)  
Authorization: Resolution 2003R003  
Location: T1S/R7E

FY 2006:	\$	600,000
FY 2007:	\$	5,400,000
FY 2008:	\$	6,220,000
FY 2009:	\$	0
FY 2010:	\$	0
<b>5-Yr CIP:</b>		<b>\$ 12,220,000</b>





# Rose Garden Lane Channel

Supervisory District: 4  
Jurisdiction: Peoria  
PCN: 450.02.32

Phone: 602-506-4486

Project Manager:  
**Emili Kolevski, P.E.**

emk@mail.maricopa.gov

The District completed the Glendale/Peoria Area Drainage Master Plan Update Study (G/P ADMP) in May 2001. The Study made several recommendations for regional drainage infrastructure to provide 100-year protection for the G/P ADMP watershed. The Rose Garden Lane Channel is a high priority recommendation of the G/P ADMP and ranks as a high priority flood control project for the City of Peoria. The City Council of Peoria adopted the recommendations of the G/P ADMP in May 2001, and the Board of Directors for the District adopted the G/P ADMP recommendations in December 2001 (Resolution FCD 2001R012).

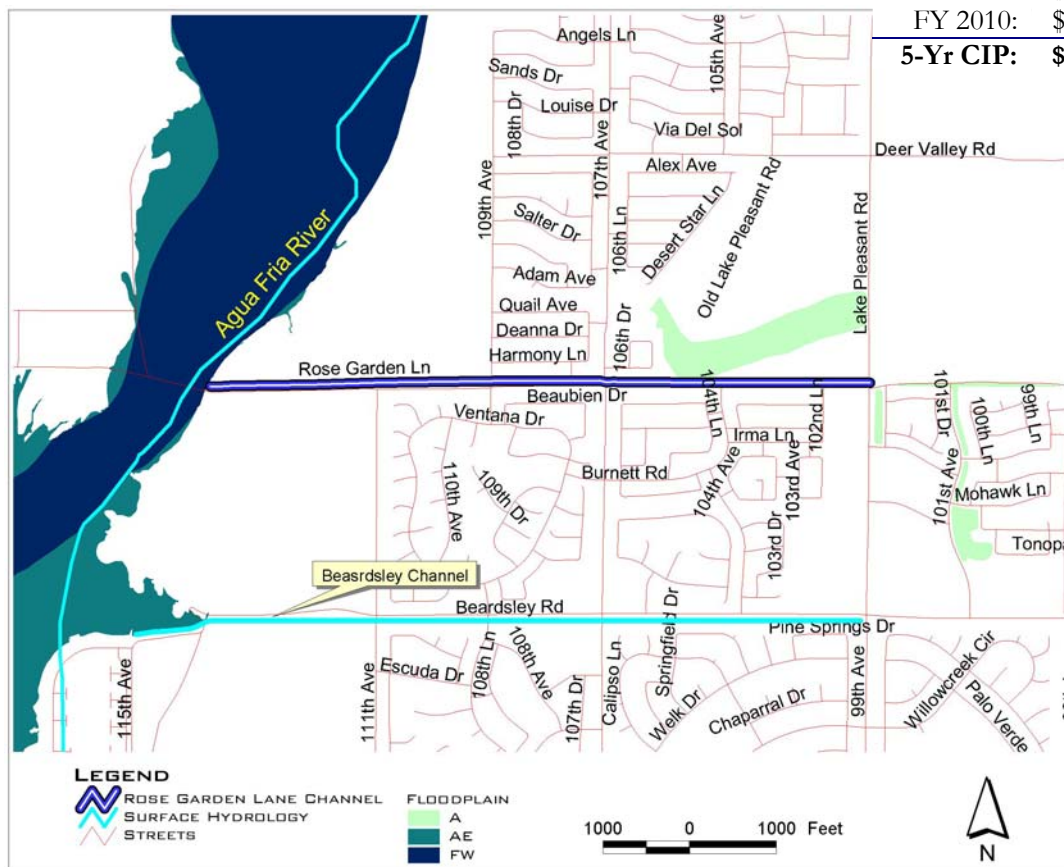
The channel is an open channel along the north side of Rose Garden Lane and will provide 100-year level of protection, though a lesser level of protection may be appropriate if agreed to by Peoria and the District. The channel will benefit an area between approximately Lake Pleasant Road and the Agua Fria River, south of Rose Garden Lane. The channel will accept flows, which currently flow over Rose Garden Lane and overflow the Beardsley Channel, and divert them to the Agua Fria River. An intergovernmental agreement between the District and the City of Peoria is in place for the design and an IGA is negotiation that will define the project partners' responsibilities for construction, construction management and operations and maintenance.

The project is currently in the 30% design stage. An alternative analysis will be done to investigate alternative outfall locations within the Agua Fria River due to nuisance flow and flooding issues on Rose Garden Lane within the river boundaries. Design will be completed FY 2006 and construction is scheduled for FY 2006 and FY 2007.

Origination: Glendale/Peoria ADMP Update  
Authorization: Resolution 2001R012, IGA FCD2003A012  
Location: T4N/R1E

FY 2006:	\$	1,405,000
FY 2007:	\$	2,040,000
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0

**5-Yr CIP: \$ 3,445,000**







# 83<sup>rd</sup> Avenue/Pinnacle Peak Road Improvements

Supervisory District: 4  
Jurisdiction: Peoria  
PCN: 450.02.33

Phone: 602-506-4486

Project Manager:  
**Emili Kolevski, P.E.**

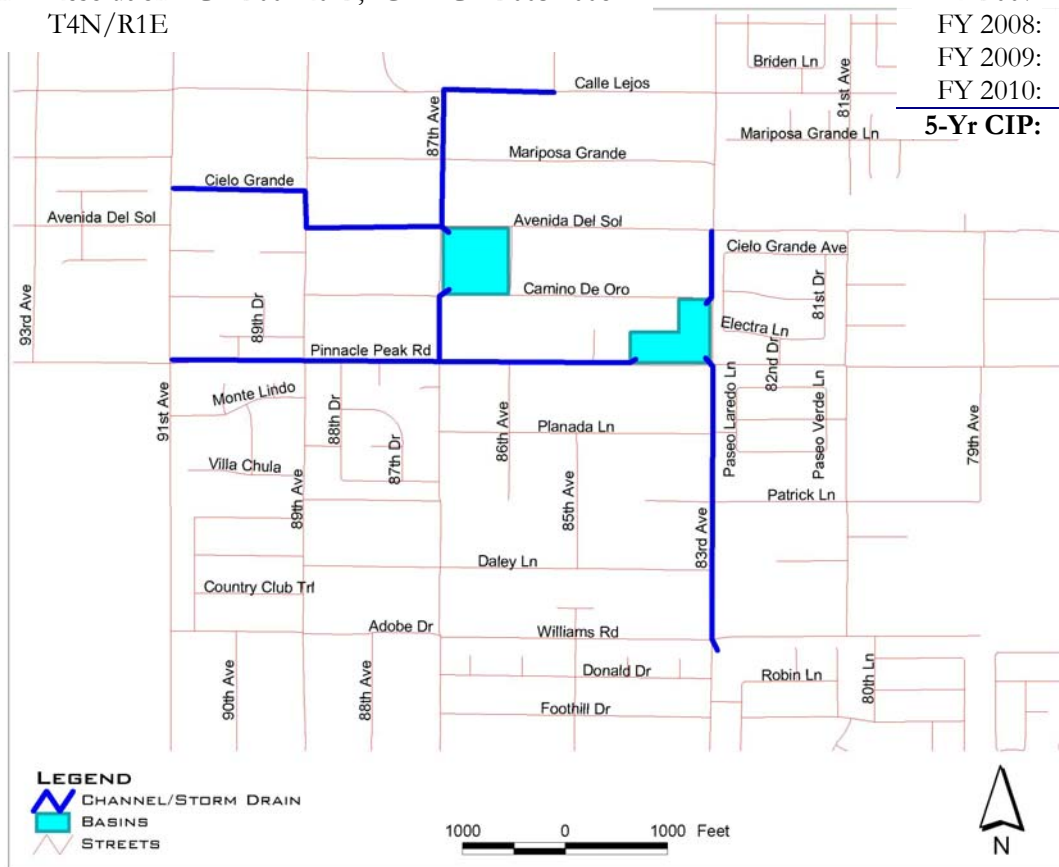
[emk@mail.maricopa.gov](mailto:emk@mail.maricopa.gov)

The 83rd Avenue/Pinnacle Peak Road Drainage Improvements Project is a high priority recommendation of the Glendale/Peoria (G/P) ADMP and ranks as a high priority flood control project for the City of Peoria. Resolution FCD 2001R012 authorized the District to cost share in the project, and to undertake the design, land and rights-of-way (R/W) acquisitions, construction, construction management, and operation and maintenance of the Project. An intergovernmental agreement is in place between the District and the City that defines the project partners' responsibilities for design. A Construction IGA between the District, MCDOT and the City is currently in the negotiation stage.

The project will provide 100-year level of protection benefits to an area between approximately 83<sup>rd</sup> and 87<sup>th</sup> Avenues, and south of Calle Lejos (one-half mile north of Pinnacle Peak Road) and 10-year level of protection benefits for the area between 87<sup>th</sup> Ave. and 91<sup>st</sup> Avenues south of Cielo Grande and Pinnacle Peak Roads. The project will tie in to existing infrastructure on the east side of 83rd Avenue, south of Williams Road. The project includes the following components: 1) Two detention basins - one in the southeast corner of Avenida del Sol and 87th Avenue, and the other at the northwest corner of 83rd Avenue and Pinnacle Peak Road (the Pinnacle Peak Road Basin). 2) A storm drain outlet flowing west along Calle Lejos and south on 87th Avenue to the Avenida del Sol Basin. 3) A storm drain along Cielo Grande and Avenida del Sol to the Avenida del Sol Basin. 4) A storm drain collector along the north side of Pinnacle Peak Road flowing east to the Pinnacle Peak Road Basin from approximately 91st Avenue. 5) A storm drain from Avenida del Sol south on 83rd Avenue to the Pinnacle Peak Basin and an outlet from the Pinnacle Peak Road Basin flowing south along 83rd Avenue to an existing open channel on the east side of 83rd Avenue, south of Williams Road. The project is currently in the 30% design stage. Construction is scheduled for FY 2006 and FY 2007.

Origination: Glendale/Peoria ADMP Update  
Authorization: Resolution FCD 2001R012, IGA FCD 2003A008  
Location: T4N/R1E

FY 2006:	\$	2,623,000
FY 2007:	\$	3,120,000
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0
<b>5-Yr CIP:</b>	<b>\$</b>	<b>5,743,000</b>





# 67<sup>th</sup> Avenue Storm Drain

Supervisory District: 4  
Jurisdiction: Glendale  
PCN: 450.05.30

Phone: 602-506-4878

Project Manager:  
**Don Rerick, P.E.**

djr@mail.maricopa.gov

The project has been proposed by the City of Glendale and will provide 10-year storm drainage protection for a three square mile area lying within jurisdictional boundaries of both the cities of Glendale and Peoria. The project will consist of drainage pipes and catch basins and will be constructed in rights-of-way provided by Glendale. The outfalls for the project were constructed by the District along Cactus Road and Olive Avenue and are presently owned and operated by the City of Peoria. The District is contributing 50% of the project costs. The estimated cost for the project is \$3 million, which includes the design, land acquisition, utility relocations, construction and construction management. Glendale is the lead agency for the design and construction of the project, and will own, operate and maintain the completed project. The Phases of the project include:

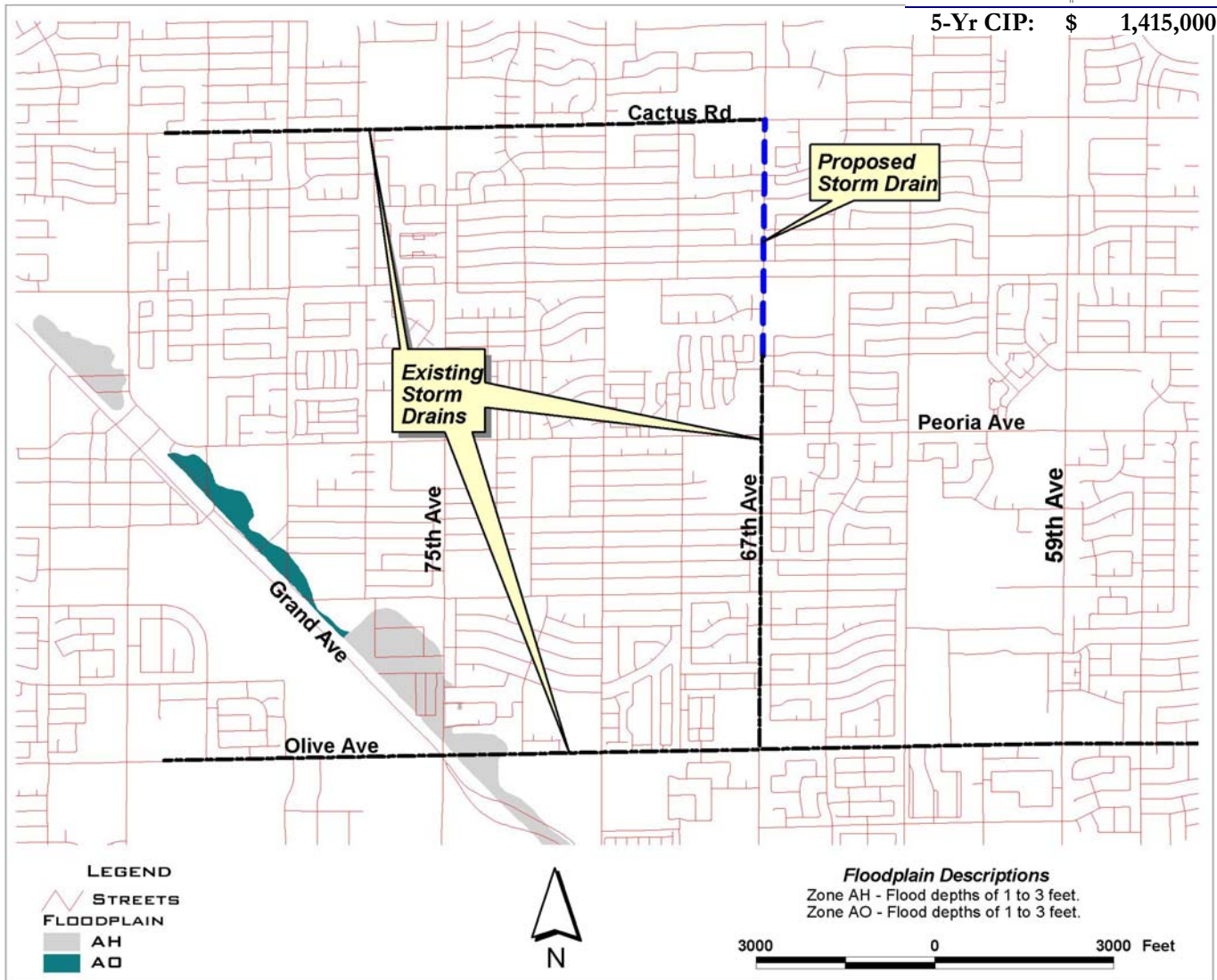
Phase 1 – 200' Storm Drain Installation at Intersection with Peoria Avenue – Construction Completed

Phase 2 – Remainder of Storm Drain Installation to Cactus – Construction scheduled for FY 07/08

Origination: Glendale/Peoria ADMP (Dec. 2001)  
Authorization: FCD IGA 99015  
Location: T3N/R1E, T3N/R2E

FY 2006:	\$	0
FY 2007:	\$	0
FY 2008:	\$	1,415,000
FY 2009:	\$	0
FY 2010:	\$	0

**5-Yr CIP: \$ 1,415,000**





# Glendale/Peoria ADMP

Supervisory District: 4  
Jurisdiction: Glendale, Peoria  
PCN: 450.xx.xx

Phone: 602-506-4486

Project Manager:  
**Emili Kolevski, P.E.**

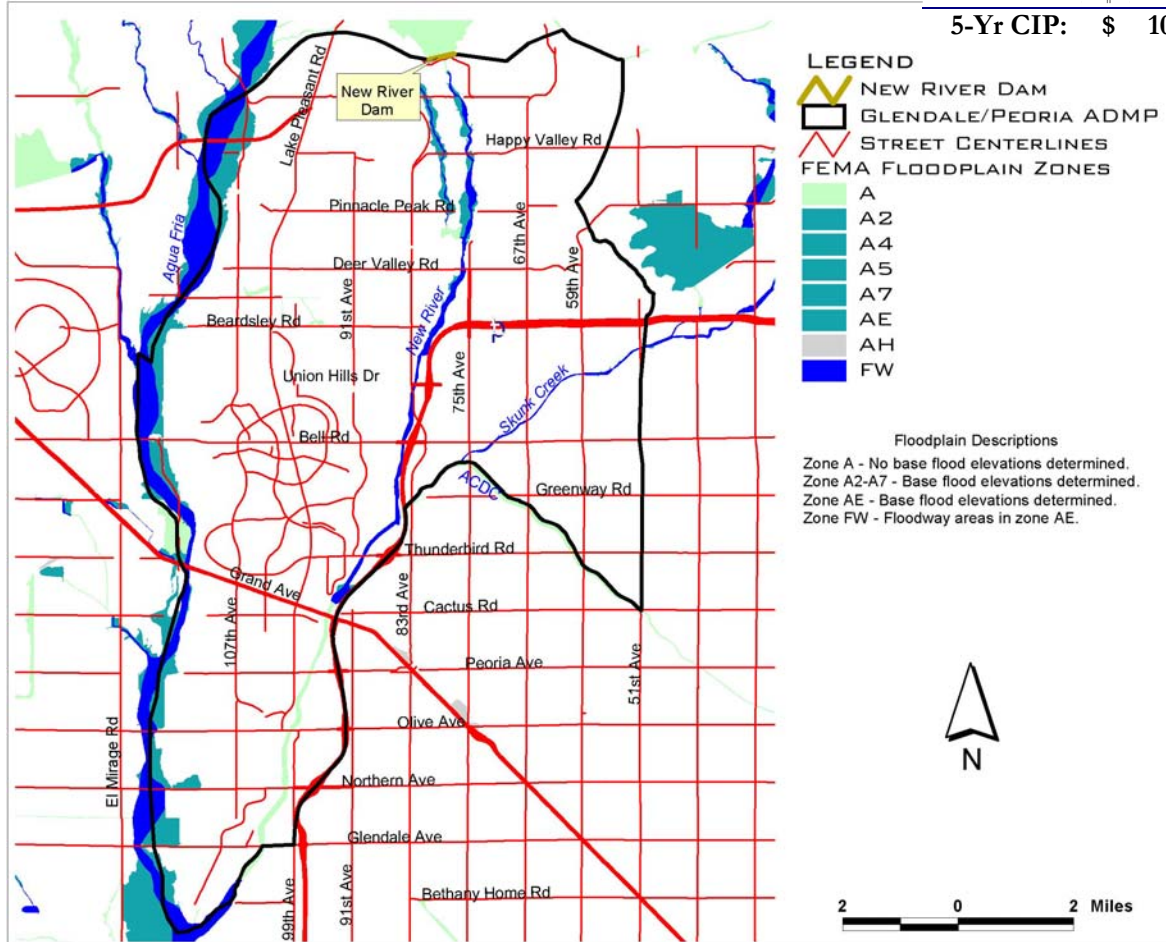
[emk@mail.maricopa.gov](mailto:emk@mail.maricopa.gov)

The District and the Cities of Glendale and Peoria developed the Glendale/Peoria ADMP Update study to identify existing and future drainage and flooding problems in the watershed, and to develop cost-effective solutions to alleviate those problems. The ADMP Update study assisted the Cities and the District in the prioritization and development of drainage infrastructure needs for the area, and included preliminary design plans for a recommended 9-Phase Improvement Projects program. The Improvement Projects program consists of channel improvements, detention basins, open channel conveyances, storm drains, and other storm water collection and disposal systems that provide 100-year protection for the 85-square mile watershed. The estimated total cost for the multi-year Improvement Projects program is \$34.3 million with several potential cost-sharing partners, including the City of Peoria as the primary partner. The Peoria City Council adopted the recommendations of the ADMP Update study, and submitted Phases 1, 2, and part of 3 to the District during the FY 01/02 Prioritization Procedure. Currently, IGAs are in place between the District and the City of Peoria for the design of the 83rd Avenue and Pinnacle Peak Road Drainage Improvements Project and the Rose Garden Lane Channel Project. Future projects were favorably evaluated and the District's 5-year CIP budget includes this funding to begin implementation of the various phases dependent upon priorities and cost.

Origination: Glendale/Peoria ADMP Update  
Authorization: FCD 2000A015, 2000A017  
Location: T4N/R1E

FY 2006:	\$	0
FY 2007:	\$	20,000
FY 2008:	\$	1,050,000
FY 2009:	\$	4,080,000
FY 2010:	\$	5,250,000

**5-Yr CIP: \$ 10,400,000**







# White Tanks #3 Modifications

Supervisory District: 4  
Jurisdiction: Buckeye  
PCN: 470.04.30

Phone: 602-372-6110

Project Manager:  
**Larry Lambert, P.E.**

lkl@mail.maricopa.gov

White Tanks FRS No.3 is ranked first in the nation by Natural Resources Conservation Service (NRCS) that requires rehabilitation under their dam rehabilitation priority ranking process. The District and NRCS have proceeded with the project under "The Small Watershed Rehabilitation Amendment" (Public Law 106-472), which authorizes NRCS to assist watershed project sponsors with rehabilitation of aging dams on a 65% federal, 35% local cost share basis. NRCS is currently providing technical assistance (NRCS staff assistance) under this program for the project. The District and NRCS completed the final work plan and environmental assessment in 2004. The District signed an IGA with NRCS, which defines District and NRCS activities and cost share responsibilities for the project in early FY 2004-2005.

In FY 2003-2004 under Contract FCD 2003C014, alternatives were evaluated that would maintain the same flood protection as the existing dam. The project alternative selected was a dam modification. The dam modification design, under contract FCD 2003C055, has been completed for Phase I of the project. Phase II of the design will be completed in 2005 under the same contract. The District will initiate construction of Phase I in 2005.

It is intended that White Tanks FRS No.3 Rehabilitation Project will be constructed in three phases as follows:

Phase I : White Tanks FRS No.3 Rehabilitation Phase I

Phase II : White Tanks FRS No.3 Rehabilitation Phase II

Phase III: White Tanks FRS No.3 North Inlet Channel Improvements

While the IGA describes the Project in its entirety, the specific federal funding included in the IGA is for Phase I only of the Project. The federal cost share for the Project to date is \$9 million. Federal funds have been allocated in this amount under federal fiscal years 2004 and 2005. The Agreement was signed by both the District's Board of Directors and NRCS in 2004. It is intended that cost sharing of Phase II and Phase III will be supplements to the IGA; however, federal funding of Phase II and III will be subject to approval of federal appropriations and Project allocations on a fiscal year basis.

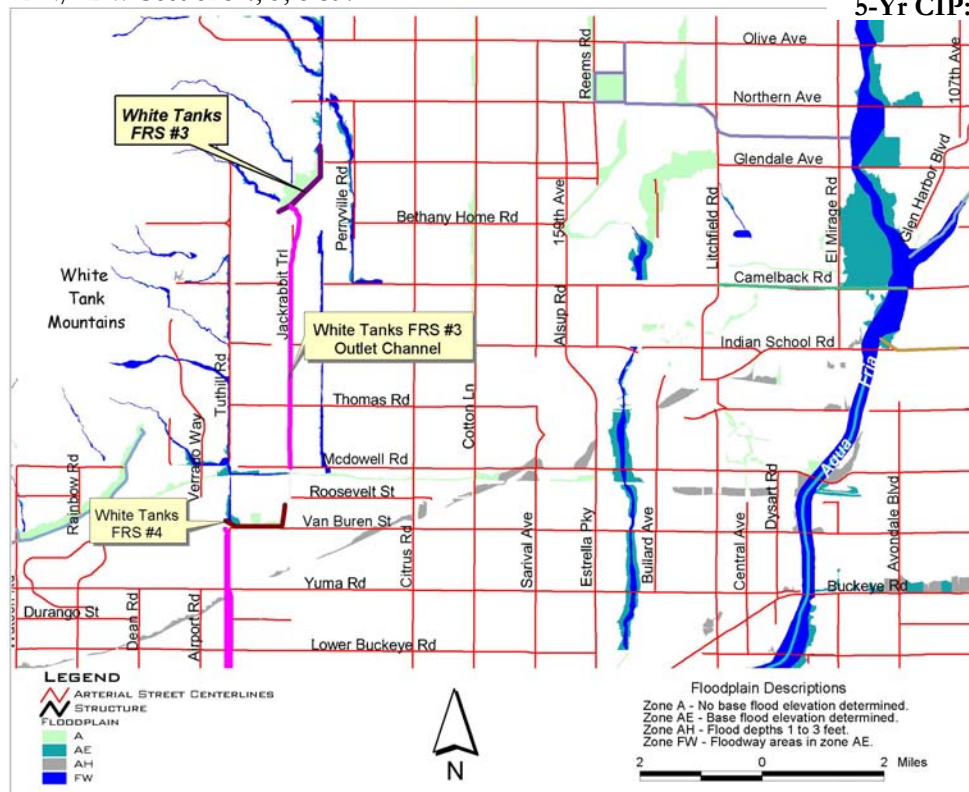
Origination: 1991 Proposal by Natural Resources Conservation Service  
to address Dam Safety Deficiencies

Authorization: Resolution 94-03

Location: T2N/R2W Sections 4, 5, 8 & 9

FY 2006:	\$	9,582,000
FY 2007:	\$	5,526,000
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0

**5-Yr CIP: \$ 15,108,000**





# White Tanks FRS #3 North Inlet Channel

Supervisory District: 4  
Jurisdiction: Unincorporated Maricopa County  
PCN: 470.04.31

Phone: 602-506-2943

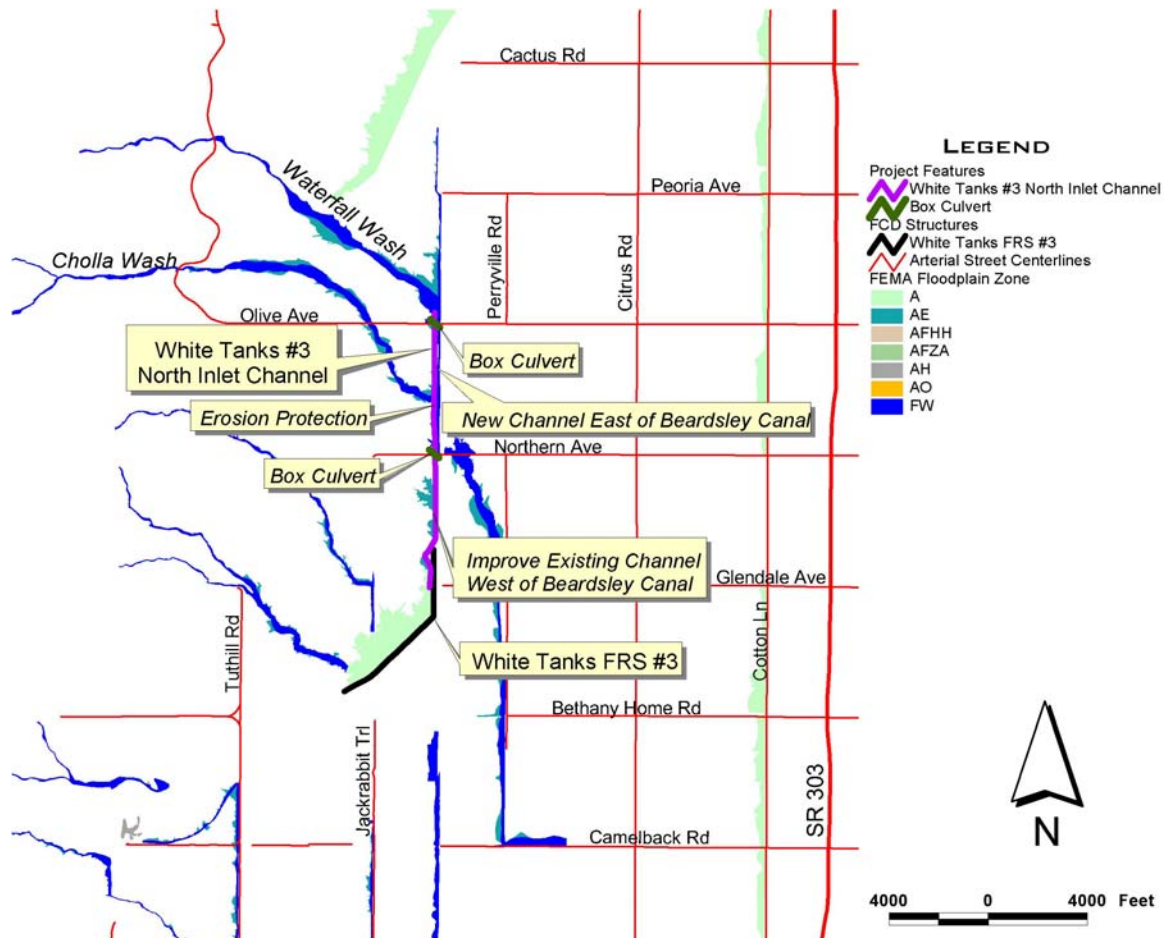
Project Manager:  
**Bobbie Ohler, P.E.**

[bao@mail.maricopa.gov](mailto:bao@mail.maricopa.gov)

The White Tanks FRS #3 North Inlet Channel (NIC) Project, which was identified in the White Tanks Area Drainage Master Plan, includes the construction of a channel along the east side of the Beardsley Canal from Olive Avenue to Northern Avenue, a splitter structure and road/canal crossing at Olive Avenue, a road/canal crossing at Northern Avenue, a box culvert at Northern Avenue, erosion protection of the Beardsley Canal at Cholla Wash, and improvements to the existing channel west of the Beardsley Canal and south of Northern Avenue. The 100-year flows currently break out over the Beardsley Canal and flow to the east inundating a residential area. The NIC Project will protect the Beardsley Canal between Olive and Northern avenues, the existing flood control channel south of Northern Avenue, and approximately 118 homes east of the Beardsley Canal. This is a joint project with the Maricopa County Municipal Water Conservation District Number One (MWD), who owns the Beardsley Canal, and the Flood Control District. MCDOT is also cost-sharing for the box culvert at Olive Avenue. The NIC Project is currently under design. The District is negotiating an IGA with MWD to cost share for the construction, construction management, and operation and maintenance of the NIC Project.

Origination: Evaluated originally as part of the White Tanks FRS#3 Project  
Prioritization Procedure 2004  
Authorization: IGA FCD 2003A009, FCD 2004A005, FCD 2004A006,  
FCD 2005A003 pending  
Location: T3N/R2W, T2N/R2W

FY 2006:	\$	1,812,000
FY 2007:	\$	3,640,000
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0
<b>5-Yr CIP:</b>	<b>\$</b>	<b>5,452,000</b>





# White Tanks #3 Outlet Channel

Supervisory District: 4  
Jurisdiction: Buckeye  
PCN: 470.04.32

Phone: 602-372-6110

Project Manager:  
**Larry Lambert, P.E.**

lkl@mail.maricopa.gov

This project is part of the White Tanks FRS No.4 Rehabilitation Project. White Tanks FRS No. 4 is ranked high in the nation by Natural Resources Conservation Service (NRCS) for rehabilitation under their dam rehabilitation priority ranking process. The District and NRCS are proceeding with the Project under "The Small Watershed Rehabilitation Amendment" (Public Law 106-472), which authorizes NRCS to assist watershed project sponsors with rehabilitation of aging dams on a 65% federal, 35% local cost share basis. NRCS is currently providing technical assistance (NRCS staff assistance) under this program for the project. The District and NRCS are working to complete the work plan and environmental assessment in 2006.

In FY 2005-2006 under Contract FCD 2004C019, alternatives will be evaluated that would maintain the same flood protection as the existing dam. The project alternative will include an outlet channel from White Tanks FRS No. 3 to White Tanks FRS No. 4 (this project) and a dam rehabilitation plan (see project 201.02.26) with an outlet channel from White Tanks FRS No. 4. Resolution FCD 2004R011 has authorized the advanced land acquisition required for the White Tanks FRS No. 3 Outlet Channel due to the rapid development in the area.

It is intended that White Tanks FRS No.3 Outlet Channel will be constructed as one of three phases as follows:

Phase I : White Tanks FRS No.4 Outlet Channel

Phase II : White Tanks FRS No.4 Rehabilitation

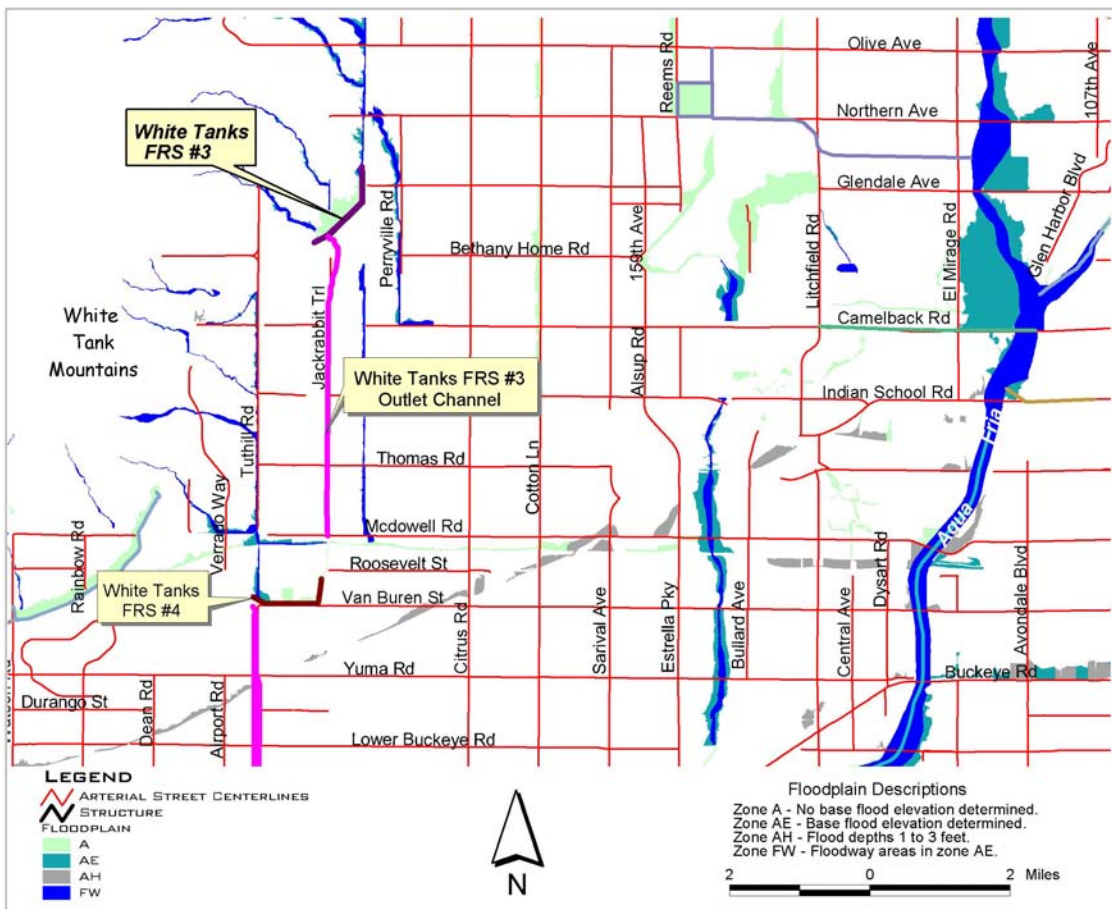
Phase III: White Tanks FRS No.3 Outlet Channel Improvements

Origination: Phase 1 Dam Safety Assessment Report for White Tanks FRS No. 4  
and an Application to Natural Resources Conservation Service  
for assistance under Public Law 106-472

Authorization: Resolution 94-03

Location: T2N/R2W Sections 4, 5, 8 & 9

FY 2006:	\$	0
FY 2007:	\$	0
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0
<b>5-Yr CIP:</b>	<b>\$</b>	<b>0</b>







# Reems Road Channel & Basin

Supervisory District: 4  
Jurisdiction: Unincorporated Maricopa County  
PCN: 470.12.31

Phone: 602-506-2943

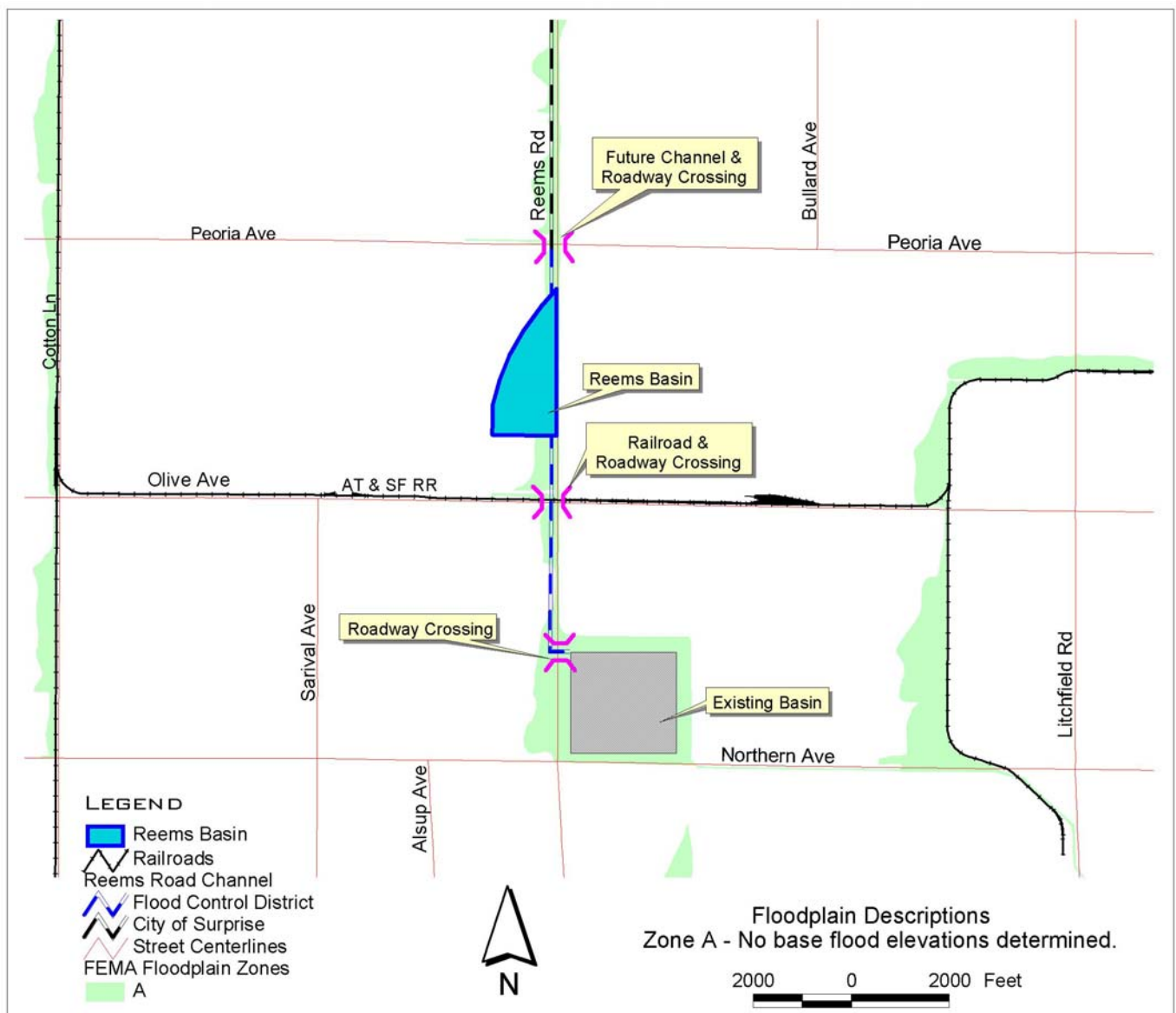
Project Manager:  
**Bobbie Ohler, P.E.**

[bao@mail.maricopa.gov](mailto:bao@mail.maricopa.gov)

This project will provide a flood control channel along the west side of Reems Road, and a 42-acre basin north of Olive Avenue. The channel and basin will provide 100-year flood protection and outlet to the Dysart Drain within the Falcon Dunes Golf Course. The City of Surprise is constructing the channel from Peoria Avenue north to Waddell Road, and the District is constructing the channel and basin south of Peoria Avenue, and also cost-sharing with the City of Surprise on the box culvert to be constructed at Cactus Road. MCDOT has agreed to cost-share to extend box culverts at Olive and Butler to their ultimate length.

Origination: White Tanks ADMP in 1992  
and Loop 303 Corridor/White Tanks ADMP Update 2002  
Authorization: IGA FCD 2002A014  
Location: T3N/R1W

FY 2006:	\$	790,000
FY 2007:	\$	2,250,000
FY 2008:	\$	2,920,000
FY 2009:	\$	170,000
FY 2010:	\$	0
<b>5-Yr CIP:</b>	<b>\$</b>	<b>6,130,000</b>





# Bullard Wash Phase II

Supervisory District: 4 & 5  
Jurisdiction: Goodyear  
PCN: 470.13.31

Phone: 602-506-4771

Project Manager:  
**Scott Vogel, P.E.**

csv@mail.maricopa.gov

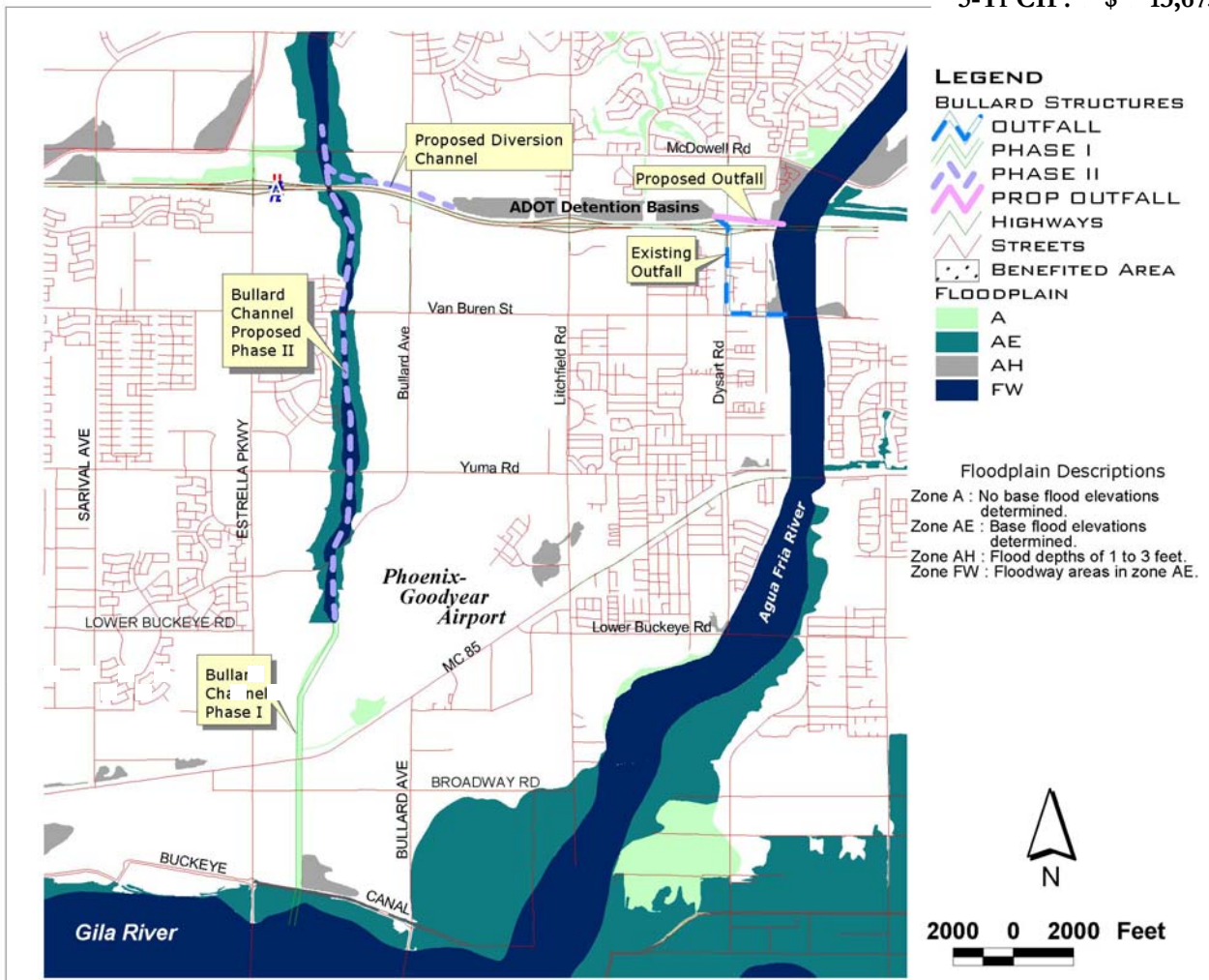
Bullard Wash is included within the Loop 303 Corridor/White Tanks Area Drainage Master Plan (ADMP), which recommends improvements be made to the wash. Phase I of the Bullard Wash Improvements Project, from the Gila River to Lower Buckeye Road, was constructed as a previous District/City of Goodyear project. Phase II includes an earthen/greenbelt channel along the Bullard Wash alignment from Lower Buckeye Road to McDowell Road. A future phase may include a diversion channel will take high storm flows from Bullard Wash at McDowell Road through the detention basins north of I-10 and west of Dysart Road, with an outlet to the Agua Fria River. Landscaping, fencing and other multi-use facilities are anticipated along the channel alignment and within the basins.

The project will channelize the floodplain north of the Phoenix-Goodyear Airport. It will reduce the floodplain width and protect the Phoenix-Goodyear Airport and nearby development from flooding. For the area north of I-10, the project will collect and convey storm-water currently draining by sheet flow to Bullard Wash. This storm water will otherwise collect in streets, businesses, farm fields, and residential areas. Design of Phase II is complete. An intergovernmental agreement with the City will be required for construction of the project.

Origination: Loop 303 Corridor/White Tanks Area Drainage Master Plan;  
Prioritization Procedure FY 2002  
Authorization: Resolutions 2000R016 & 2000R016A; IGA 2001A006  
Location: T1N/R1W

FY 2006:	\$	23,000
FY 2007:	\$	20,000
FY 2008:	\$	4,750,000
FY 2009:	\$	4,830,000
FY 2010:	\$	4,050,000

**5-Yr CIP: \$ 13,673,000**





# White Tanks ADMP/Loop 303 Corridor

Supervisory District: 4&5

Jurisdiction: Avondale, Buckeye, Glendale, Goodyear, Phoenix, and Surprise

PCN: 470.xx.xx

Phone: 602-506-5537

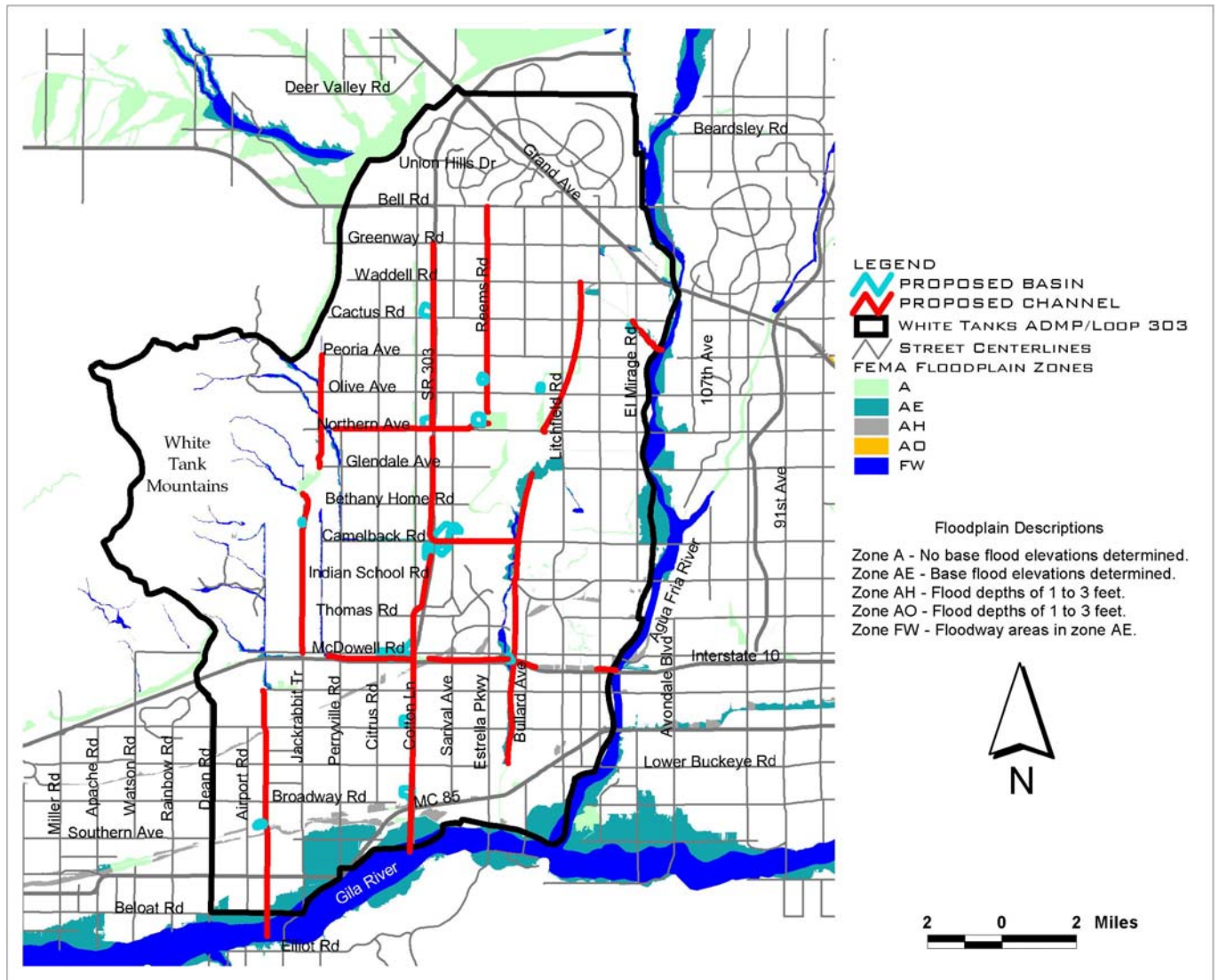
Project Manager:  
**Greg Jones, P.E.**

[glj@mail.maricopa.gov](mailto:glj@mail.maricopa.gov)

The study consisted of an area drainage master plan to determine guidelines for stormwater management and structural mitigation measures for flooding in the White Tanks area. The study included analysis of approximately 208 square miles of watershed, which extends from Grand Avenue south to the Gila Rivers, and from the White Tank Mountains east to the Agua Fria River. The study identified drainage problems, updated the existing hydrology due to development and new hydrologic methodology, developed cost effective solutions for a stormwater collection and conveyance system and identified a preferred outfall alternative. The future design and construction phase will involve the implementation of solutions to flooding that are identified the planning phases and remedial actions have been specified. Total expenditures proposed for the CIP are now estimated at \$400 million for identified projects, which includes the costs for the Loop 303 Regional Drainage Channel and Basins.

Origination: FCD Staff Recommendation – ongoing Planning Program  
 Authorization: Pending  
 Location: T1N/R2W, T1N/R1W, T2N/R2W, T2N/R1W,  
 T3N/R2W, T3N/R1W, T4N/R2W, T4N/R1W

FY 2006:	\$	20,000
FY 2007:	\$	30,000
FY 2008:	\$	3,060,000
FY 2009:	\$	3,080,000
FY 2010:	\$	5,160,000
<b>5-Yr CIP:</b>	<b>\$</b>	<b>11,350,000</b>







# Queen Creek Channel (Hawes to Power)

Supervisory District: 1  
Jurisdiction: Queen Creek  
PCN: 480.02.31

Phone: 602-506-4878

Project Manager:  
**Don Rerick, P.E.**

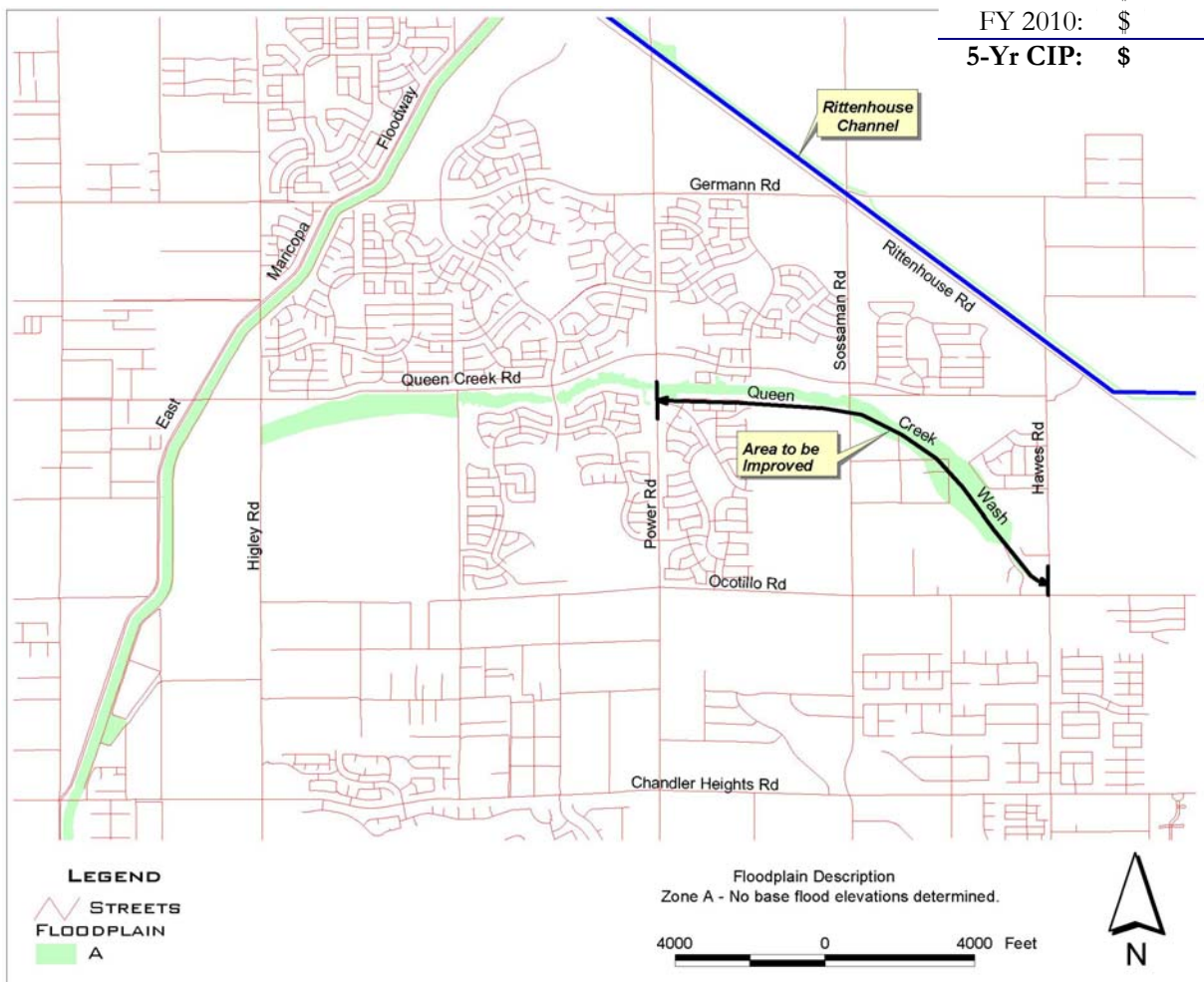
djr@mail.maricopa.gov

The project will channelize Queen Creek Wash from Hawes Road northwesterly to Power Road for a distance of approximately two and one half miles. Based on the Flood Insurance Study on Queen Creek Wash, there are areas of significant breakouts particularly along the north bank of this reach of the wash. The most feasible solution for preventing the breakouts from occurring along Queen Creek Wash in this area is to increase the cross section (capacity) of the wash to contain the 100-year flows. This project consists of channel construction, landscaping and construction of the Sossaman Road Bridge across the wash.

The Town of Queen Creek is the lead agency for design, rights-of-way acquisition, utility relocation, construction, construction management, and will own, operate and maintain the completed project. The District shall review and approve the design and the construction documents prior to bid. The total cost of the project is estimated at \$6.0 million with District's contribution limited to \$2.42 million. The design was completed in FY 2003, and construction is underway with substantial completion achieved in early calendar year 2005. Winter storms then caused damage to the nearly completed project. The Town and the District are working to develop a repair plan to be implemented and then complete and close out the project in FY 2005/2006.

Origination: Queen Creek/Sanokai Wash HMP (Oct. 2000)  
Authorization: FCD 2000A004  
Location: T2S/R7E

FY 2006:	\$	20,000
FY 2007:	\$	0
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0
<b>5-Yr CIP:</b>	<b>\$</b>	<b>20,000</b>





# Sonoqui Wash Channelization

Supervisory District: 1  
Jurisdiction: Gilbert, Queen Creek  
PCN: 480.04.31

Phone: 602-506-4768

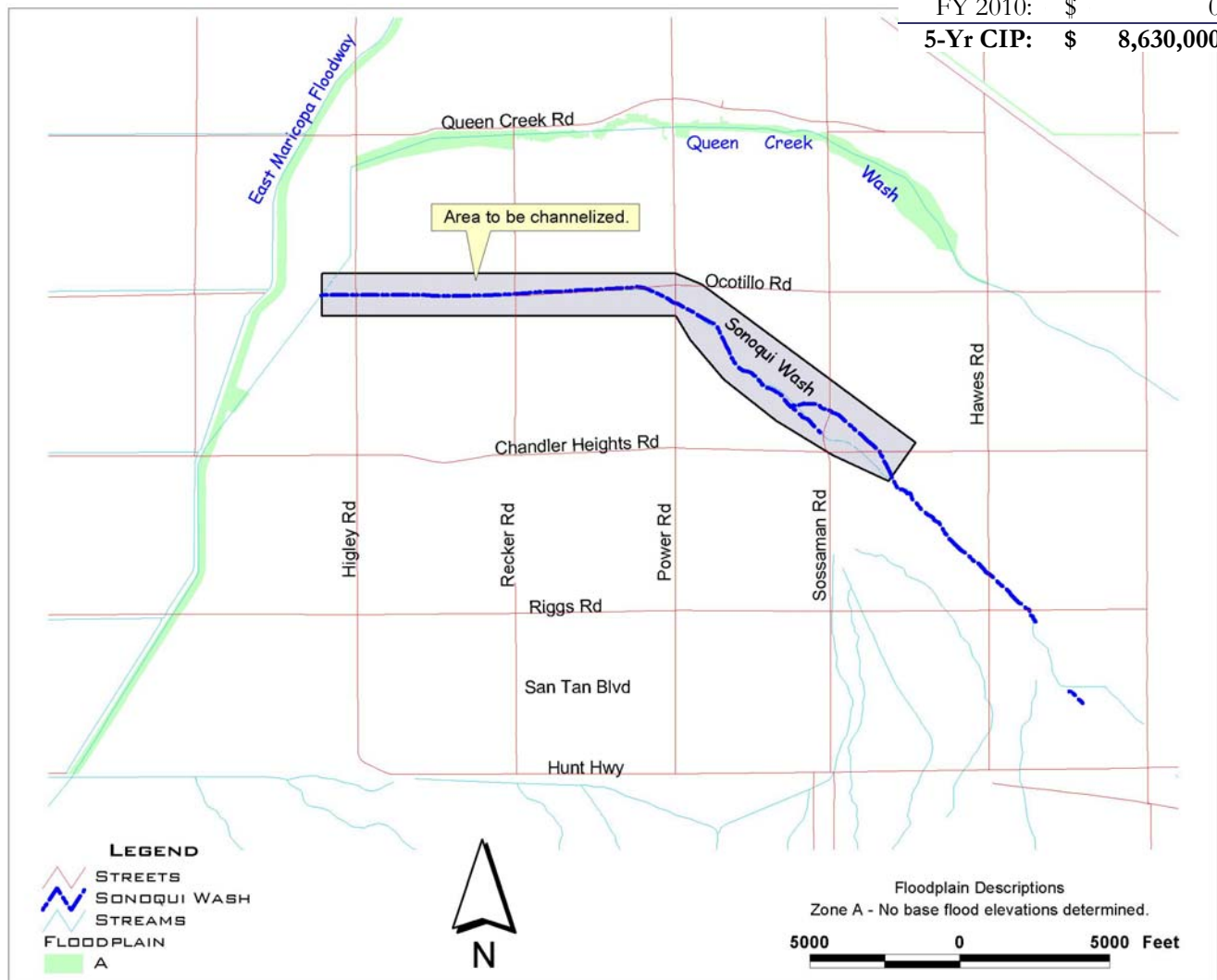
Project Manager:  
**Raju Shah, P.E.**

[rcs@mail.maricopa.gov](mailto:rcs@mail.maricopa.gov)

The project design includes channelization of Sonoqui Wash from Queen Creek Wash just west of Higley Road to Chandler Heights Road. The existing wash does not contain 100-yr flows and is subject to flooding adjacent property owners. The proposed channel will be designed to collect and convey the 100-yr flow. The current floodplain encompasses approximately 800 acres of land. After completion of the project, the floodplain will be confined to the channel located within a 200' wide strip of land, and the remaining land can be removed from the floodplain. This is a joint project between the District, and the Towns of Gilbert and Queen Creek. The District will be the lead agency for the design of the project including bank improvements, major roadway crossings, channel stabilization, and landscape and trail improvements. The District will construct the channel and the Towns will be required to implement the proposed Landscaping of the channel at their own expense. The Towns will own, operate and maintain their portions of the channel. The adjacent developers, as per their development agreement with the Towns, will dedicate most of the land required for construction of the channel.

Origination: Queen Creek/Sonoqui Hydraulic Master Plan (HMP)  
Authorization: IGA 2002A002, 2002A002A, 2004A015  
Location: T2S/R6E; T2S/R7E

FY 2006:	\$	20,000
FY 2007:	\$	5,170,000
FY 2008:	\$	3,440,000
FY 2009:	\$	0
FY 2010:	\$	0
<b>5-Yr CIP:</b>		<b>\$ 8,630,000</b>





# Sonoqui Wash Channelization (Chandler Heights Road to Riggs Road)

Supervisory District: 1  
Jurisdiction: Queen Creek  
PCN: 480.04.xx

Phone: 602-506-4878

Project Manager:  
**Don Rerick, P.E.**

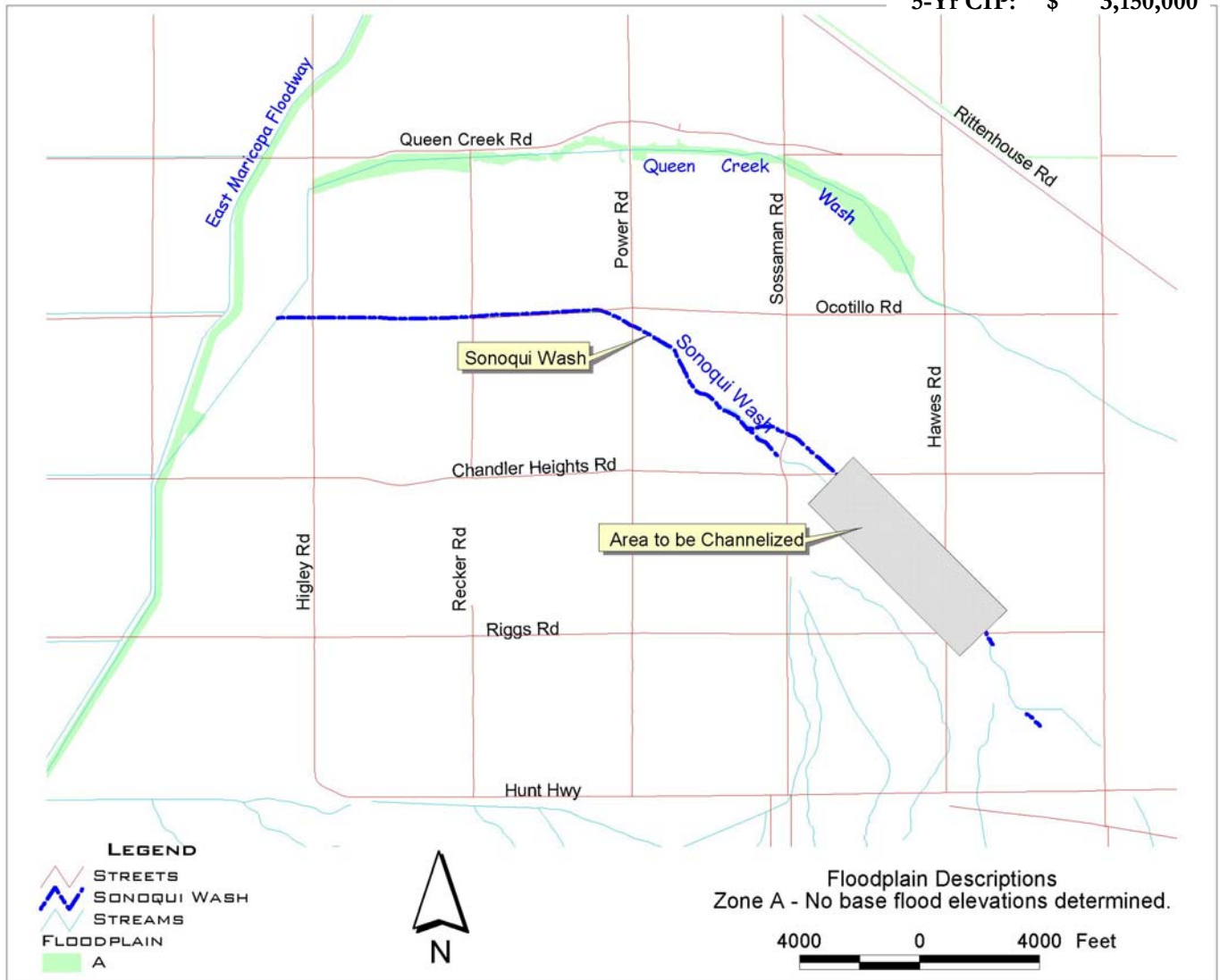
djr@mail.maricopa.gov

The proposed project by the Town of Queen Creek includes 100-yr level flood control channel improvements to Sonoqui Wash from Chandler Heights Road to Riggs Road. The existing wash does not contain 100-yr flows and is subject to flooding adjacent property owners. The proposed channel will be designed to collect and convey the 100-yr flows and discharge them into the downstream Sonoqui Wash Channel improvements presently under design and scheduled for construction in FY 2005/2006. This will be a joint project between the District and the Town of Queen Creek. The Town would be the lead agency for all aspects of the project. The project costs are anticipated to be shared equally between the Town and the District. The Town will own, operate and maintain the completed project.

Origination: Queen Creek/Sonoqui Hydraulic Master Plan (HMP)  
Authorization: To be developed and negotiated  
Location: T2S/R7E

FY 2006:	\$	20,000
FY 2007:	\$	20,000
FY 2008:	\$	450,000
FY 2009:	\$	1,060,000
FY 2010:	\$	1,600,000

**5-Yr CIP: \$ 3,150,000**







## Queen Creek Channel (Recker to Higley)

Supervisory District: 1  
Jurisdiction: Queen Creek  
PCN: 480.05.31

Phone: 602-506-4878

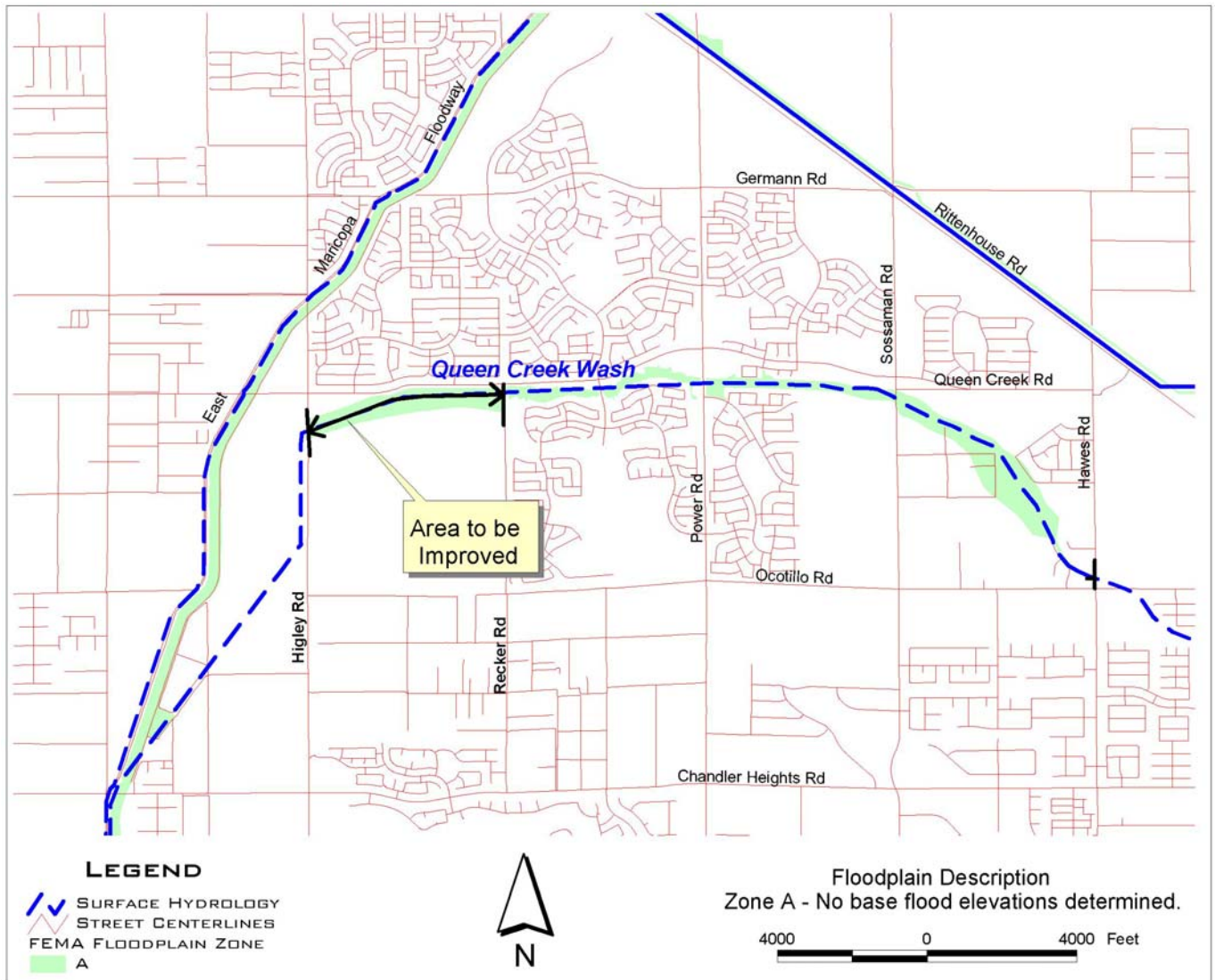
Project Manager:  
**Don Rerick, P.E.**

[djrr@mail.maricopa.gov](mailto:djr@mail.maricopa.gov)

The Town of Gilbert has proposed improvements to Queen Creek Wash from Recker to Higley Roads. Improvements have already been made to the wash upstream of Recker Road, and have been designed for the wash downstream of Higley Road as part of the District's EMF Basins project. The Queen Creek Wash improvements downstream of Higley Road will be constructed beginning in FY05/06. In accordance with the IGA, the Town is the lead agency for design, utility relocation, rights-of-way acquisition, construction, and construction management. The Town will own, operate and maintain the completed project. The proposed improvements are to replace the existing wash with a natural desert vegetated 100-year capacity channel. The total cost of the project, excluding force, is estimated to be \$3,000,000 with the District's costs capped at \$1,000,000.

Origination: Queen Creek/Sanokai Wash HMP (Oct. 2000)  
Authorization: Resolution FCD 2004R014 and IGA FCD 2005A006  
Location: T2S/R6E

FY 2006:	\$	520,000
FY 2007:	\$	510,000
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0
<b>5-Yr CIP:</b>	<b>\$</b>	<b>1,030,000</b>





# Queen Creek Road Basin

Supervisory District: 1  
Jurisdiction: Chandler  
PCN: 491.04.31

Phone: 602-506-4768

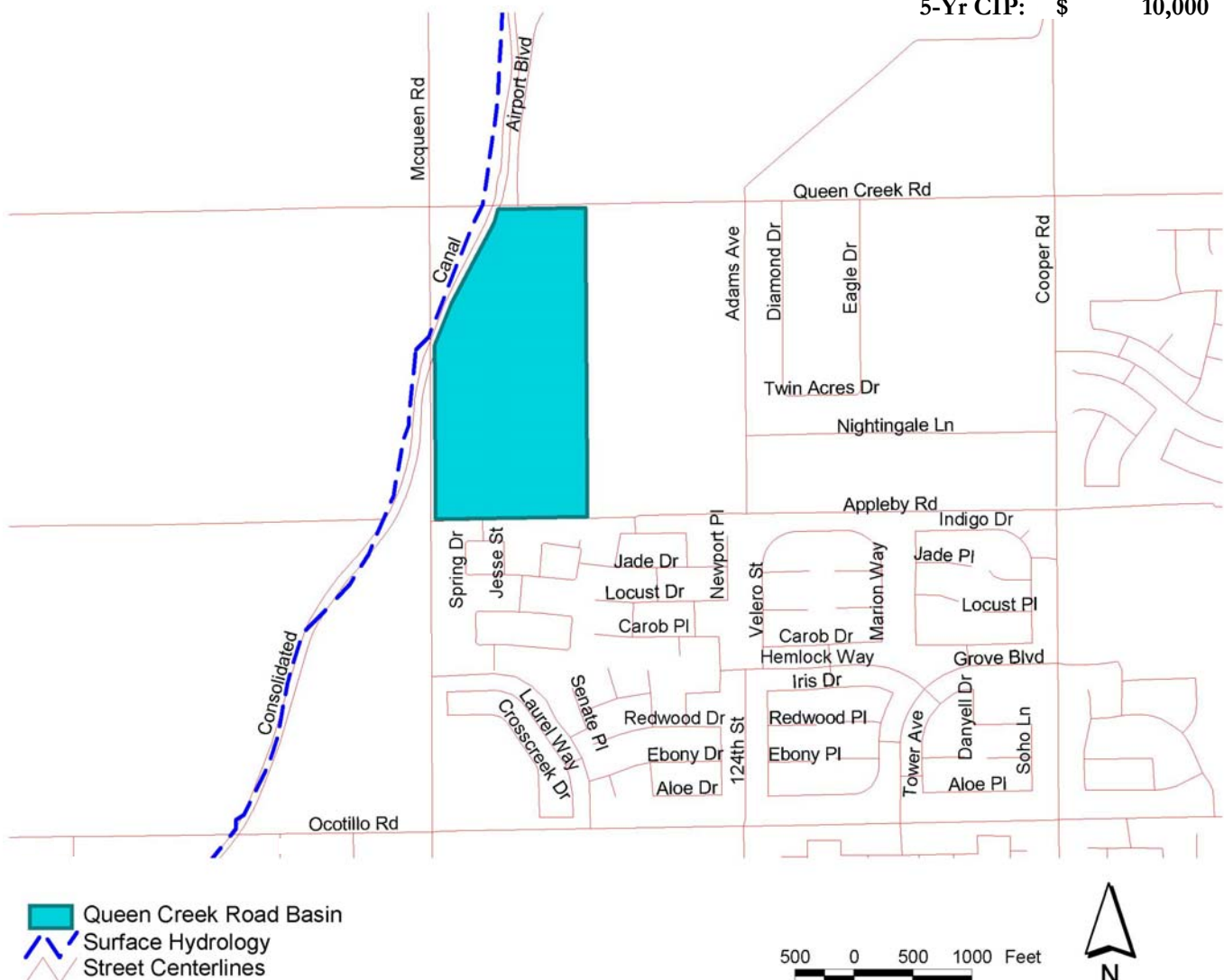
Project Manager:  
**Raju Shah, P.E.**

[rcs@mail.maricopa.gov](mailto:rcs@mail.maricopa.gov)

The Queen Creek Road Basin was identified as one element of the recommended plan of the Higley ADMP. The basin would serve as an off-line basin, in order to alleviate the flooding problems along the eastern boundary of the Consolidated Canal; as well as flooding to the west caused by possible overtopping of the canal from runoff generated within the study area. The basin will retain approximately 204 ac-feet of storage volume for up to a 100-yr frequency storm event. The City's Parks Department is interested in developing this basin as a regional park and also will own, operate and maintain the basin once constructed. The City is the lead for design and construction.

Origination: Higley Area Drainage Master Plan  
Authorization: IGA 2004A014  
Location: T2S/R5E Section 14

FY 2006:	\$	10,000
FY 2007:	\$	0
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0
<b>5-Yr CIP:</b>	<b>\$</b>	<b>10,000</b>





# Adobe Dam/Desert Hills ADMP

Supervisory District: 3  
Jurisdiction: Phoenix, Cave Creek, Unincorporated Maricopa County  
PCN: 520.xx.xx

Phone: 602-506-4519

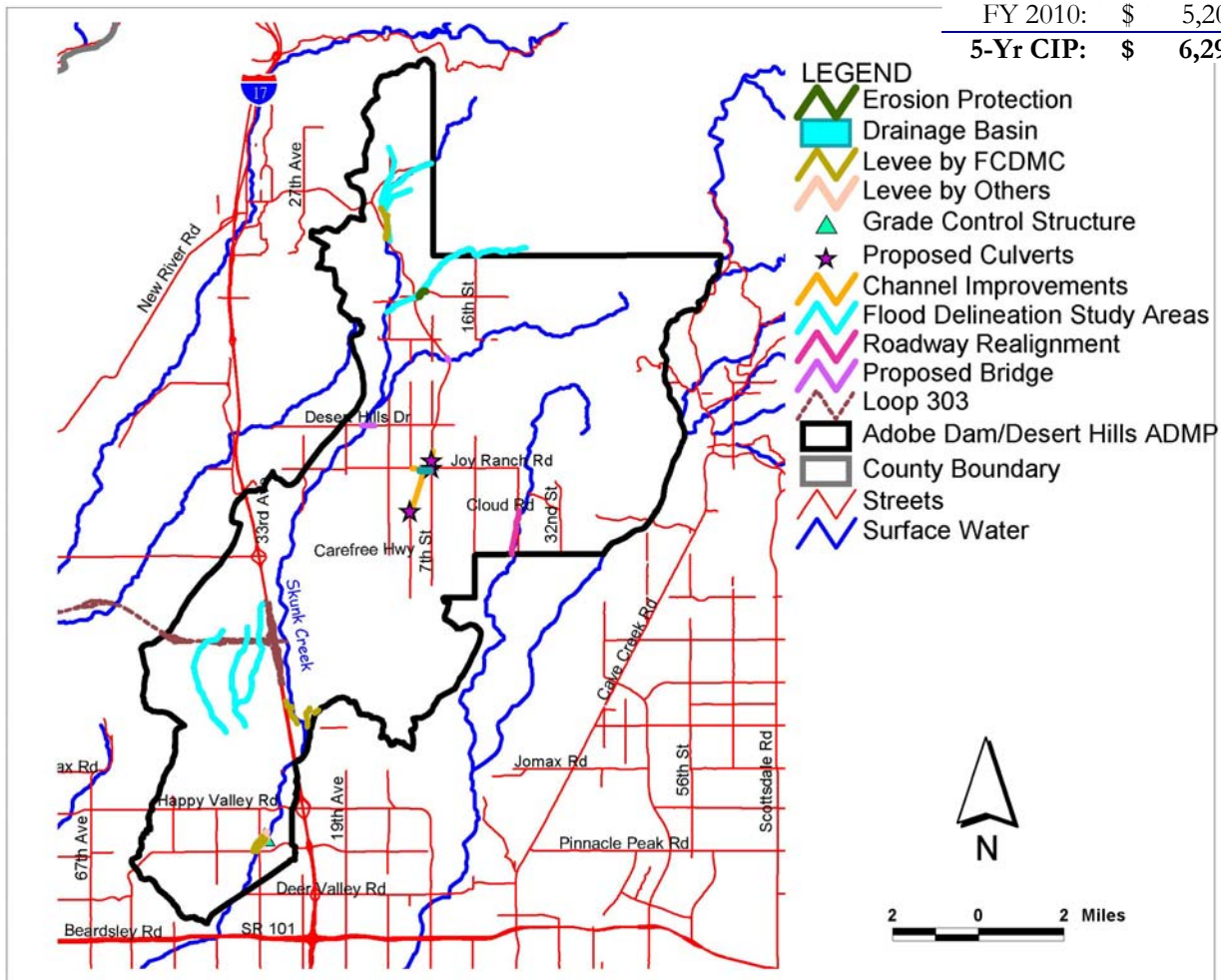
Project Manager:  
**Afshin Ahouraiyan, E.I.T.**

[afa@mail.maricopa.gov](mailto:afa@mail.maricopa.gov)

The purpose of the Adobe Dam-Desert Hills ADMP was to develop a Recommended Alternative to mitigate identified drainage flooding and erosion hazards in the study area. The recommended alternative comprised a combination of both structural and nonstructural components resulting from a rigorous analysis and comparative evaluation of multiple alternative measures.

The recommended alternative for this area has many structural features that are within different segments of the study area. Some of the structural alternatives include construction of a channel upstream of Pinnacle Peak Road to a point where Skunk Creel flows out of the landfill area; construction of new levees immediately downstream and upstream of the CAP as well as upstream and downstream of New River Road Bridge; construction of basin, channel, and culverts for the Desert Lake wash; construction of bridges on Desert Hills and New River Roads; construction of grade control and erosion protection on Skunk and Cline Creek; and re-alignment of roadways. The non-structural elements of the recommended alternative include; floodplain delineations, flood response plan, development guidelines, and voluntary participation in the Floodprone Properties Acquisition Program. These features of the recommended plan may be implemented individually or collectively in the future based on scheduling, funding, and cost sharing.

Origination:	Adobe Dam Area Drainage Master Study	FY 2006:	\$	10,000
Authorization:	Resolution FCD2005R003 (not yet approved)	FY 2007:	\$	10,000
Location:	T4N/R2E to T7N/R4E	FY 2008:	\$	20,000
		FY 2009:	\$	1,050,000
		FY 2010:	\$	5,200,000
		<b>5-Yr CIP:</b>	<b>\$</b>	<b>6,290,000</b>







## Skunk Creek Channel at 35<sup>th</sup> Avenue

Supervisory District: 3  
Jurisdiction: Phoenix  
PCN: 520.xx.xx

Phone: 602-506-4519

Project Manager:  
**Afshin Ahouraiyan, E.I.T.**

[afa@mail.maricopa.gov](mailto:afa@mail.maricopa.gov)

The proposed channel improvement will bridge the gap between the south edge of the existing Skunk Creek Channel and the drop structure upstream of the Pinnacle Peak Bridge. Currently, the 100-year design floodwaters break over the levee and travels across Pinnacle Peak Road into the Paseo Highlands Park on the south side. The channel improvement project will eliminate the split flow over the existing levee and also any potential flooding on the west bank of the Skunk Creek Channel.

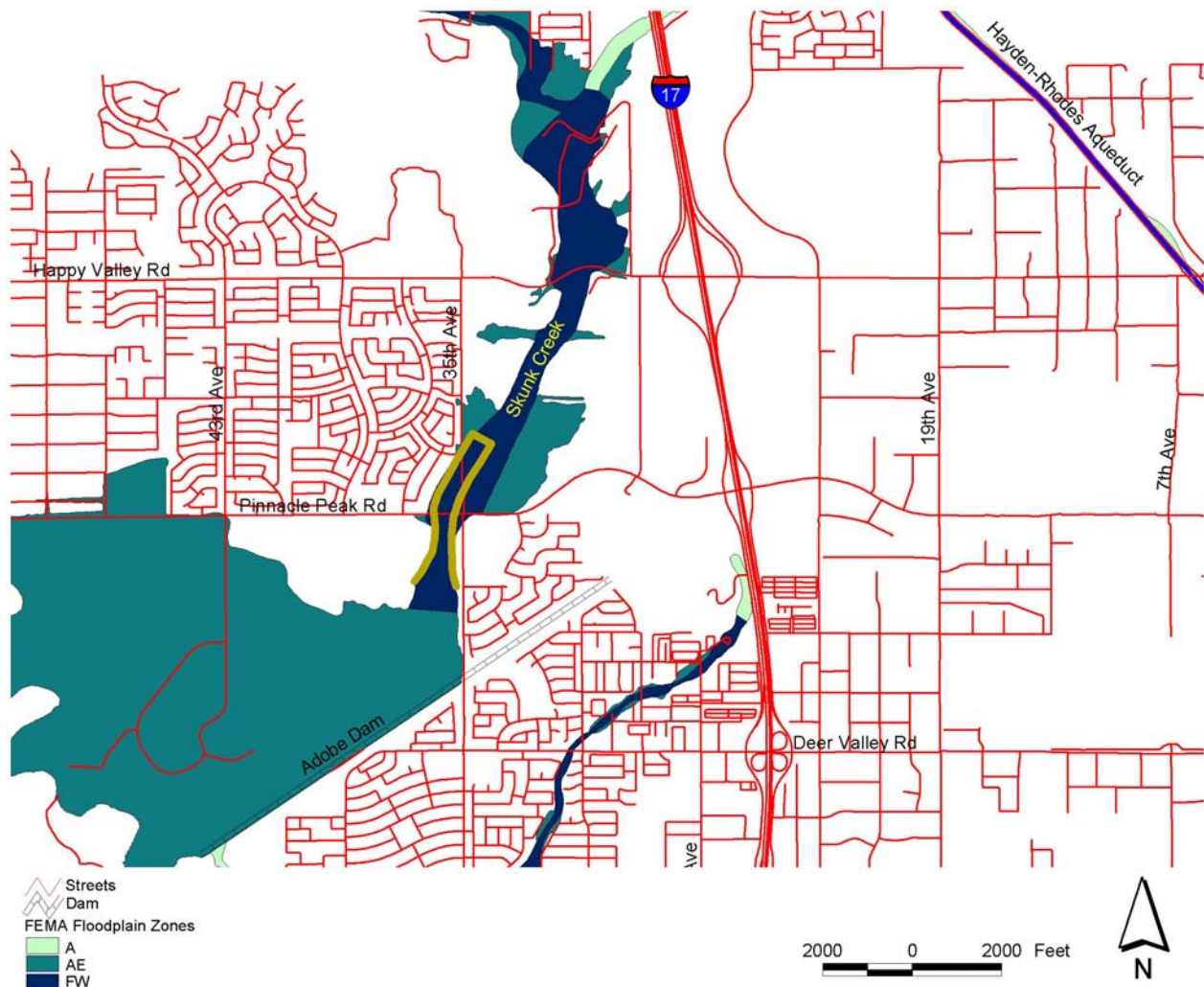
The Adobe Dam-Desert Hills Area Drainage Master Plan also identifies this project as an element of the recommended alternative. The proposed project will guide and direct the 100-year design flow into the drop structure upstream of the Pinnacle Peak Bridge without any further breakouts. Numerous residential and a few commercial properties on the west side of the Skunk Creek upstream of the bridge will be protected from the 100-year design storm. The District and the City will share the design and construction of this proposed channel.

Origination: FCD CIP Prioritization Procedure FY 2006  
Authorization: Resolution FCD2005R003 (not yet approved)  
Location: T4N/R2E

FY 2006:	\$	10,000
FY 2007:	\$	320,000
FY 2008:	\$	2,760,000
FY 2009:	\$	0
FY 2010:	\$	0

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**5-Yr CIP: \$ 3,090,000**







# 75<sup>th</sup> Avenue Storm Drain/ Durango Regional Conveyance Channel

Supervisory District: 5  
Jurisdiction: Phoenix, Unincorporated Maricopa County  
PCN: 565.04.31

Phone: 602-506-2943

Project Manager:  
**Bobbie Ohler, P.E.**

[bao@mail.maricopa.gov](mailto:bao@mail.maricopa.gov)

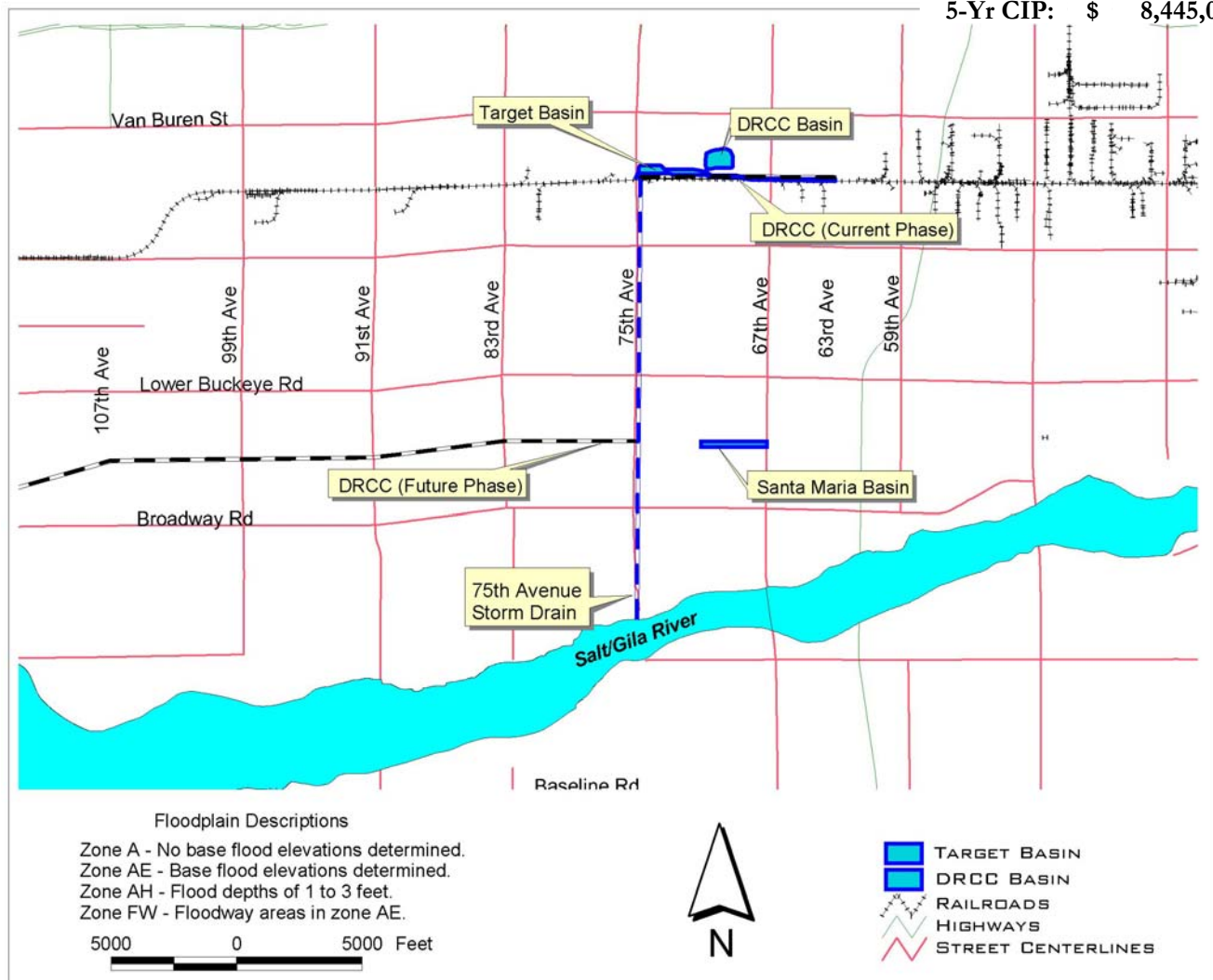
The 75<sup>th</sup> Avenue Storm Drain and Durango Regional Conveyance Channel (DRCC) Project will provide an interim regional outfall for the City of Phoenix, and is the first phase of the DRCC Project. The area north of the Union Pacific Railroad has flooding hazards. The Project improvements will reduce the flooding hazards and remove approximately 71 structures from an identified floodplain. The Project was requested by the City of Phoenix for inclusion into the District's Capital Improvement Program during the FY 2001/2002 Prioritization Procedure.

The City is the lead for design of both parts (storm drain and DRCC) of the Project. The City will be the lead for construction of the storm drain, which is expected to go to construction in summer 2005. The District is the lead for construction of the DRCC, which is expected to go to construction in spring 2006.

Origination: Durango ADMP  
Authorization: IGA 2002A015 and 2003A014  
Location: T1N/R1E

FY 2006:	\$	4,295,000
FY 2007:	\$	4,150,000
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0

**5-Yr CIP: \$ 8,445,000**





# Durango ADMP

Supervisory District: 5  
Jurisdiction: Avondale, Phoenix, Tolleson  
PCN: 565.xx.xx

Phone: 602-506-5537

Project Manager:  
**Greg Jones, P.E.**

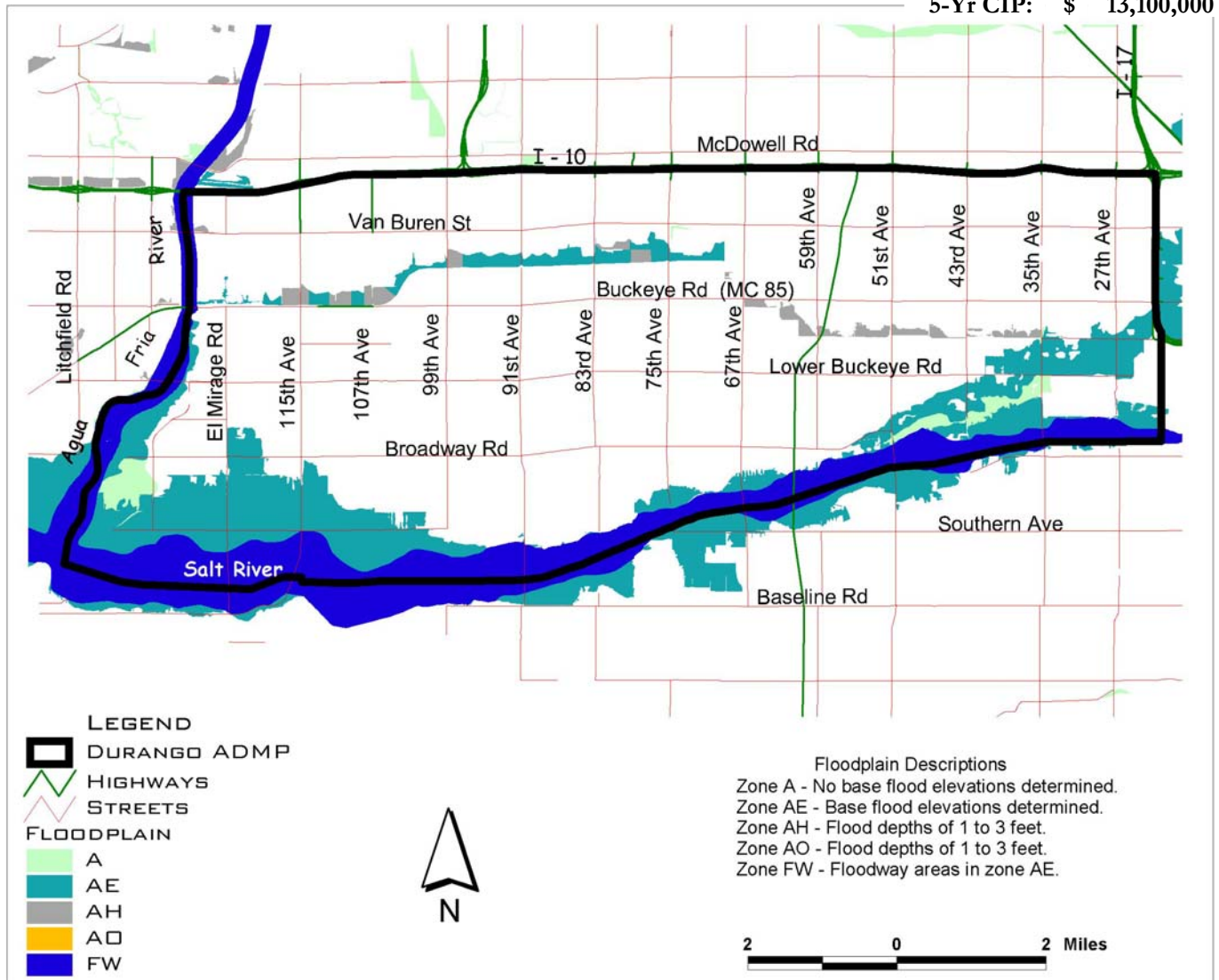
[glj@mail.maricopa.gov](mailto:glj@mail.maricopa.gov)

The study consisted of an area drainage master plan to determine guidelines for stormwater management and structural mitigation measures for flooding in the Durango Study area. The study included analysis of approximately 68 square miles of watershed, which extends from I-10 south to the Salt/Gila Rivers, and from approximately 27<sup>th</sup> Avenue west to the Agua Fria River. The study identified drainage problems, updated the existing hydrology due to development and new hydrologic methodology, developed cost effective solutions for a stormwater collection and conveyance system and identified potential outfall alternatives. The design and construction phase will involve the implementation of solutions to flooding that are identified once the planning and conceptual design phases have been completed, and remedial actions have been specified. Total expenditures proposed for the CIP are now estimated at \$130 million for identified projects, which includes the costs for the 75<sup>th</sup> Avenue Storm Drain & Durango Regional Conveyance Channel.

Origination: FCD Staff Recommendation – ongoing Planning Program  
Authorization: Resolution FCD 99-03  
Location: T1N/R1W, T1N/R1E, T1N/R2E

FY 2006:	\$	20,000
FY 2007:	\$	540,000
FY 2008:	\$	2,080,000
FY 2009:	\$	4,160,000
FY 2010:	\$	6,300,000

**5-Yr CIP: \$ 13,100,000**





# 10<sup>th</sup> Street Wash Improvements (Alice to ACDC)

Supervisory District: 3  
Jurisdiction: Phoenix  
PCN: 580.05.31

Phone: 602-506-4768

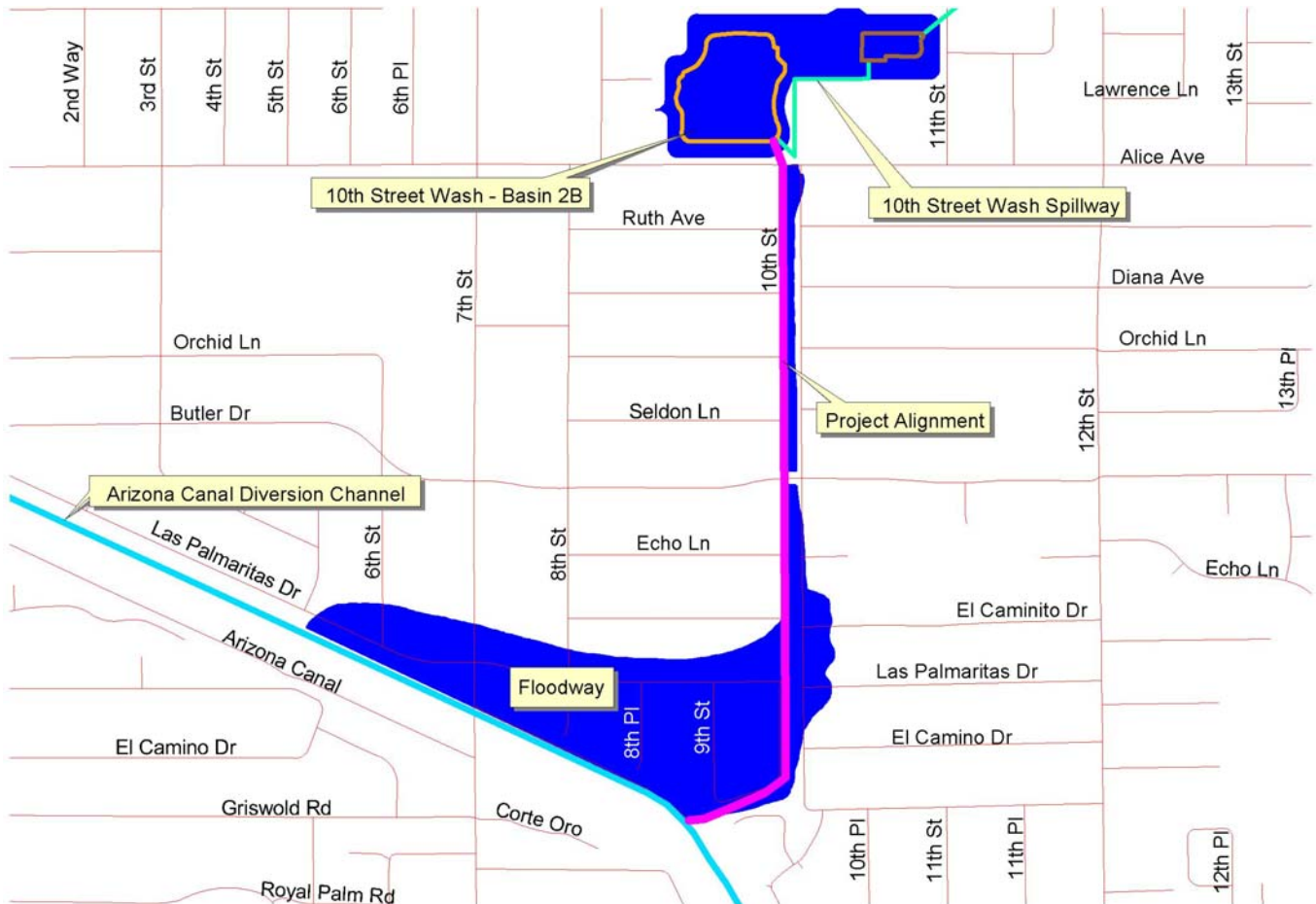
Project Manager:  
**Raju Shah, P.E.**

[rcs@mail.maricopa.gov](mailto:rcs@mail.maricopa.gov)

The project starts at Alice Avenue along 10<sup>th</sup> Street within the existing wash alignment and ends at the Arizona Canal Diversion Channel (ACDC.) The total length of the project is approximately 3000 feet. The project design includes replacing the existing earthen channel with a multiple cell culvert. The project design frequency is the 100-year storm event. There is an existing floodplain along ACDC containing approximately 84 properties. Once the project is completed, all of the 84 properties can be removed from the floodplain. The Flood Control District is the lead for the design, which is currently at the 30% completion stage. The final plan will be completed by December 2005. Construction funding is available in fiscal year 2007.

Origination: 10<sup>th</sup> Street Wash Feasibility Study  
Authorization: IGA FCD 2005A001  
Location: T3N/R3E Section 33

FY 2006:	\$	315,000
FY 2007:	\$	1,570,000
FY 2008:	\$	1,060,000
FY 2009:	\$	0
FY 2010:	\$	0
<b>5-Yr CIP:</b>		<b>\$ 2,945,000</b>



## LEGEND

- Project Alignment
- Streets
- FEMA Floodway Zone

500 0 500 Feet





## 9<sup>th</sup> Avenue Storm Drain (Peoria Ave. to ACDC)

Supervisory District: 3  
Jurisdiction: Phoenix  
PCN: 580.07.31

Phone: 602-506-4768

Project Manager:  
**Raju Shah, P.E.**

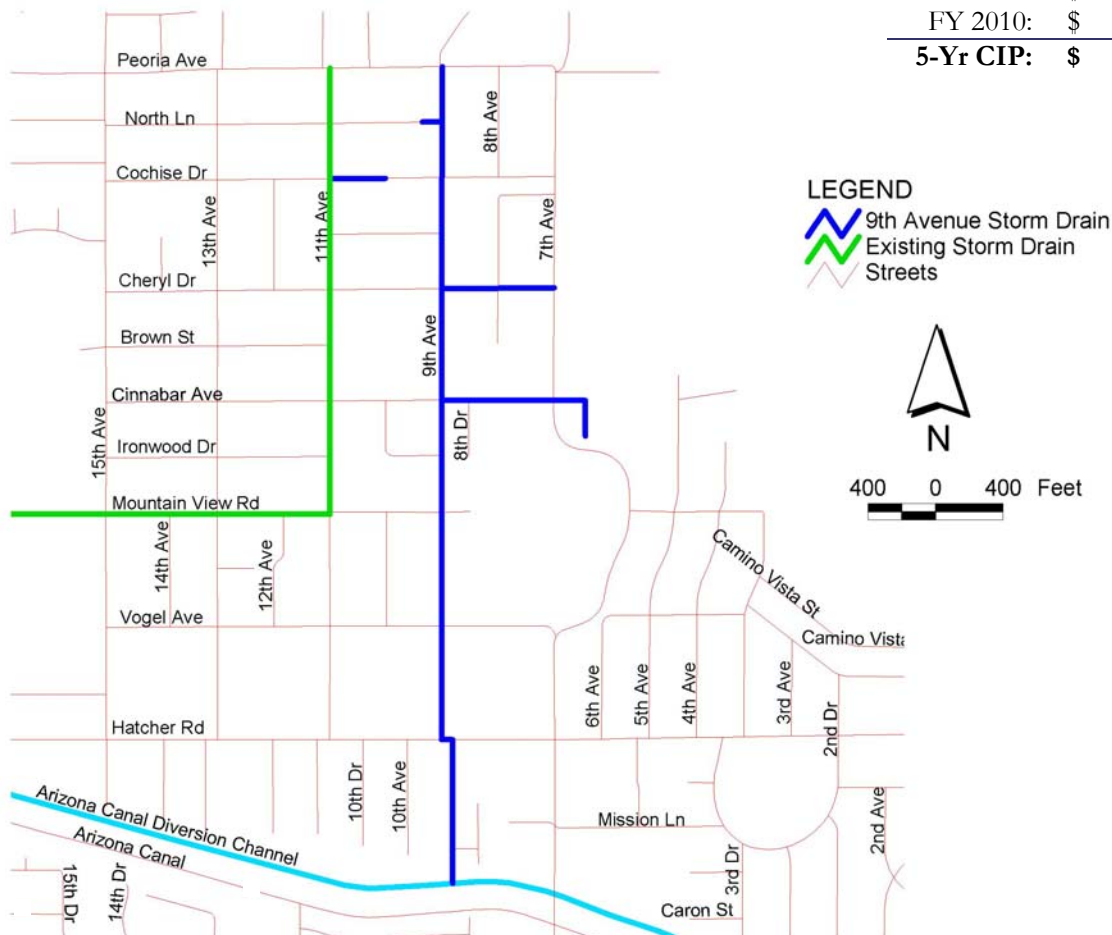
[rcs@mail.maricopa.gov](mailto:rcs@mail.maricopa.gov)

The project was identified within the Sunnyslope Candidate Assessment Report (CAR) as a one of several storm drains required in the Sunnyslope area to prevent local flooding during smaller events. The City has received numerous drainage complaints from this area. The City requested the District to initiate a drainage study to identify the problem and recommend solutions to the drainage issues.

The 9<sup>th</sup> Avenue Storm Drain project starts at Peoria Avenue along 9<sup>th</sup> Avenue and ends at Arizona Canal Diversion Channel (ACDC). The project consists of a storm drain system of pipe sizes ranging from 24" to 78", inlet and outlet structures as well as catch basins. The project will provide a 10-yr level of flood protection to the properties located in the watershed. The City is the lead on design and construction of the project. The District is cost sharing the construction of the project. The cost share percentage is 50/50. The District will draft an intergovernmental agreement between the City and the District to identify responsibilities for construction, operation and maintenance of the project. The City will own, operate and maintain the storm drain system once completed.

Origination: Sunnyslope Candidate Assessment Report (CAR)  
Authorization: Resolution 2005R005  
Location: T3N/R3E Section 30

FY 2006:	\$	20,000
FY 2007:	\$	0
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0
<b>5-Yr CIP:</b>	<b>\$</b>	<b>20,000</b>







# Scatter Wash Basin Improvements

Supervisory District: 3 & 4  
Jurisdiction: Phoenix  
PCN: 590.03.31

Phone: 602-506-4878

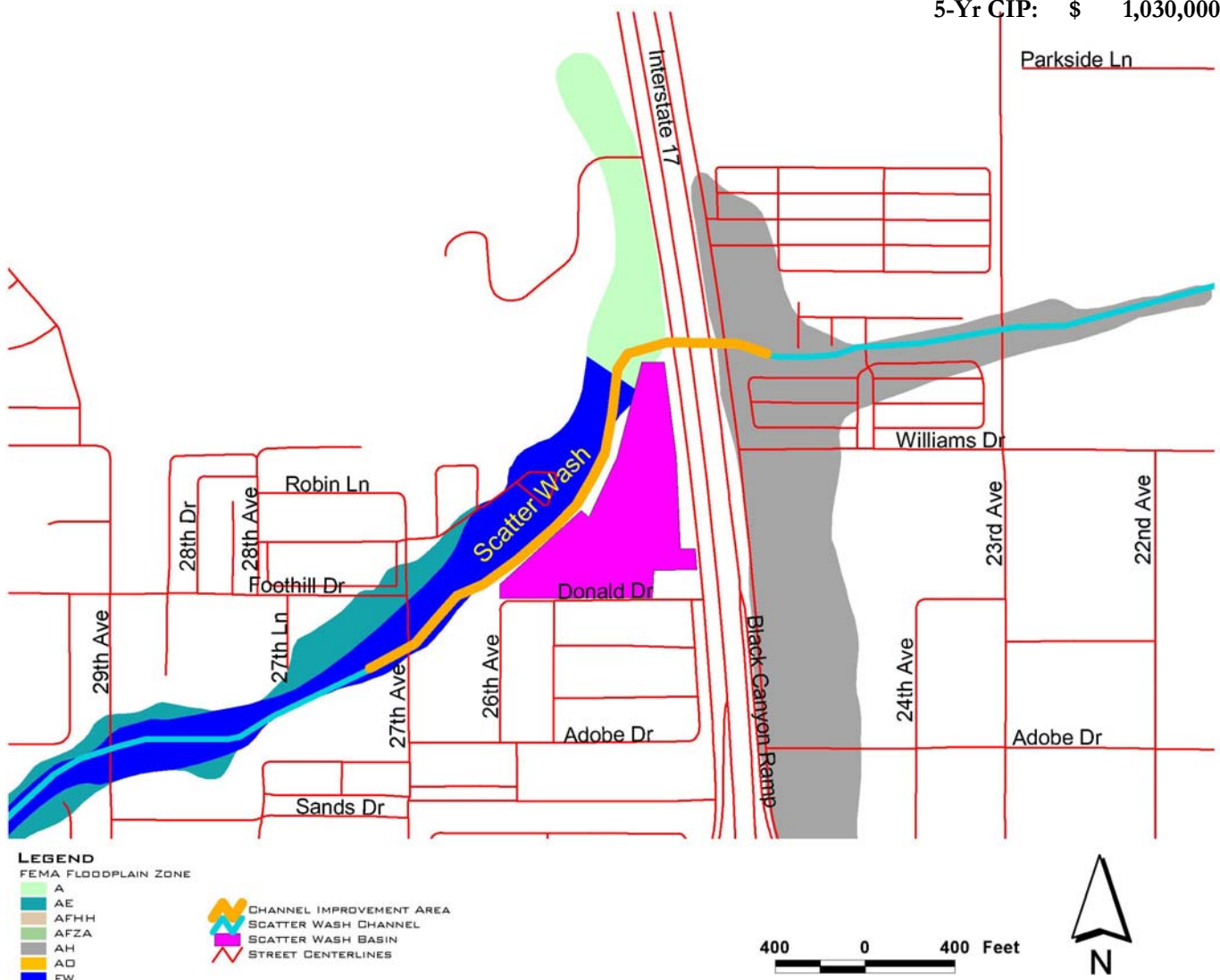
Project Manager:  
**Don Rerick, P.E.**

[djrr@mail.maricopa.gov](mailto:djr@mail.maricopa.gov)

The Arizona Department of Transportation (ADOT) has proposed a channel and basin improvement project for Scatter Wash immediately downstream of Interstate 17 (I-17). This project would be a joint project among ADOT, the City of Phoenix and the Flood Control District. The project would provide 100-year flood protection to this reach of Scatter Wash, and would consist of improvements to Scatter Wash at the I-17 crossing, channel improvements downstream of I-17 and construction of an off-line basin. It is proposed that ADOT be the lead agency for design and construction and that the City would own, operate and maintain the channel and basin improvements. The District Board of Directors has approved a Resolution for the project, and the project partners are now in the process of developing an Intergovernmental Agreement. ADOT will include the design and construction of the project in conjunction with improvements planned for I-17. The anticipated cost share for the project is 44% ADOT, and 28% each for the City and the District.

Origination: ADOT Design Concept Report  
Authorization: Resolution FCD 2004R012 and IGA FCD 2004A016  
Location: T4N/R2E

FY 2006:	\$	630,000
FY 2007:	\$	400,000
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0
<b>5-Yr CIP:</b>	<b>\$</b>	<b>1,030,000</b>





# Bethany Home Outfall Channel

Supervisory District: 4 & 5  
Jurisdiction: Glendale, Phoenix  
PCN: 620.03.32

Phone: 602-506-4771

Project Manager:  
**Scott Vogel, P.E.**

csv@mail.maricopa.gov

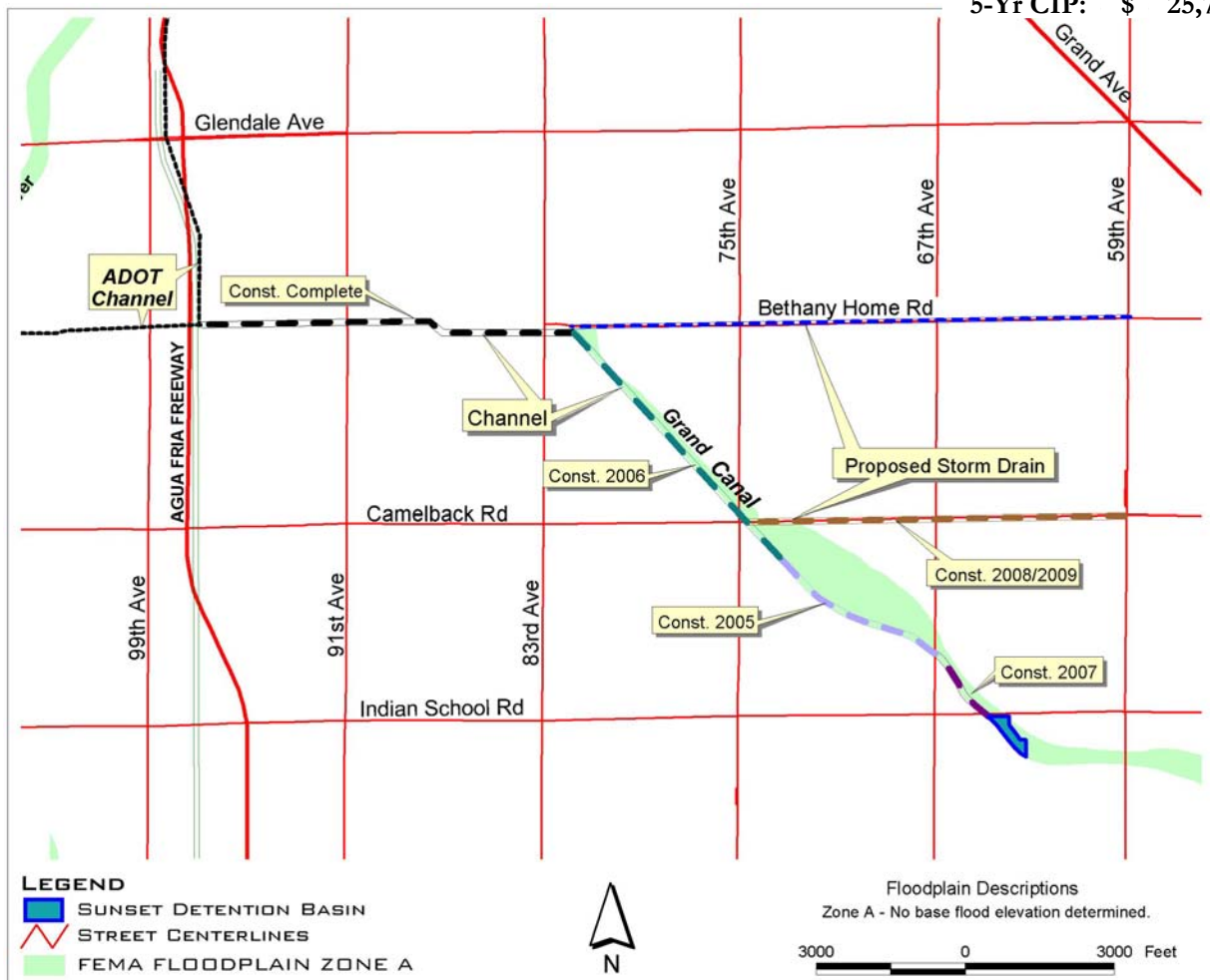
The Bethany Home Road Outfall Channel project includes a linear basin and channel along the Grand Canal extending westerly from 63<sup>rd</sup> Avenue to the New River. The project will have a 100-year capacity removing approximately 745 structures from the floodplain. The channel alignment (Phase I and II) is in Phoenix, Glendale, and unincorporated Maricopa County. Portions of the channel are being used as a trail corridor and linear park.

Phase I of the project has been completed by ADOT, with District participation. Phase I extends west from the Agua Fria Freeway to the New River following the Bethany Home Road Alignment. ADOT increased the size of their channel to accommodate additional flows from the Maryvale area.

Phase II of the project includes a channel from the Agua Fria Freeway alignment to 63<sup>rd</sup> Avenue. The ADMP also recommends ten-year capacity storm drains, located within Bethany Home Road and Camelback Road, extending from 59<sup>th</sup> Avenue to the Outfall Channel. Preliminary estimates indicate that the cost to construct this 100-year channel and 10-year storm drains is approximately \$67 million. The cost share for the project is approximately 50% District, and 25% each for the Cities of Glendale and Phoenix. The first reach of the Phase II project (Loop 101 to 83<sup>rd</sup> Avenue) is completed. Design and construction of the remainder or the improvements will be phased over several years, with completion anticipated in 2009.

Origination: Maryvale Area Drainage Master Plan, Prioritization Procedure 10/97  
Authorization: Resolution 98-12 & 98-12A; IGA 2000A013, 2002A003  
Location: T2N/R1E, T2N/R2E

FY 2006:	\$	9,195,000
FY 2007:	\$	7,550,000
FY 2008:	\$	5,510,000
FY 2009:	\$	3,460,000
FY 2010:	\$	0
<b>5-Yr CIP:</b>	<b>\$</b>	<b>25,715,000</b>





# 26<sup>th</sup> Avenue/Verde Lane Basin

Supervisory District: 5  
Jurisdiction: Phoenix  
PCN: 620.05.31

Phone: 602-506-4486

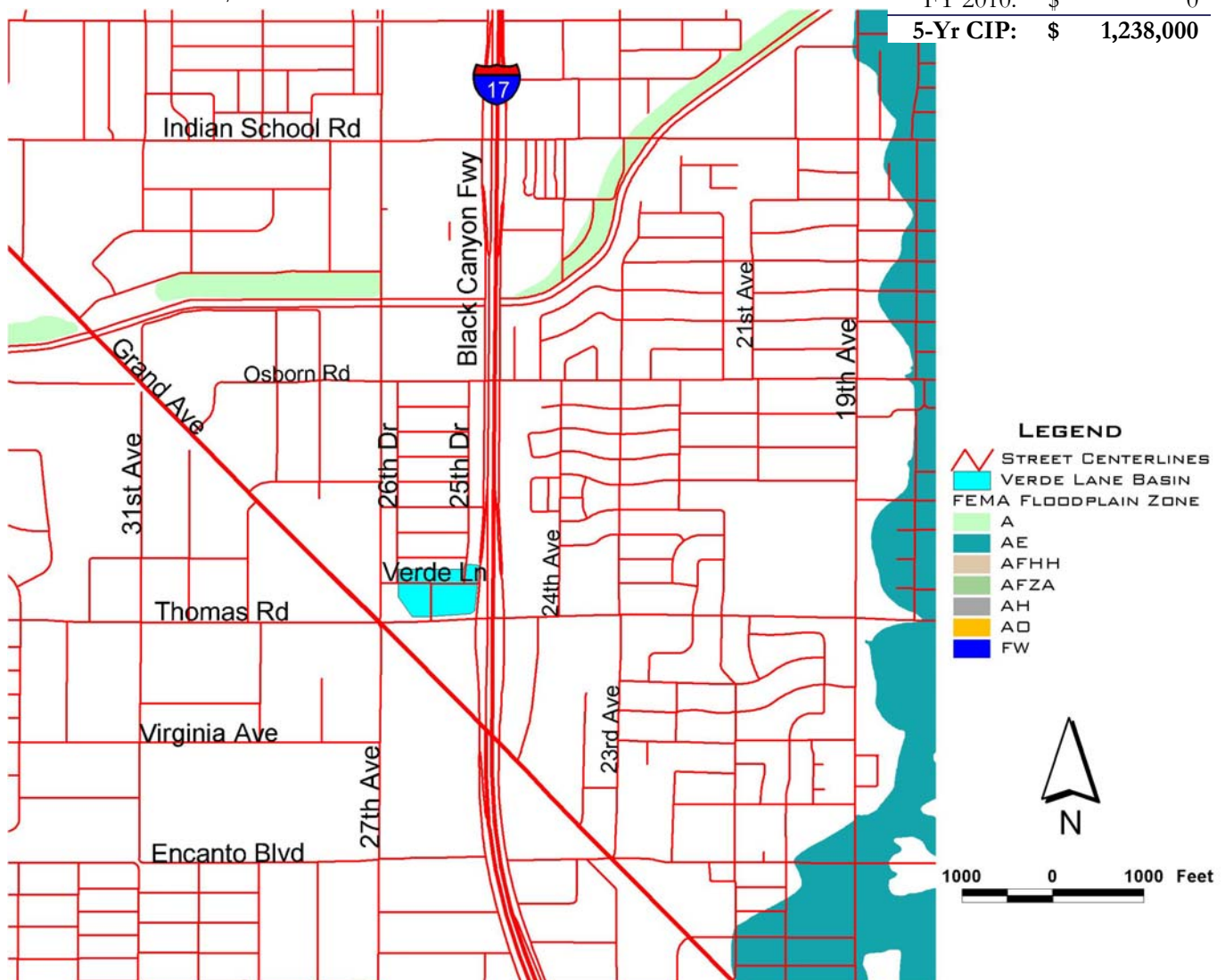
Project Manager:  
**Emili Kolevski, P.E.**

[emk@mail.maricopa.gov](mailto:emk@mail.maricopa.gov)

The City of Phoenix has accepted the Maryvale Area Drainage Master Plan (ADMP) as the hydrological basis for future drainage improvements within the ADMP watershed. A Design Concept Report for 26<sup>th</sup> Avenue & Verde Lane was prepared by the City of Phoenix. The recommended basin alternative will provide a retention volume for the 100-year, 24-hour storm for the local drainage area. The recommended alternative will incorporate a storm drain system designed to intercept flow from along the I-17 frontage road. Flows will be intercepted along 25<sup>th</sup> and 26<sup>th</sup> Drives, eliminating flooding for storms up to and including the 10-year event. The Verde Lane Detention Basin will provide a positive outfall location for the proposed storm drains thereby precluding ponding from occurring within the streets and houses. The new basin will drain into the existing 27<sup>th</sup> Avenue storm drain system after the peak flows have passed. This project cost will be shared equally with the City. The project is in the 60% design stage and construction is scheduled for FY 2006.

Origination: Maryvale ADMP  
Authorization: Resolution FCD 2004R002, IGA FCD 2004A003  
Location: T2N/R2E

FY 2006:	\$	1,238,000
FY 2007:	\$	0
FY 2008:	\$	0
FY 2009:	\$	0
FY 2010:	\$	0
<b>5-Yr CIP:</b>	<b>\$</b>	<b>1,238,000</b>







## 24<sup>th</sup> Ave. & Camelback Rd. Detention Basin & Storm Drain

Supervisory District: 3  
Jurisdiction: Phoenix  
PCN: 625.02.31

Phone: 602-506-4486

Project Manager:  
**Emili Kolevski, P.E.**

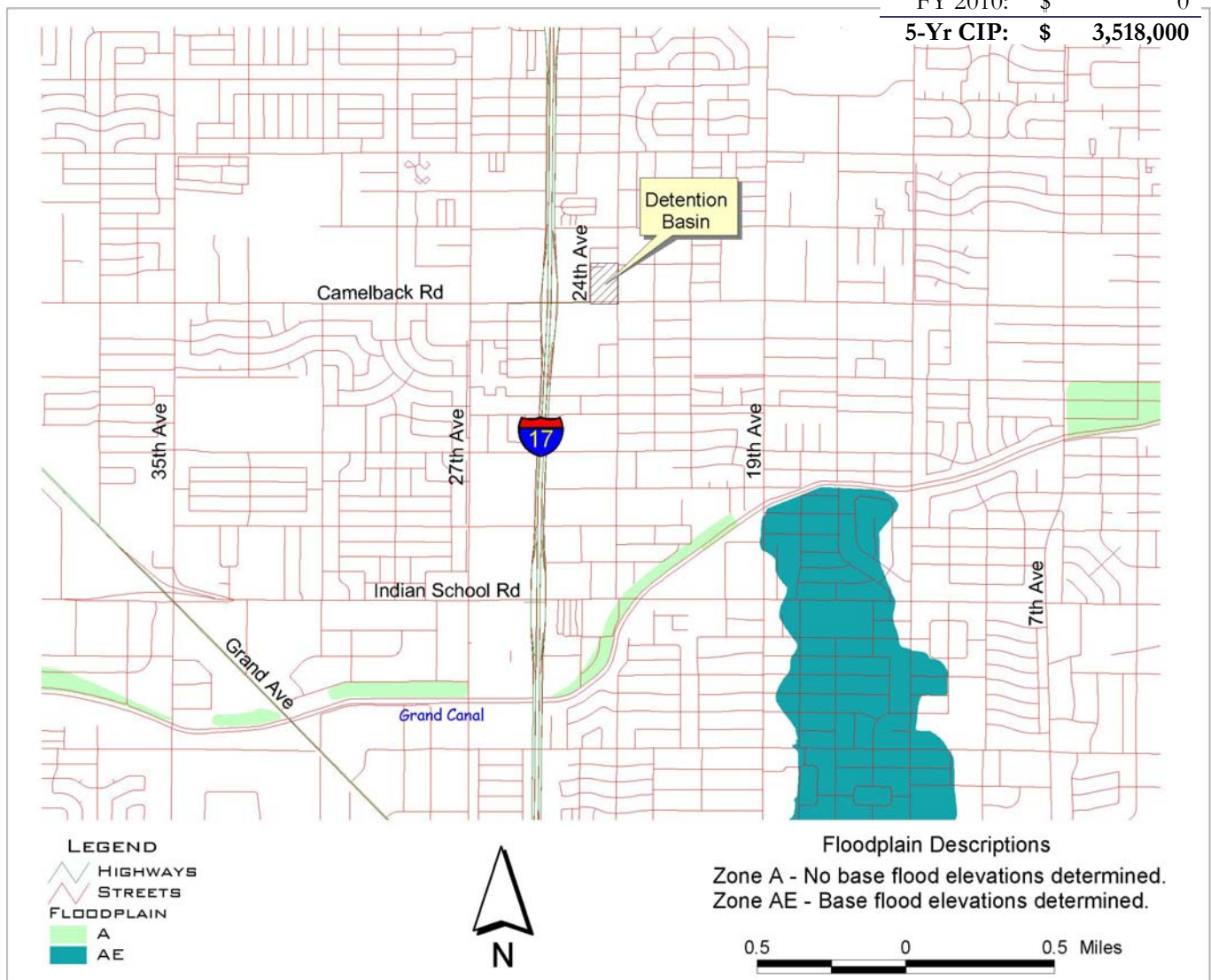
[emk@mail.maricopa.gov](mailto:emk@mail.maricopa.gov)

A Drainage Study was prepared by the City of Phoenix in 2003 to identify the extent of flooding problems, evaluate alternative facilities to minimize flooding and establish a recommended plan to provide flood protection and public safety of the local residents and adjacent businesses within a 3.6 square mile drainage area in the vicinity of 24th Avenue and Camelback Road. The watershed extends from the ACDC on the North to the Grand Canal in the South and between I-17 on the West to 19th Avenue on the East. The study recommends construction of four basins and associated storm drains to collect and dispose of the floodwater. The basins are located at the Grand Canal, Camelback Road, at Washington Park and at Northern Avenue. The basins are proposed to be constructed in phases. Phoenix will be the lead agency for this project. Due to the R/W costs and other design issues, the City and the District are revisiting the project concept and a new IGA may be developed to redefine the project.

Origination: Glendale/Phoenix from Maryvale ADMP  
Authorization: IGA FCD 2002A003, Resolution FCD 98-12A  
Location: T2N/R1E, T2N/R2E

FY 2006:	\$	1,118,000
FY 2007:	\$	1,260,000
FY 2008:	\$	1,140,000
FY 2009:	\$	0
FY 2010:	\$	0

**5-Yr CIP: \$ 3,518,000**







## 24<sup>th</sup> Ave. & Camelback Rd. Detention Basin & Storm Drain Phase IV

Supervisory District: 3  
Jurisdiction: Phoenix  
PCN: 625.xx.xx

Phone: 602-506-4486

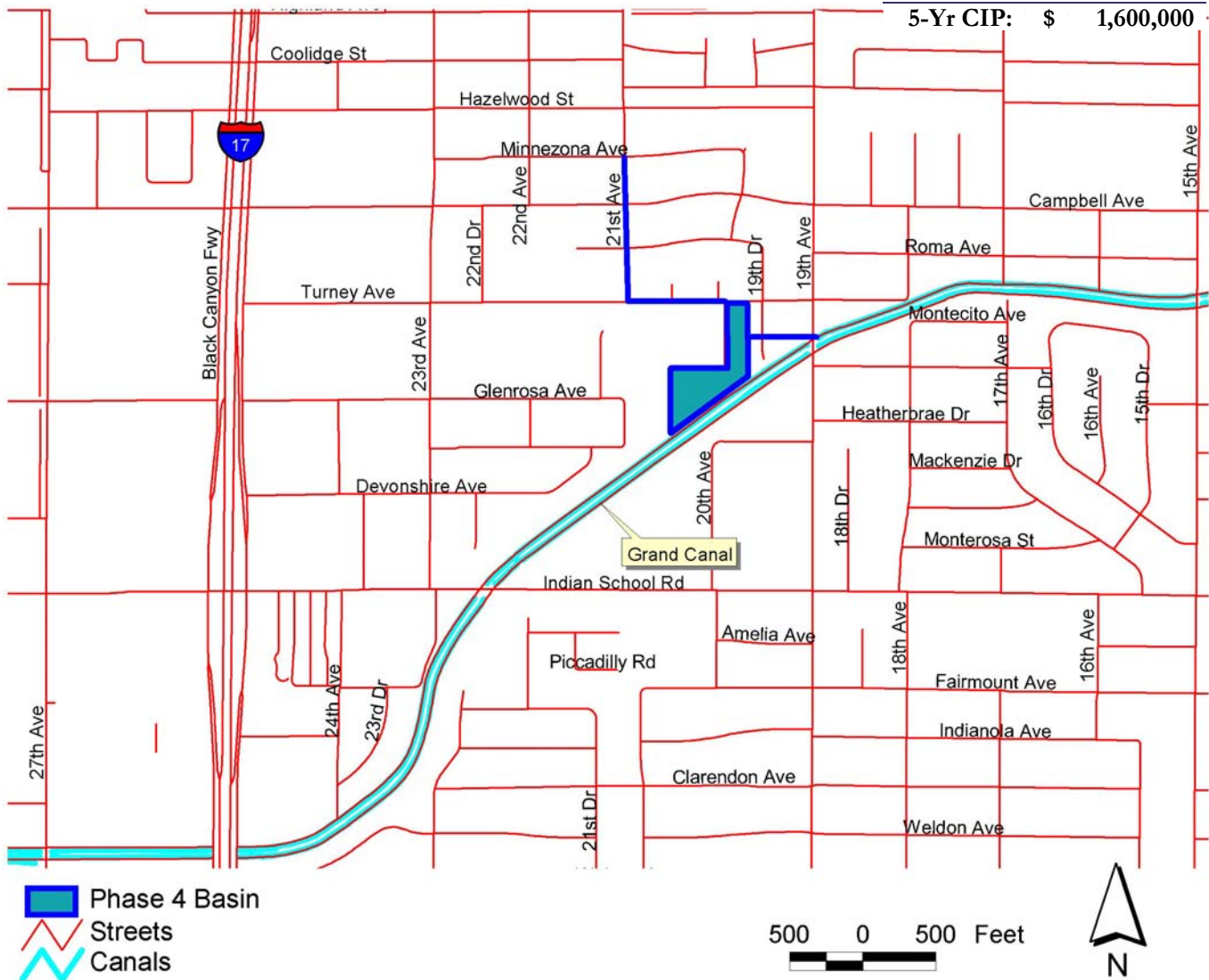
Project Manager:  
**Emili Kolevski, P.E.**

[emk@mail.maricopa.gov](mailto:emk@mail.maricopa.gov)

A Drainage Study was prepared by the City of Phoenix in 2003 to identify the extent of flooding problems, evaluate alternative facilities to minimize flooding and establish a recommended plan to provide flood protection and public safety of the local residents and adjacent businesses within a 3.6 square mile drainage area in the vicinity of 24th Avenue and Camelback Road. The watershed extends from the ACDC on the North to the Grand Canal in the South and between I-17 on the West to 19th Avenue on the East. The study recommends construction of four basins and associated storm drains to collect and dispose of the floodwater. The basins are located at the Grand Canal, Camelback Road, at Washington Park and at Northern Avenue. Phoenix will be the lead agency for Phase IV of this project and has already purchased the basin at the Grand Canal. Future IGAs will be developed to identify project responsibilities.

Origination: Glendale/Phoenix from Maryvale ADMP  
Authorization: IGA FCD 2002A003, Resolution FCD 98-12A  
Location: T2N/R1E, T2N/R2E

FY 2006:	\$	0
FY 2007:	\$	0
FY 2008:	\$	0
FY 2009:	\$	540,000
FY 2010:	\$	1,060,000
<b>5-Yr CIP:</b>	<b>\$</b>	<b>1,600,000</b>





# Floodprone Property Acquisition Program

Supervisory District: 1, 2, 3, 4, & 5  
Jurisdiction: Maricopa County  
PCN: various

Phone: 602-506-8127

Project Manager:  
**Theresa Pinto, CFM**

[tmp@mail.maricopa.gov](mailto:tmp@mail.maricopa.gov)

Less than 18% of the estimated 9,800 miles of stream corridor in Maricopa County have been mapped with regulatory floodplains and floodways. In many of the mapped areas, development took place prior to the floodplain mapping. As floodplains were delineated, many residents learned that their homes were within a regulatory floodplain. The Floodprone Property Acquisition Program (FPAP) is a voluntary program that was developed to help residents that were identified as being in a flood hazard area where a structural flood control solution is not feasible or cost effective.

Property owners that have properties located in floodprone areas are typically contacted by mail to inform them that they may be eligible for this program. If property owners are interested in the program, they submit an application to the District for evaluation. After an application is received, the property is evaluated for eligibility and ranked based on the degree of flood hazard. The degree of flood hazard is based on whether the residential structure is in the 100-year floodway or floodplain fringe, the finished floor elevation of the structure, the velocities and depths of the 100-year floodwater, previous flooding events, and other related criteria. After the District acquires the properties and the residents move, all of the structures are demolished and removed from the property. Depending on the property location, the property may be preserved as open space in-perpetuity, sold, or leased for uses compatible with adjacent properties and floodplain regulations.

In FY 04/05, 30 property owners applied to the program and 15 properties were acquired by the District. The budget for FY 05/06 is approximately \$3,000,000. The FPAP is an annual program that is expected to continue for many years.

Origination: Alternative Flood Control Works Program September 1995;  
FCD Comprehensive Plan, September 2002  
Authorization: Resolutions 95-01, 95-01A, 2004R013, & 2005R010  
Location: Throughout Maricopa County

FY 2006:	\$	3,110,000
FY 2007:	\$	5,200,000
FY 2008:	\$	5,200,000
FY 2009:	\$	5,220,000
FY 2010:	\$	5,260,000
<b>5-Yr CIP:</b>	<b>\$</b>	<b>23,990,000</b>

