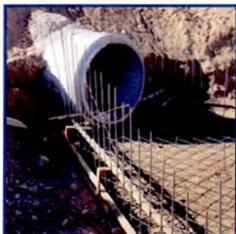




## Five-Year Capital Improvement Program

Fiscal Years 2009 to 2013



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# Organizational Structure

## 1.1 District Overview

The State of Arizona formed the Flood Control District of Maricopa County (District) on August 3, 1959 in accordance with chapter 21 of title 48 of the Arizona Revised Statutes. The District is a political subdivision of the state, and has the powers, privileges and immunities generally given to incorporated cities and towns. The District is governed by a Board of Directors, and is funded primarily by a flood control tax levy assessed on real property within Maricopa County and by District cost-sharing agreements with project partners.

The mission of the District is to provide regional flood hazard identification, regulation, remediation and education to Maricopa County residents so 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 is comprised of eight divisions: Executive; Administration; Operations & Maintenance; Engineering; Floodplain Management and Services; Real Estate; Geographic Information Systems; and Planning & Project Management, which oversees the District's Capital Improvement Program (CIP).

## 1.2 Board of Directors

The Maricopa County Board of Supervisors serves as the District's Board of Directors and, as a component of its duties, holds approval authority over the District's Capital Budget, authorizes initiation of District projects and approves District Intergovernmental Agreements (IGAs).

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

## 1.3 Flood Control Advisory Board

The Flood Control Advisory Board (FCAB) provides recommendations to the Board of Directors on District matters, including annual endorsement of the District's five-year CIP. The FCAB consists of seven members, five of whom are appointed by the Board of Directors to five-year terms. The remaining members provide ex-officio representation for the Salt River Project and the City of Phoenix.

FCAB meetings are held at 2:00 p.m. in the District's administration building, on the fourth Wednesday of each month from January through October, and on the first Wednesday of December. There are no meetings scheduled in the months of July and November. Please confirm meeting schedules by calling 602-506-1501.

- 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 Acuña, P.E. (City of Phoenix)

#### **1.4 District Chief Engineer and General Manager**

Timothy S. Phillips, P.E., is the District's Chief Engineer and General Manager. Mr. Phillips has more than 27 years of experience as a staff engineer, project manager and general manager for local and regional public water resource agencies within Arizona including the Salt River Project, the New Magma Irrigation and Drainage District, and the Central Arizona Irrigation and Drainage District. He has been with the District for 10 years and has served as the Chief Engineer since 2004

Mr. Phillips holds a bachelor's degree in civil engineering from Arizona State University, and master's degrees in organizational management and strategic studies. He is a registered professional engineer in civil engineering in the state of Arizona.

# Capital Improvement Program

## 2.1 Capital Improvement Program and Capital Budget Overview

The District primarily mitigates existing regional flood hazards through its five-year CIP - the revolving five-year plan for accomplishing capital projects. The CIP drives design and construction of new infrastructure in concert with the District's planning activities and also addresses modification and replacement of existing infrastructure.

The CIP accounts for approximately 65% of the total Flood Control District annual budget.

The District maintains the five-year CIP as mandated by state statutes and as directed by the District's General Policies under District Resolutions 88-08 and 88-08A. The CIP consists of an administrative process that identifies and prioritizes future capital projects (the Prioritization Procedure) and an operational plan that funds those projects. It includes all costs associated with the implementation of projects or elements of projects that have been proposed by District programs or external agencies' programs.

The itemized Capital Budget representing the first year of the CIP is approved by the Board of Directors and therefore embodies the most concrete element of the CIP. The Capital Budget is closely reviewed by the District and the Maricopa County Office of Management and Budget prior to the budget's adoption by the Board of Directors.

Because it is not formally tied to the County's adopted budget, the five-year CIP is constantly reshaped by the District to best reflect future project expectations and active District encumbrances. Although it does not approve a budget to support the "out-years" of the CIP, the Board of Directors reviews and approves recommended future fiscal year encumbrances to ensure consistency with revenue projections and County fiscal policy. The CIP acts as the District's management tool in this planning, encumbrance and expenditure process. The CIP is dynamic, and is continually reviewed and adjusted to account for revised estimates of future expenditures and adjusted project schedules and costs. The CIP's five-year perspective allows the District to plan and program projects prior to actual authorization, but the yearly capital budgeting process ensures that each project undergoes several stages of review before it is 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.

The District's CIP:

- 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 FCAB and the Board of Directors in making sound operating decisions.
- Facilitates more efficient administration and management. Focused review of necessary capital improvements reduces 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 District funds with other funding sources.
- Maintains a sound and stable financial program, avoiding dramatic changes in the County's tax structure through deliberate management of project timing.

## **2.2 Flood Control Capital Project Planning and Implementation**

The District's planning program prepares extensive regional studies, in the form of Area Drainage Master Studies (ADMSs), to identify locations and property exposed to flood hazards. The ADMS program originated in 1983 with the objective of developing uniform, comprehensive inventories and models of the features influencing rainfall runoff in the 48 ADMS areas ranging from 15 to 580 square miles. Completed ADMSs detail the physical characteristics and hydrology of their study areas, and provide a multiple-watershed perspective identifying drainage and flooding problems reported by independent communities.

Following an analysis of flooding problems, alternative solutions are developed to determine the most cost-effective and publicly acceptable mitigation approaches through the Area Drainage Master Plan (ADMP) and Watercourse Master Plan (WCMP) programs. ADMPs incorporate the full area of their corresponding ADMSs, while WCMPs focus on the management of a particular river, stream, creek or wash, and its banks and nearby flood zones. Utilizing information provided by an ADMS, these plans recommend specific, project-oriented or avoidance solutions for flooding problems. ADMPs, along with independent requests from cities, towns and other agencies, are the primary sources of projects considered for the CIP.

Since 1993, proposed capital projects have been reviewed for merit through the District's Prioritization Procedure, outlined in section 2.3. This process solicits and evaluates project requests from the District's client communities and other agencies, and recommends projects for inclusion in the CIP. The District initiates recommended projects following authorization by the Board of Directors, with the planning process filling the transition period, from recommendation to project initiation, by conducting pre-design studies and coordinating interagency agreements. The CIP allocates resources and provides a timetable for the implementation of individual projects, usually including the structures' design and construction, and any necessary property acquisitions or utility relocations.

## **2.3 Prioritization Procedure**

The District's Prioritization Procedure, initially implemented for the Fiscal Year 1995 budget cycle, serves as the annual mechanism for evaluating new proposed projects for possible inclusion in the CIP.

The Prioritization Procedure promotes a balanced approach to the evaluation of proposed projects. The District attempts 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 also promote community development, protect natural habitats, and maintain watercourse flow paths. The procedure favors projects that involve cost-sharing partnerships, allowing the District to best leverage limited financial resources.

All newly proposed projects are evaluated according to predetermined and weighted criteria by a Project Evaluation Committee chaired by Amir Motamedi, P.E., and comprised of senior

representatives of the District's Engineering, Operations & Maintenance, Planning & Project Management, Floodplain Management & Services and Real Estate divisions. The committee develops its recommendations using a system that allocates points to individual projects based on specific criteria. These criteria include:

- 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

In developing the prioritization criteria, which are approved by the FCAB, the District seeks the inputs of its client agencies through Prioritization Procedure workshops attended by potential project partners. The last workshop was held in 2003.

Project Evaluation Committee recommendations are forwarded sequentially to the Chief Engineer and General Manager, the FCAB Budget Subcommittee and the FCAB for approval. When appropriate, to develop more detailed information on potential CIP projects and their associated costs, recommended projects may undergo a District-funded and prioritized pre-design study. 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. Initiation of IGAs typically follow, with project placement in the five-year CIP generally being secure once the engineering design, plans and construction specifications are underway.

## **District Financing**

### **3.1 Financial Overview**

Over the past 10 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's mission objectives are growing at a greater rate than its revenue. Compounding these issues are the steady increases in construction and right-of-way acquisition costs that have accompanied the County's growth.

Most large government and private sector organizations that plan and construct 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, long-term capital budgeting for these organizations is comparatively straightforward.

The District operates on a "pay-as-you-go" basis: the District's entire Capital Budget is funded from current revenues, and no borrowing takes place to finance capital projects. The District carries no debt load, County taxpayers do not pay for interest charges on District structures, and 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, their property, and their safety. This policy is quite different from that utilized by government entities that spend current revenues on operating expenses and debt repayment associated with past capital expenditures.

### **3.2 Flood Control Tax Levy**

The majority of the District's revenue is derived from a flood control tax applied to assessed real property valuations. The District's Board of Directors and the County's Board of Supervisors set the flood control tax rate and assessed property valuations respectively. The flood control secondary assessed value, and as a result the District's revenue, is subject to economic influences. To prevent large fluctuations in property owners' tax levies, the Board of Directors established a self-imposed 2% levy growth limit in 2006. The overall levy generated from property taxed in a given fiscal year cannot increase by more than 2%. The flood control tax rate is set to enforce this policy and is then applied to all property - including new or previously untaxed property. Large increases in secondary assessed values result in correspondingly large decreases in the flood control tax rate. Between Fiscal Year 2007 and Fiscal Year 2008, for example, the flood control tax rate decreased from \$0.2047 to \$0.1533 per \$100 assessed value. This offset a 36% increase in the flood control secondary assessed value of property taxed in Fiscal Year 2007 and, when combined with tax revenue from newly constructed property, resulted in an overall tax levy increase of 5% when compared to the originally projected Fiscal Year 2007 tax revenue.

Over the past 21 years, the flood control tax rate has experienced a steady decline, while annual revenue has slowly grown:

<u>District Tax Rates by Fiscal Year</u>		
<u>Fiscal Year</u>	<u>Tax Rate</u>	<u>Tax Revenue</u>
2009	0.1367*	\$74,844,976*
2008	0.1533	\$70,422,870*
2007	0.2047	\$64,957,962
2006	0.2119	\$62,733,411
2005	0.2119	\$55,544,623
2004	0.2119	\$50,050,367
2003	0.2119	\$44,302,534
2002	0.2319	\$44,622,753
2001	0.2534	\$43,874,335
2000	0.2858	\$43,992,461
1999	0.3270	\$44,995,000
1998	0.3425	\$42,697,000
1997	0.3413	\$38,501,000
1996	0.3632	\$36,085,500
1995	0.3332	\$35,300,000
1994	0.3632	\$35,400,000
1993	0.3901	\$39,715,000
1992	0.4447	\$46,879,000
1991	0.4235	\$45,797,000
1990	0.4303	\$46,408,000
1989	0.5000	\$51,345,000
1988	0.5000	\$46,059,000

\*Values are projected and subject to change.

The CIP is constantly reviewed and adjusted to reflect the most recent information on expected revenues over the coming years. Economic unpredictability combined with the District's reliance on tax revenue mean the District's CIP must remain flexible, ensuring the District can fulfill its obligations following unexpected economic downturns. With a decreased tax rate, the District may be more vulnerable to revenue shortfalls during economic declines, and delay of CIP projects.

### **3.3 Cost-Share Reimbursements**

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. To address a wealth of regional flood control problems with minimal resources, the District has increasingly leveraged the financing of local project partners.

The Prioritization Procedure favors projects with the highest project partner cost share, and cost-share reimbursements to the District have experienced a marked increase, rising from \$2 million in Fiscal Year 1993 to \$7 million in Fiscal Year 1997, to more than \$12 million in Fiscal Year 2007. The District aims to fund one-half of a project's design and construction costs and obtain the remaining funding from benefiting municipalities and other public and private agencies.

The District applies the same philosophy to operations and maintenance funding. Expenditures made by the District to operate and maintain flood control structures and adjacent property are substantial; in Fiscal Year 2007 these operations and maintenance costs were \$6.1 million, or 7% of the District's total expenditures. To minimize the growth of these expenditures in the future, the District has successfully focused on deferring operations and maintenance costs by entering IGAs that commit District funding for capital costs alone.

### **3.4 Capital Improvement Program Expenditures**

The five-year CIP is a function of District revenue projections. The five-year CIP reflected in this booklet assumes that District revenue will support an annual \$60 million Capital Budget from Fiscal Year 2009 through Fiscal Year 2013. Additional revenues generated by excess land sales, intergovernmental agreements or unforeseen property value increases may allow for additional expenditures; revenue lags tied to declines in property values or a lack of contributing project partners may lead to a corresponding decrease in the District's Capital Budget for a given fiscal year.

The District's capital spending utilizes the majority of the District's overall revenues. As a result, the five-year CIP must accomplish the District's mission, objectives, strategies and priorities. These strategies include:

- A continued emphasis on cost sharing and partnerships so 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 project partners (e.g. municipalities, agencies) assume full responsibility for operations and maintenance activities once the project has been completed.
- A continued commitment to balance expenditures to implement new infrastructure for developing areas while retrofitting, repairing and improving infrastructure to mitigate flood hazards in established communities.
- Avoidance of hard structure construction where non-structural approaches such as floodplain delineation and management, natural watercourse improvements, and minor improvements to natural drainage patterns provide cost savings while protecting lives and property with equal efficiency.
- 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.
- Distribution of District-developed hydrological and flood control planning information to developers and other appropriate entities to ensure that private development infrastructure is built to District standards.

The District has made an additional commitment to ensure that new flood control projects not only protect people and property from flooding threats, but also provide community and environmental 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.

## **Use of This Document**

Project budget tables are presented for Fiscal Years 2009 through 2013. Fiscal Year 2009 figures represent the District's proposed Capital Budget and are subject to review and adoption by the District's Board of Directors. Figures for Fiscal Years 2010 through 2013 are projected and may experience significant change, particularly for projects in the early stages of development. Tax revenue trends may have an additional, substantial impact on project sequencing.

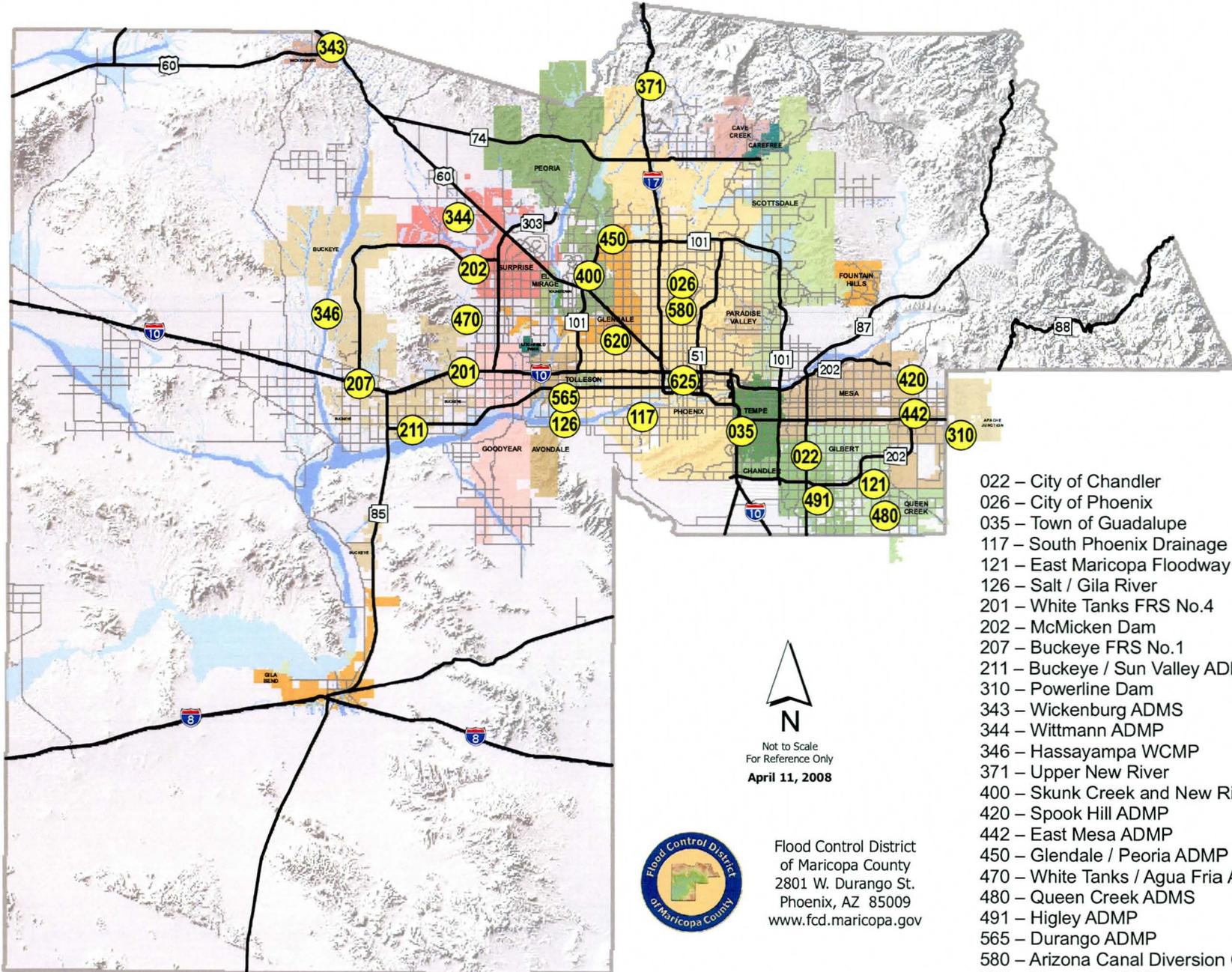
Listed project totals are totals for this five-year CIP; they do not represent total historical or anticipated project costs.

Included with each project description is the name and contact information for the responsible project manager. Project managers may also be contacted through the general District switchboard at 602-506-1501.

This report is available at: <http://www.fcd.maricopa.gov>.

# Flood Control District of Maricopa County CAPITAL IMPROVEMENT PROGRAM

Fiscal Years 2009 - 2013



- 022 – City of Chandler
- 026 – City of Phoenix
- 035 – Town of Guadalupe
- 117 – South Phoenix Drainage Improvements
- 121 – East Maricopa Floodway
- 126 – Salt / Gila River
- 201 – White Tanks FRS No.4
- 202 – McMicken Dam
- 207 – Buckeye FRS No.1
- 211 – Buckeye / Sun Valley ADMS
- 310 – Powerline Dam
- 343 – Wickenburg ADMS
- 344 – Wittmann ADMP
- 346 – Hassayampa WCMP
- 371 – Upper New River
- 400 – Skunk Creek and New River
- 420 – Spook Hill ADMP
- 442 – East Mesa ADMP
- 450 – Glendale / Peoria ADMP
- 470 – White Tanks / Agua Fria ADMP
- 480 – Queen Creek ADMS
- 491 – Higley ADMP
- 565 – Durango ADMP
- 580 – Arizona Canal Diversion Channel ADMP
- 620 – Maryvale ADMP
- 625 – Metro ADMP

  
 N  
 Not to Scale  
 For Reference Only  
 April 11, 2008



Flood Control District  
 of Maricopa County  
 2801 W. Durango St.  
 Phoenix, AZ 85009  
[www.fcd.maricopa.gov](http://www.fcd.maricopa.gov)



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# Central Chandler Storm Drain Improvements

PCN: 022.01.32

## Mike Duncan, P.E., CFM, Project Manager

602-506-4732

mwd@mail.maricopa.gov

Supervisory District: 1

Jurisdiction: Chandler

Origination: FY 2009 Prioritization Procedure

Resolution(s): Pending

IGA(s): Pending

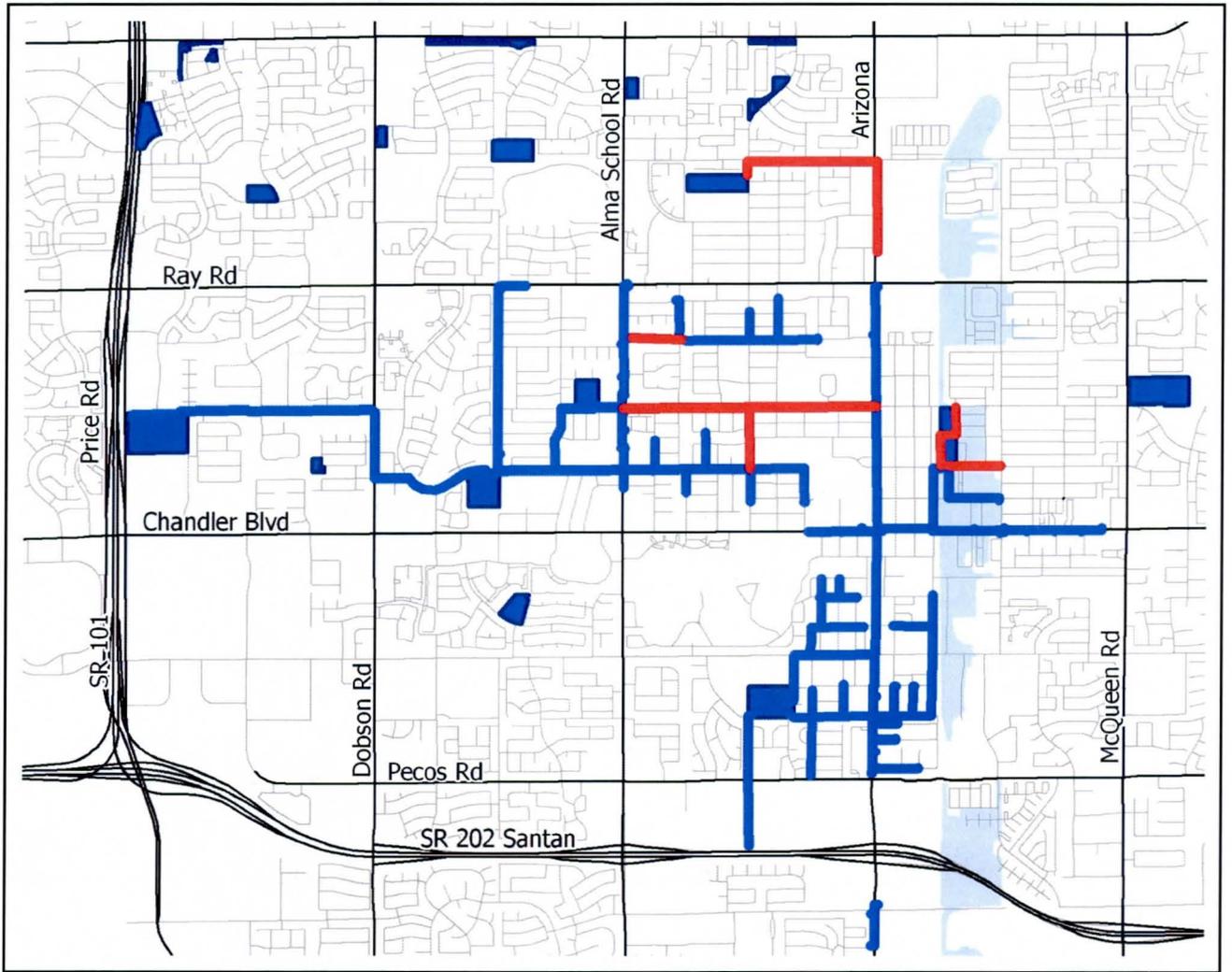
Recommended by the City of Chandler's March 2006 Storm Water Master Plan Update, this project removes all local drainage connections to an existing Salt River Project "Chandler Drain" irrigation tailwater system and establishes a distinct City storm drain system. Improvements are contained within a two-square-mile area of downtown Chandler subject to historic flooding problems. Project elements include numerous catch basins and approximately three miles of drainage pipes.

Total project cost is estimated at \$5.5 million, and the District anticipates entering a cost-share agreement with the City of Chandler, the project's prospective lead agency. A resolution and IGA are required.

Design funding is tentatively scheduled for Fiscal Year 2009, and construction is expected to be complete by Fiscal Year 2011. The project may be broken into up to four phases depending on District and City funding availability.

### Fiscal Year

FY 2009	\$515,000
FY 2010	\$1,215,000
FY 2011	\$1,215,000
FY 2012	\$10,000
FY 2013	\$0
5-Year Program	<hr/> \$2,955,000



Location: T1S/R5E



**Legend**

- Proposed Storm Drain
- Existing Storm Pipes
- Existing Basins
- Floodplain
- Floodway

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# City of Phoenix Dam No. 7 Rehabilitation

PCN: 026.01.30

## Mike Greenslade, P.E., Project Manager

602-506-5426

mdg@mail.maricopa.gov

Supervisory District: 3

Jurisdiction: Phoenix

Origination: FY 2008 Prioritization Procedure

Resolution(s): FCD 2007R007

IGA(s): FCD 2007A012

The City of Phoenix owns and operates four flood control dams that are of sufficient height and storage capacity to be classified as jurisdictional by the Arizona Department of Water Resources: Phoenix Detention Basin No. 7, East Park Dam, West Park Dam and North Mountain Flood Detention Dam No. 3.

Safety assessments of these dams performed by the City under IGA FCD 2004A018 recommended rehabilitation of Phoenix Detention Basin No. 7 and implementation of minor dam safety improvements of the remaining jurisdictional dams.

Phoenix Detention Basin No. 7, located in the North Mountain Preserve, provides flood protection to downstream areas for up to the 100-year flood event. This earth embankment

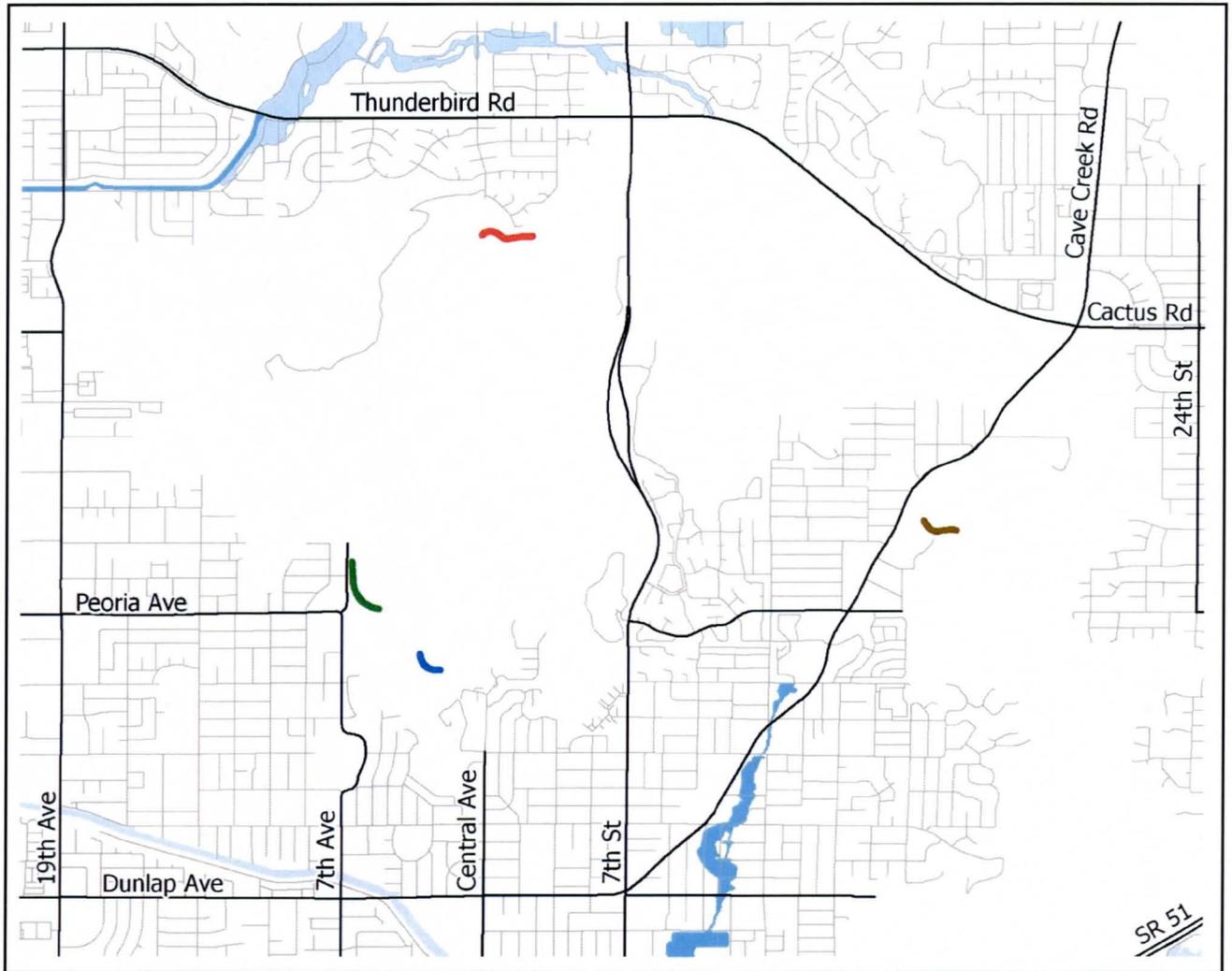
dam is about 1,000 feet in length with a maximum height of 31 feet and a storage capacity of 120 acre-feet. An un-gated low level drain pipe (primary outlet) through the dam releases floodwaters captured in the impoundment at a rate of about 50 cubic feet per second (cfs) to a downstream natural channel.

Dam rehabilitation, planned for Fiscal Year 2009, will include adding a central filter into the existing earth dam, repair work of the dam embankment, and removal of existing trees and large tree roots in accordance with current dam safety practices. New trash racks will also be installed on the primary outlet of each of the four City jurisdictional dams.

### **Fiscal Year**

---

FY 2009	\$515,000
FY 2010	\$5,000
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$520,000



Location: T3N/R3E



**Legend**

- Phoenix Detention Basin No. 7 (026.01.30)
- East Park Dam
- North Mountain Flood Detention Basin No. 3
- West Park Dam
- Floodplain
- Floodway

---

# ADOT Pit Modifications

PCN: 035.04.31

## Don Rerick, P.E., Project Manager

602-506-4878  
djr@mail.maricopa.gov

Supervisory District: 5  
Jurisdiction: Guadalupe  
Origination: FY 1994 Prioritization Procedure  
Resolution(s): FCD 1999R012  
IGA(s): FCD 99003, 99004, 99005

This largely completed project provides a storm drain collection system and four retention basins located along the Highline Canal that capture and convey the 10-year storm event within the Town of Guadalupe and east of Avenida del Yaqui. Runoff from within the Town had historically flooded low-lying houses and collected along the Highline Canal, where it eventually overtopped the canal and caused damage to downstream Tempe properties.

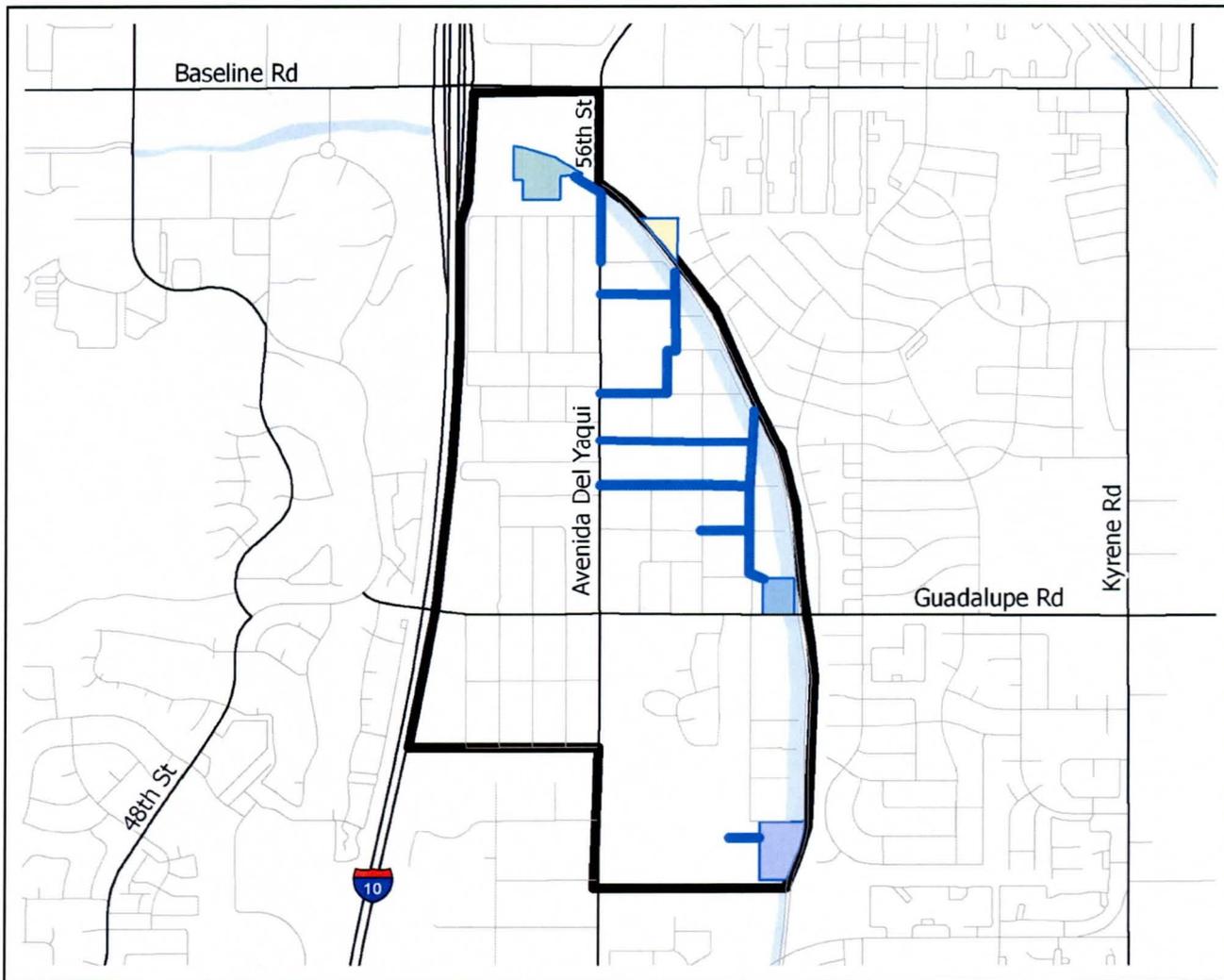
Three of the project's four basins are located within the Town and have been landscaped and converted to parks. The remaining basin, along the east side of the canal in Tempe, was landscaped and fenced due to its small size.

Construction is complete with the exception of a potential future pump station that may be designed and constructed by the City of Tempe in a large drainage basin near I-10 and Warner Road. In accordance with the project IGA, the District will participate in a cost share if construction is completed by the end of Fiscal Year 2009.

The Town owns, operates and maintains the storm drain system and four basins. Total project costs have been less than \$7 million.

### Fiscal Year

FY 2009	\$5,000
FY 2010	\$0
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$5,000



Location: T1S/R4E



**Legend**

-  Storm Drain
-  North Basin
-  Northeast Basin
-  Central Basin
-  South Basin
-  Town of Guadalupe
-  Floodplain
-  Floodway

---

# Laveen Area Conveyance Channel

PCN: 117.08.31

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

602-506-2943

bao@mail.maricopa.gov

Supervisory District: 5

Jurisdiction: Phoenix

Origination: FY 2002 Prioritization Procedure

Resolution(s): FCD 2000R011

IGA(s): FCD 2000A021, 2000A021A, 2000A021B

The Laveen Area Conveyance Channel is a public and private partnership that improved the Maricopa Drain into a regional flood control facility to reduce flooding in the Laveen area. The project consisted of 5.8 miles of conveyance channel and a detention basin at 43rd Avenue and Southern Avenue.

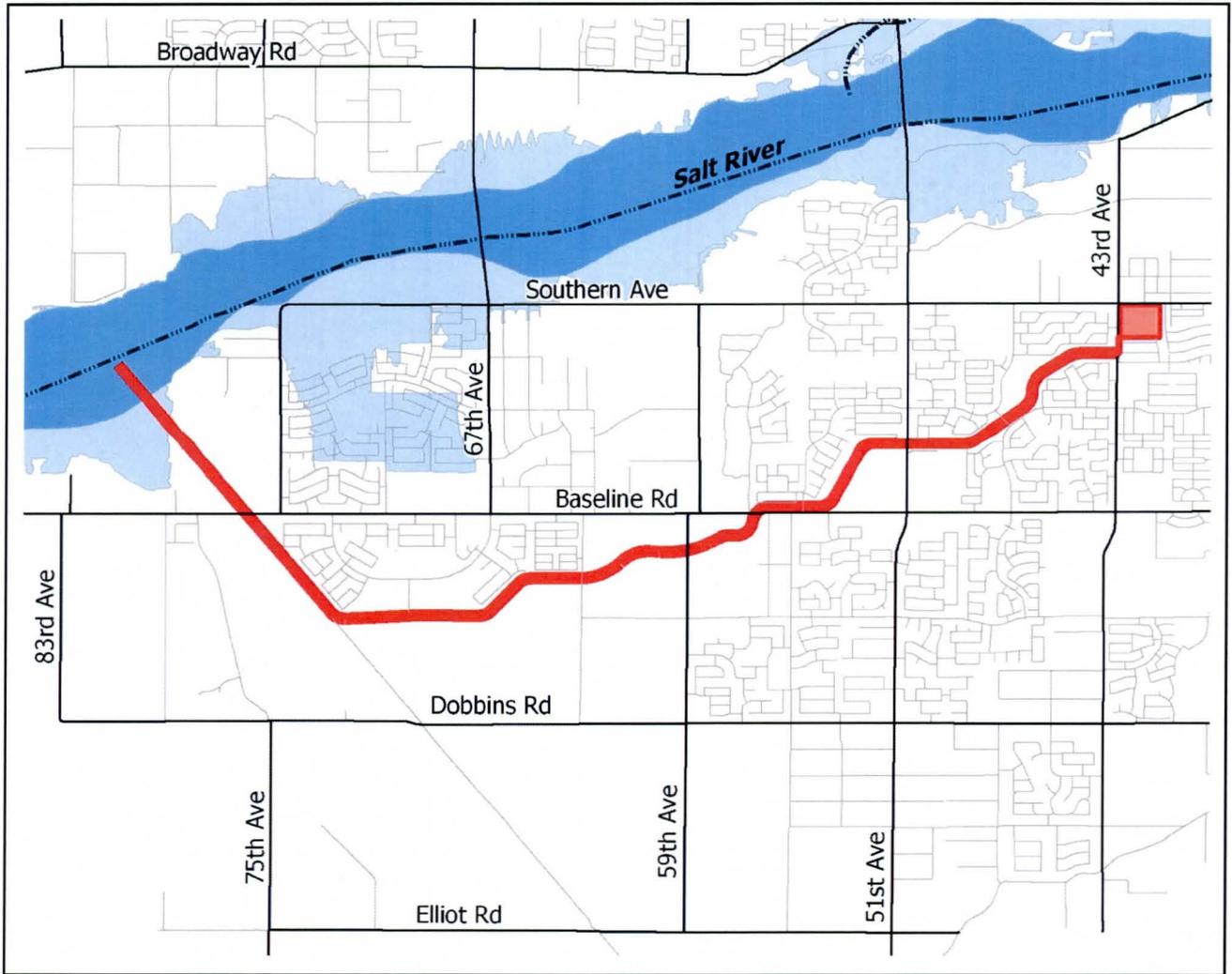
The District's project involvement is complete with the exception of minor land acquisitions and construction of a swale, scheduled for Fiscal Year 2009.

Landscaping by the City of Phoenix is ongoing to allow the channel and basin to function as City park facilities. The District will continue to maintain the project outfall.

### **Fiscal Year**

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FY 2009	\$165,000
FY 2010	\$0
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$165,000



**Legend**

- Laveen Area Conveyance Channel (117.08.31)
- Basin Site
- Floodplain
- Floodway

Location: T1S/R1E, T1S/R2E, T1N/R1E, T1N/R2E

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# 23rd Avenue & Roeser Road Basin & Storm Drain

PCN: 117.09.31

## Scott Vogel, P.E., Project Manager

602-506-4771

csv@mail.maricopa.gov

Supervisory District: 5

Jurisdiction: Phoenix

Origination: FY 2005 Prioritization Procedure

Resolution(s): FCD 2003R008

IGA(s): FCD 2003A004

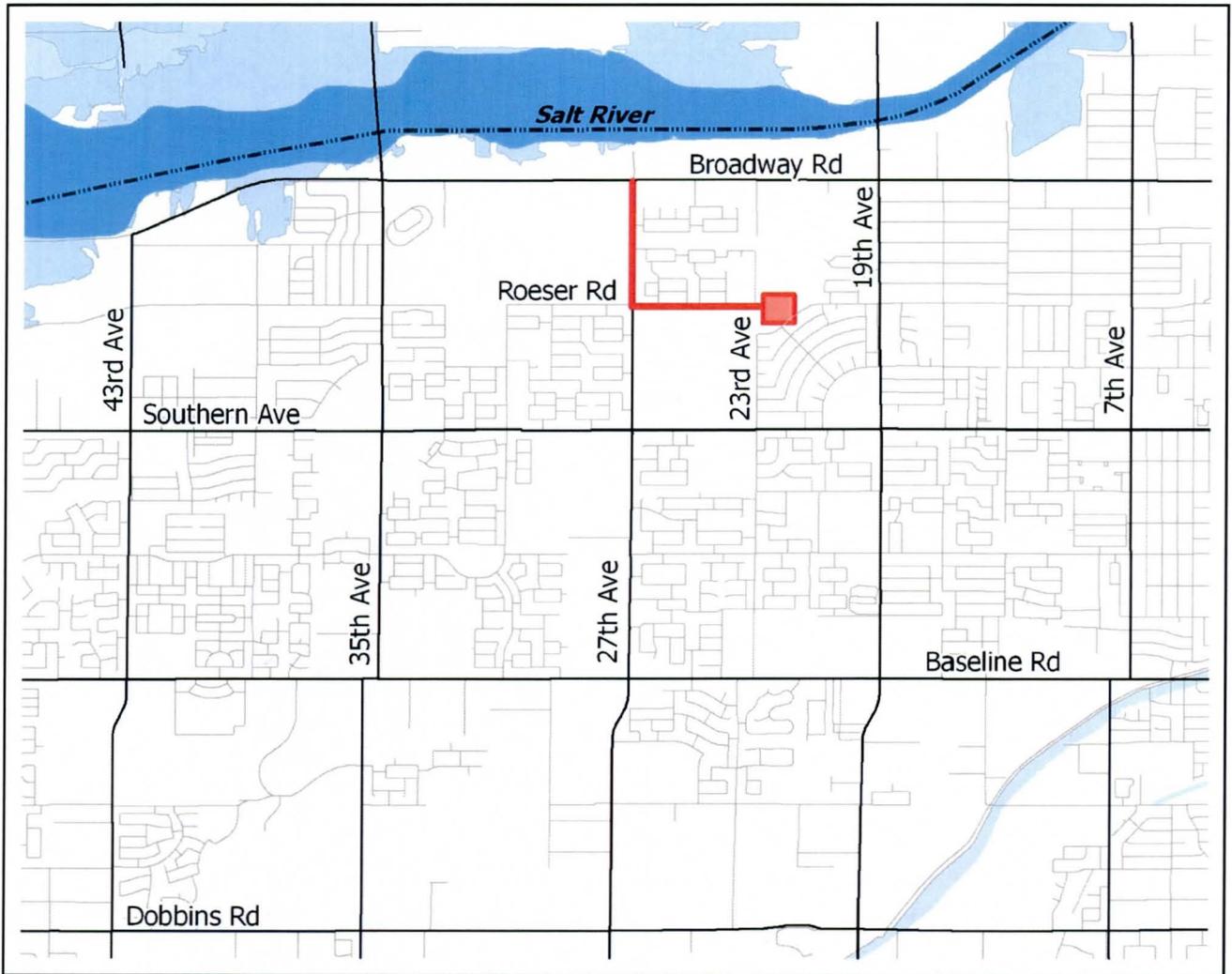
The 23rd Avenue/Roeser Road Detention Basin & Storm Drain is identified as an element of regional flood control infrastructure as defined by the recommended plan for the South Phoenix/Laveen Drainage Improvement Project. A proposed 10-acre detention basin, to be located on the northeast corner of 23rd 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 flows into a storm drain system to be constructed along Roeser Road between 27th Avenue and Broadway Road. This storm drain will then discharge into an existing 108-inch storm drain that will convey the flows from Broadway Road to the Salt River.

The City of Phoenix is the lead agency for all project tasks and will own, operate and maintain the completed project. The City and District are sharing equally in project costs.

Design is complete. Storm drain construction is planned for Fiscal Year 2009, and basin construction is scheduled for Fiscal Year 2011.

### Fiscal Year

FY 2009	\$1,023,000
FY 2010	\$10,000
FY 2011	\$855,000
FY 2012	\$1,064,000
FY 2013	\$0
5-Year Program	<u>\$2,952,000</u>



Location: T1N/R2E



**Legend**

- Proposed Storm Drains (117.09.31)
- Proposed Basin (117.09.31)
- Floodplain
- Floodway

---

# Rittenhouse Basin

PCN: 121.03.32

## Scott Vogel, P.E., Project Manager

602-506-4771

csv@mail.maricopa.gov

Supervisory District: 1

Jurisdiction: Gilbert

Origination: FY 2001 Prioritization Procedure

Resolution(s): FCD 1999R014

IGA(s): N/A

The District's East Maricopa Floodway (EMF) Mitigation Study identified drainage and flooding issues associated with the 15,000 cfs 100-year flow exceeding the EMF's 8,500 cfs capacity. The study proposed two large off-line detention basins - the Rittenhouse and Chandler Heights Basins - to mitigate EMF flows.

Rittenhouse Basin construction is being accomplished in multiple phases. Design and the first phase of construction have been completed, and the second phase of construction is scheduled to begin in Fiscal Year 2009. The total basin area is approximately 160 acres.

Although basin construction is being accomplished by the District alone, the Town

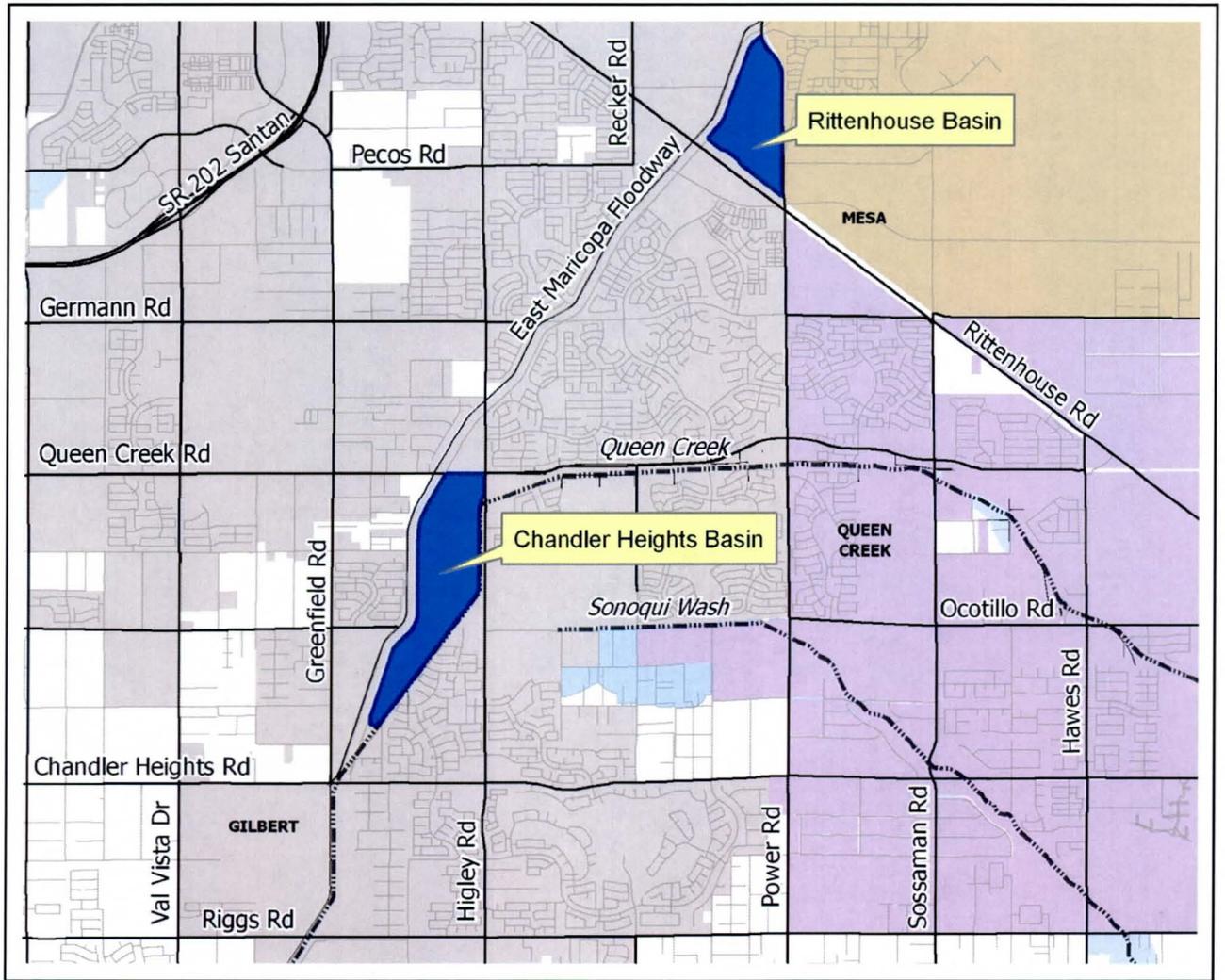
of Gilbert will fund recreational amenities and assume certain operation and maintenance obligations.

The project IGA requires the Town to purchase an easement on the excavated basin site within six months of project completion at a value equal to approximately 50-percent of the appraised fair market value.

### **Fiscal Year**

---

FY 2009	\$5,680,000
FY 2010	\$2,950,000
FY 2011	\$2,000,000
FY 2012	\$10,000
FY 2013	\$0
5-Year Program	<hr/> \$10,640,000



Location: T1S/R6E



**Legend**

- Basins
- Gilbert
- Mesa
- Queen Creek
- Floodplain
- Floodway

---

# Chandler Heights Basin

PCN: 121.03.33

## Scott Vogel, P.E., Project Manager

602-506-4771  
csv@mail.maricopa.gov

Supervisory District: 1  
Jurisdiction: Gilbert  
Origination: FY 2001 Prioritization Procedure  
Resolution(s): FCD 1999R014  
IGA(s): N/A

The District's East Maricopa Floodway (EMF) Mitigation Study identified drainage and flooding issues associated with the 15,000 cfs 100-year flow exceeding the EMF's 8,500 cfs capacity. The study proposed two large off-line detention basins - the Rittenhouse and Chandler Heights Basins - to mitigate EMF flows.

Chandler Heights Basin reduces flows from the Queen Creek and Sonoqui washes into the EMF. Construction is being accomplished in five phases. Design and the first two phases of construction have been completed, and the third phase of construction is scheduled for Fiscal Year 2011.

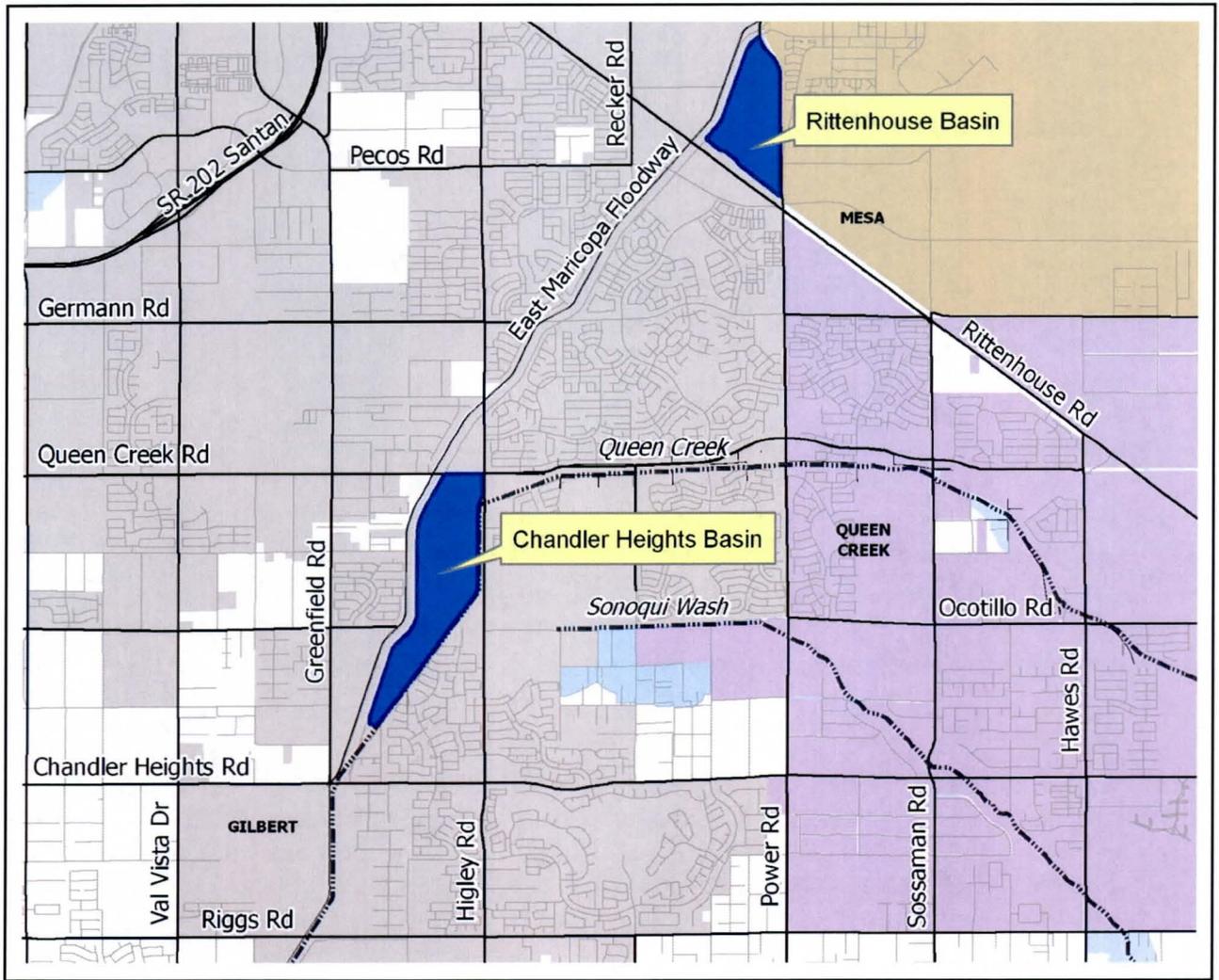
Although basin construction is being accomplished by the District alone, it is anticipated that the Town of Gilbert will

fund recreational amenities, and assume certain operation and maintenance obligations in the future.

### **Fiscal Year**

---

FY 2009	\$10,000
FY 2010	\$5,000
FY 2011	\$4,010,000
FY 2012	\$10,000
FY 2013	\$5,200,000
5-Year Program	<hr/> \$9,235,000



Location: T2S/R6E



**Legend**

- Basins
- Gilbert
- Mesa
- Queen Creek
- Floodplain
- Floodway

---

# Tres Rios

PCN: 126.01.31

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

602-506-4878  
djr@mail.maricopa.gov

Supervisory District: 5

Jurisdiction: Phoenix, Avondale, Unincorporated Maricopa County

Origination: U.S. Army Corps of Engineers Feasibility Study

Resolution(s): FCD 2004R005

IGA(s): FCD 2004A017

The Tres Rios Project is a federal project under the auspices of the U.S. Army Corps of Engineers and sponsored locally by the City of Phoenix.

The project is located along the Salt and Gila rivers, from about 83rd Avenue to the Agua Fria River, and consists of the restoration of habitat within and along the river. It involves construction of wetlands; open water marshes and riparian corridors; and a flood control levee along the north bank of the river from approximately 105th Avenue to the Agua Fria River to remove property and homes along the river from the floodplain.

The District's participation in accordance with the project resolution and IGA includes design review and coordination, \$2 million in levee

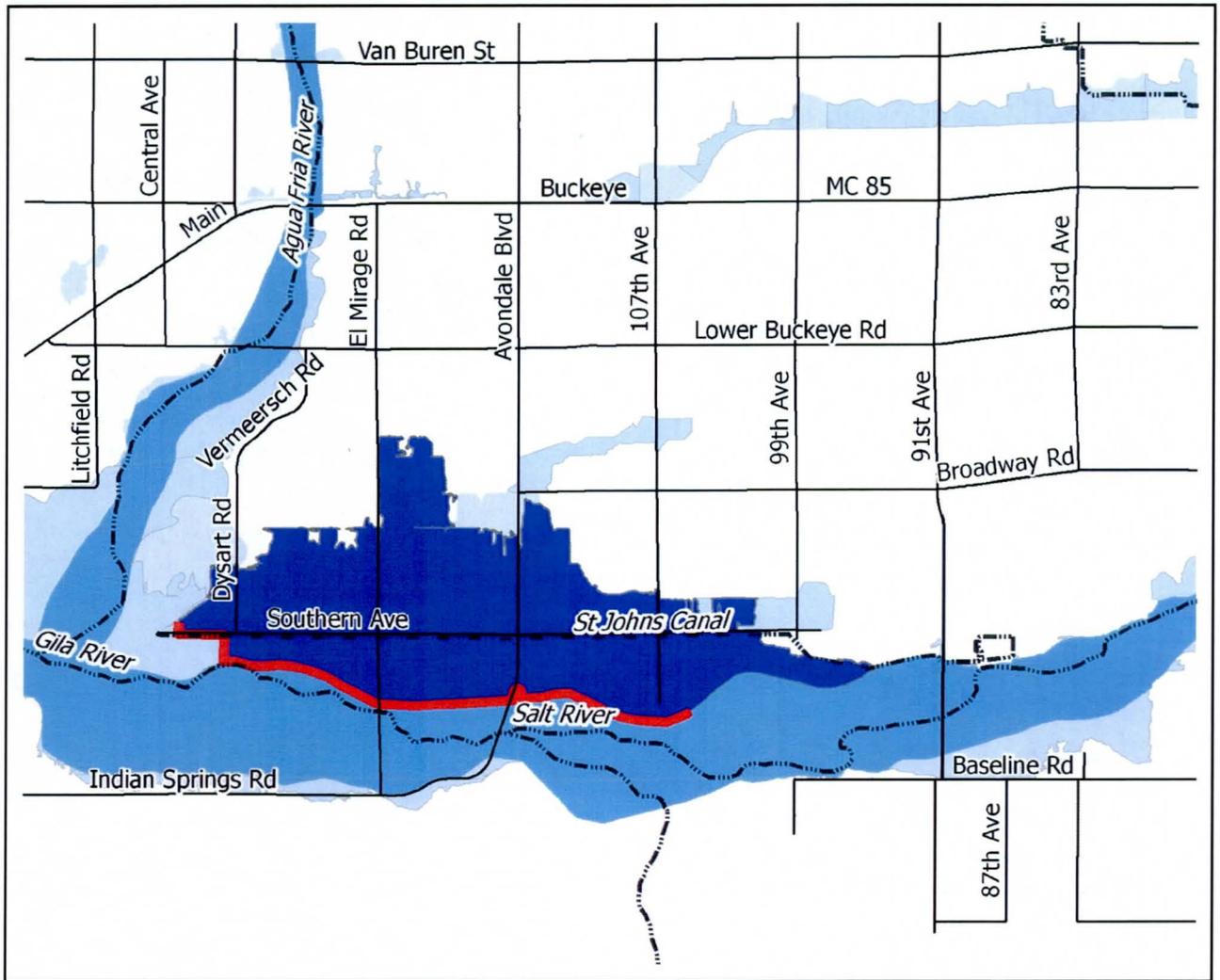
construction funding, operation and maintenance of the levee, and contribution of District-owned land required for the project.

The levee design and construction will occur in three phases - from 105th to 115th Avenue, 115th to 123rd Avenue, and 123rd to 137th Avenue. Design of the first two phases and construction of the first phase are complete, and the second phase of construction is scheduled to be complete by 2009. The third phase of design is underway and construction has not yet been scheduled.

### **Fiscal Year**

---

FY 2009	\$1,020,000
FY 2010	\$0
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$1,020,000



Location: T1N/R1W, T1N/R1E



**Legend**

- North Levee (126.01.31)
- Benefited Area
- Floodplain
- Floodway

---

# White Tanks FRS No.4 Outlet Channel

PCN: 201.01.31

## Valerie Swick, P.E., Project Manager

602-506-2929

vas@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Buckeye

Origination: FY 2007 Prioritization Procedure

Resolution(s): Pending

IGA(s): Pending

The District's Buckeye ADMP is examining alternatives to convey flows from White Tanks FRS No.4 to the Gila River Channel. Alternatives include a base-flow channel, but scheduling presented here assumes construction of a 100-year conveyance, primarily along the Tuthill Road alignment.

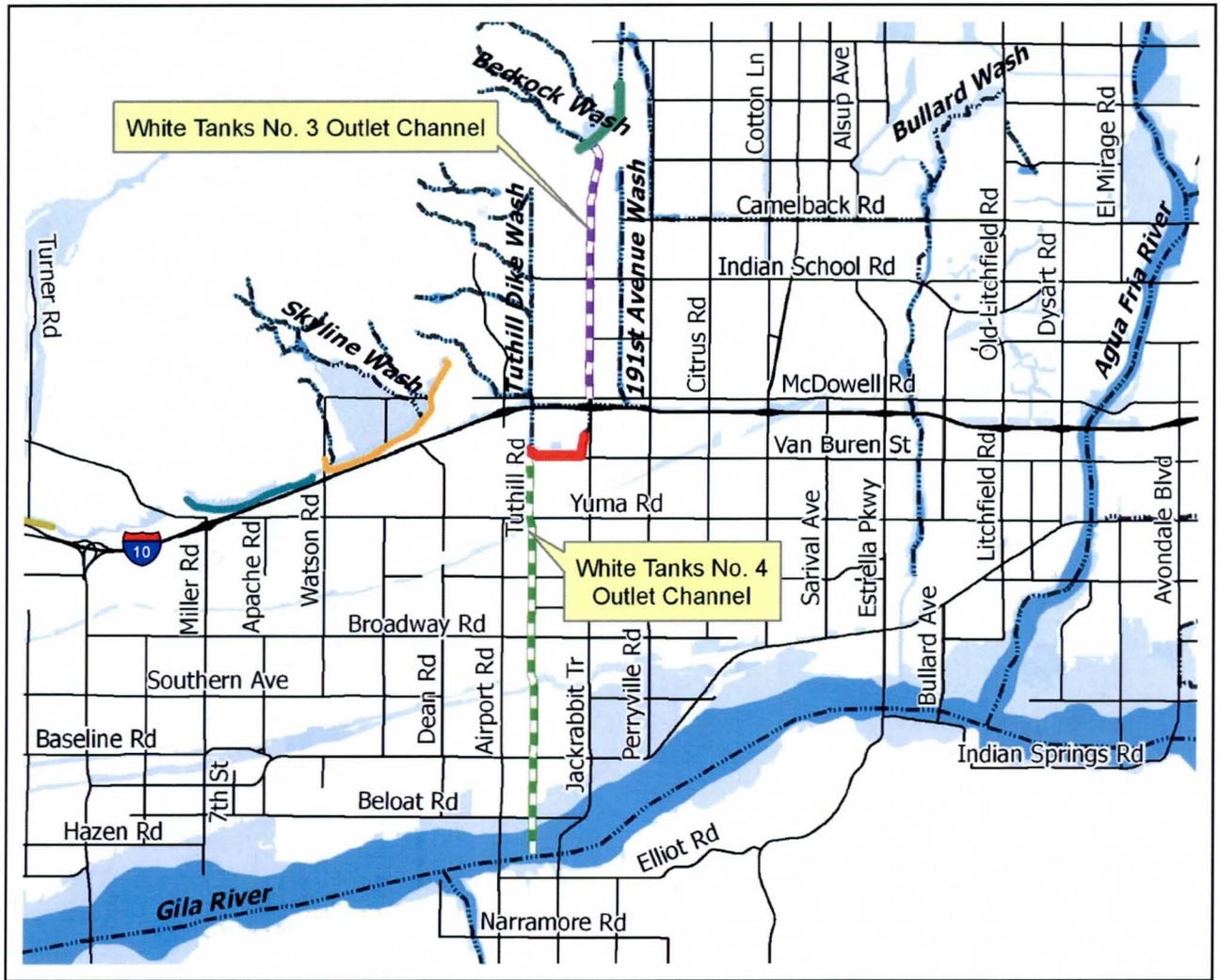
Design of the selected alternative is scheduled to commence in Fiscal Year 2011, followed by right-of-way acquisition and construction. Right-of-way acquisition may accelerate to best leverage market conditions and the status of area development.

This project will complement the rehabilitation of White Tanks FRS No.3, the construction of an outlet channel for White Tanks FRS No.3, and the rehabilitation of White Tanks FRS No.4.

### Fiscal Year

---

FY 2009	\$0
FY 2010	\$10,000
FY 2011	\$2,120,000
FY 2012	\$14,150,000
FY 2013	\$4,250,000
5-Year Program	<hr/> \$20,530,000



Location: T1N/R2W, T2W/R2W



**Legend**

-  White Tanks No. 3 Outlet Channel
-  White Tanks No. 4 Outlet Channel
-  Buckeye FRS No. 1
-  Buckeye FRS No. 2
-  Buckeye FRS No. 3
-  White Tanks FRS No. 3
-  White Tanks FRS No. 4

-  FEMA Floodplain
-  FEMA Floodway

---

# White Tanks FRS No.4 Rehabilitation

PCN: 201.02.31

## Dave Degerness, P.E., Project Manager

602-506-4730

djd@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Buckeye

Origination: FY 2006 Prioritization Procedure

Resolution(s): Pending

IGA(s): Pending

Corrective action is required to bring White Tanks Flood Retarding Structure No.4 (White Tanks FRS No.4), operated and maintained by the District, into compliance with dam safety standards and requirements.

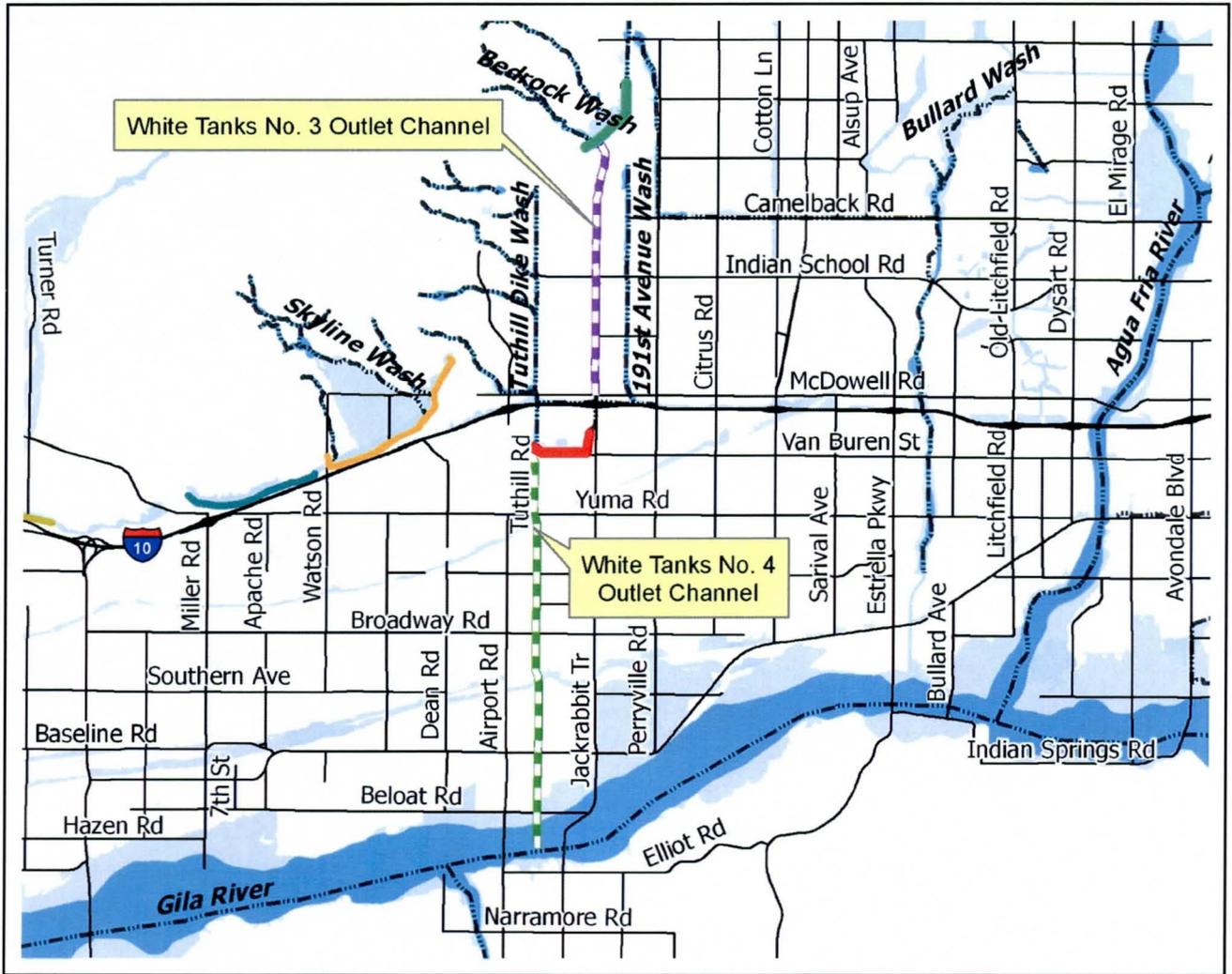
The District completed Phase I Assessments for White Tanks FRS No.4, and the Arizona Department of Water Resources (state agency with regulatory authority) classified the dam as having safety deficiencies requiring corrective action. These deficiencies include transverse cracking of the embankment, an inadequate left spillway and unprotected corrugated metal pipe outlets. The Natural Resources Conservation Service (NRCS) 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.

Design efforts are scheduled for Fiscal Year 2009.

### **Fiscal Year**

---

FY 2009	\$780,000
FY 2010	\$6,150,000
FY 2011	\$1,150,000
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$8,080,000



White Tanks No. 3 Outlet Channel

White Tanks No. 4 Outlet Channel



Location: T1N/R2W, T2N/R2W



**Legend**

-  White Tanks No.3 Outlet Channel
-  White Tanks No.4 Outlet Channel
-  Buckeye FRS No.1
-  Buckeye FRS No.2
-  Buckeye FRS No.3
-  White Tanks FRS No.3
-  White Tanks FRS No.4
-  FEMA Floodplain
-  FEMA Floodway

---

# McMicken Dam Project

PCN: 202.02.31

## Mike Greenslade, P.E., Project Manager

602-506-5426  
mdg@mail.maricopa.gov

Supervisory District: 4  
Jurisdiction: Surprise  
Origination: FCD Staff Recommendation - Phase II Structures Assessment Program  
Resolution(s): Pending  
IGA(s): Pending

The McMicken Dam Project was constructed by the U.S Army Corps of Engineers in 1954 and 1955 to protect Luke Air Force Base, the Litchfield Park Naval Air Facility and agricultural activities in the area from flooding; it also provides flood protection for critical public facilities and infrastructure including hospitals, schools, police and fire stations, freeways and other public roadways, railroads and the Beardsley Canal. The McMicken Dam Project includes McMicken Dam itself (approximately nine miles in length), the McMicken Dam Outlet Channel (approximately six miles in length) and the McMicken Dam Outlet Wash (approximately four miles in length) that discharges to the Agua Fria River.

The ability of the McMicken Dam Project to maintain the current level of flood protection for the benefit of the public in an increasingly urbanized environment is in question due to significant concerns regarding aging infrastructure, land subsidence, earth fissuring, urbanization encroachment and current dam safety standards. These dam safety issues have led the District to determine that an overall rehabilitation or replacement of the dam is required. Alternatives may include a modified dam, floodways or basins which will provide a minimum of 100-year flood protection. The District has pursued, and continues to pursue, federal funding assistance for this project.

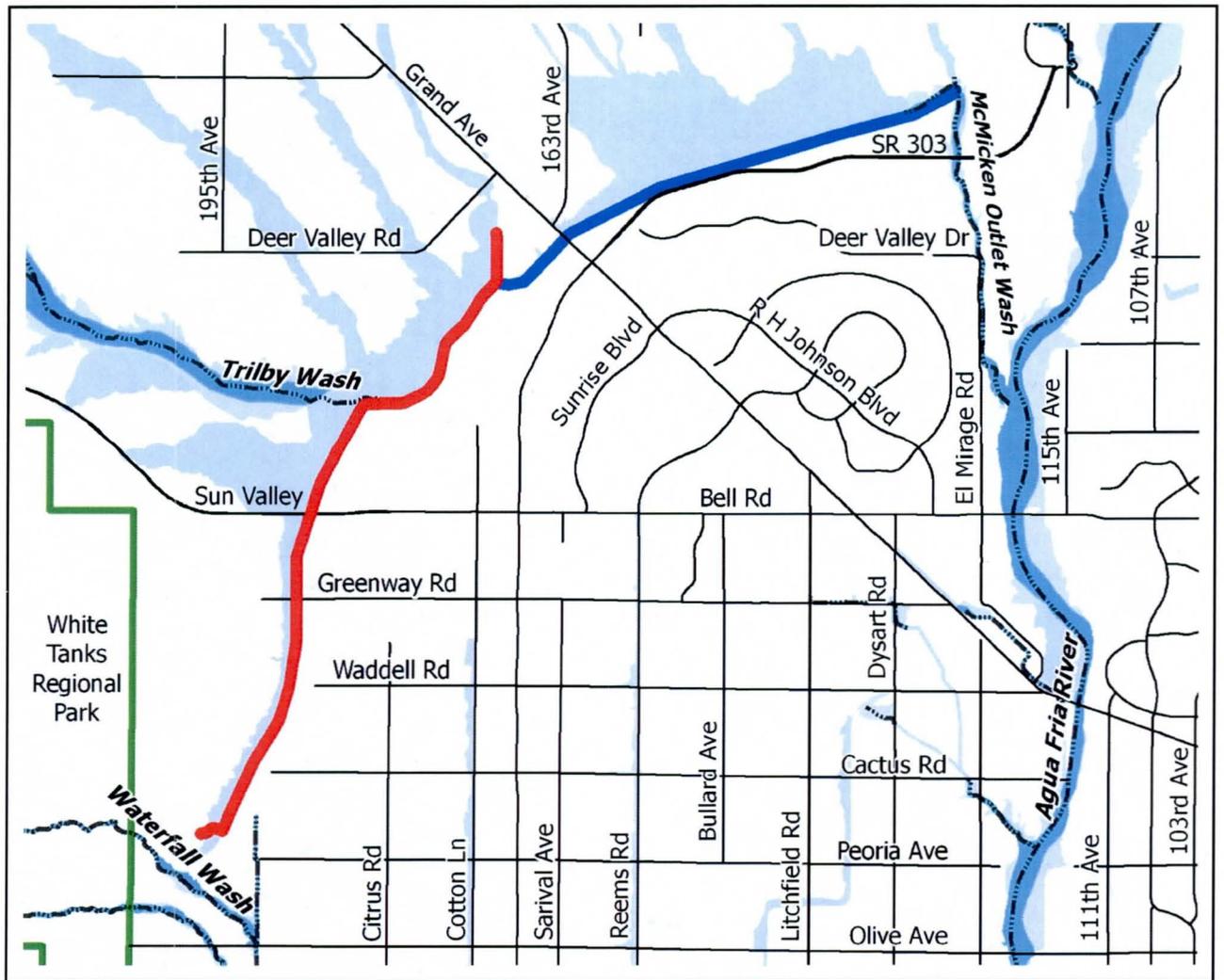
Project planning will include the coordination of any interested stakeholders for the incorporation of a recreational cost share component to the rehabilitation project.

Design for the dam's rehabilitation or replacement is scheduled to begin in Fiscal Year 2010, followed by phased construction several years thereafter.

### **Fiscal Year**

---

FY 2009	\$20,000
FY 2010	\$1,580,000
FY 2011	\$40,000
FY 2012	\$0
FY 2013	\$8,250,000
5-Year Program	<hr/> \$9,890,000



Location: T3N/R2W



**Legend**

-  McMicken Dam
-  McMicken Dam Outlet Channel
-  White Tank Mountain Regional Park Boundary
-  FEMA Floodplain
-  FEMA Floodway

---

# Buckeye FRS No.1 Rehabilitation

PCN: 207.01.31

## Tom Renckly, P.E., Project Manager

602-506-8610

trr@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Buckeye, Palo Verde and Liberty

Origination: FY 2006 Prioritization Procedure

Resolution(s): Pending

IGA(s): Pending

Buckeye FRS No.1 is the westernmost of a series of three flood control dams designed and built by the Soil Conservation Service (now the Natural Resources Conservation Service, or 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 District and is regulated by the Arizona Department of Water Resources (ADWR).

Since its construction, the dam has experienced considerable transverse cracking. ADWR has identified the transverse cracking in Buckeye FRS No.1 as a dam safety deficiency requiring corrective action. The District completed Phase I Assessments of the dam, and has requested NRCS federal cost share assistance under Public

Law 106-472 for a rehabilitation project to address dam safety concerns and to maintain flood control benefits to downstream properties for the next 100 years.

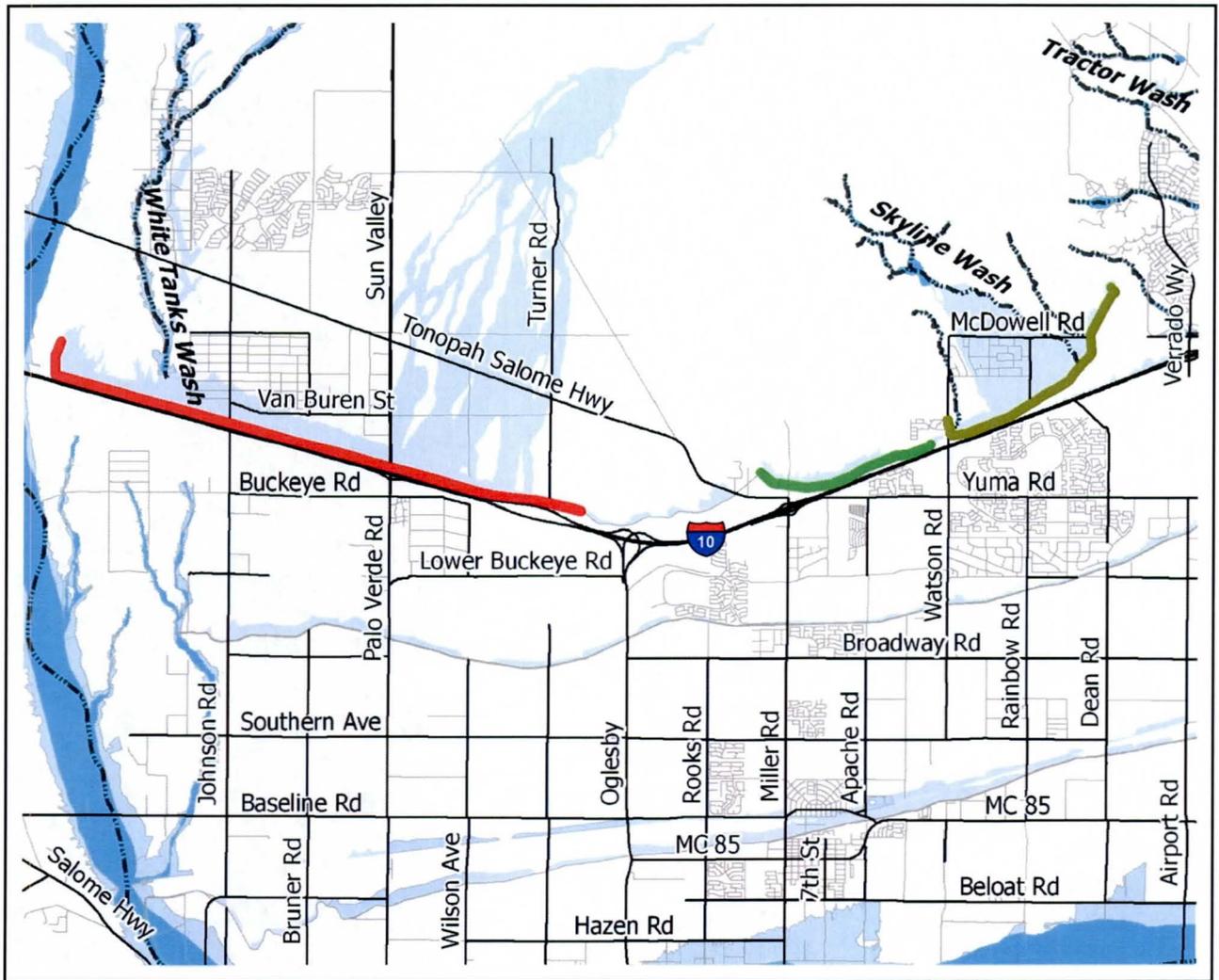
Alternatives under consideration include a modified dam, a channel/levee system and combinations of both providing a minimum of 100-year flood protection.

Buckeye FRS No.1 has been identified as a major component of the proposed Maricopa Regional Trail Phase 3 Master Plan. Ongoing project planning includes coordination with stakeholders for the potential incorporation of a recreational federal cost share component to the rehabilitation project.

Design is scheduled to begin in Fiscal Year 2010.

### Fiscal Year

FY 2009	\$20,000
FY 2010	\$1,080,000
FY 2011	\$8,250,000
FY 2012	\$8,250,000
FY 2013	\$8,250,000
5-Year Program	<u>\$25,850,000</u>



**Legend**

- Buckeye FRS No.1
- Buckeye FRS No.2
- Buckeye FRS No.3
- Floodplain
- Floodway

Location: T1N/R3W, T1N/R4W, T1N/R5W

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# Downtown Buckeye Regional Basin & Storm Drain

PCN: 211.03.31

## Mike Duncan, P.E., CFM, Project Manager

602-506-4732

mwd@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Buckeye

Origination: FY 2006 Prioritization Procedure

Resolution(s): FCD 2006R007

IGA(s): FCD 2006A014

The Town of Buckeye historically experienced flooding conditions downtown in the vicinity of Monroe Avenue (MC 85). The District completed a Candidate Assessment Report that identified potential structural solutions: a 10-year storm drain system and outfall, and 100-year retention basins.

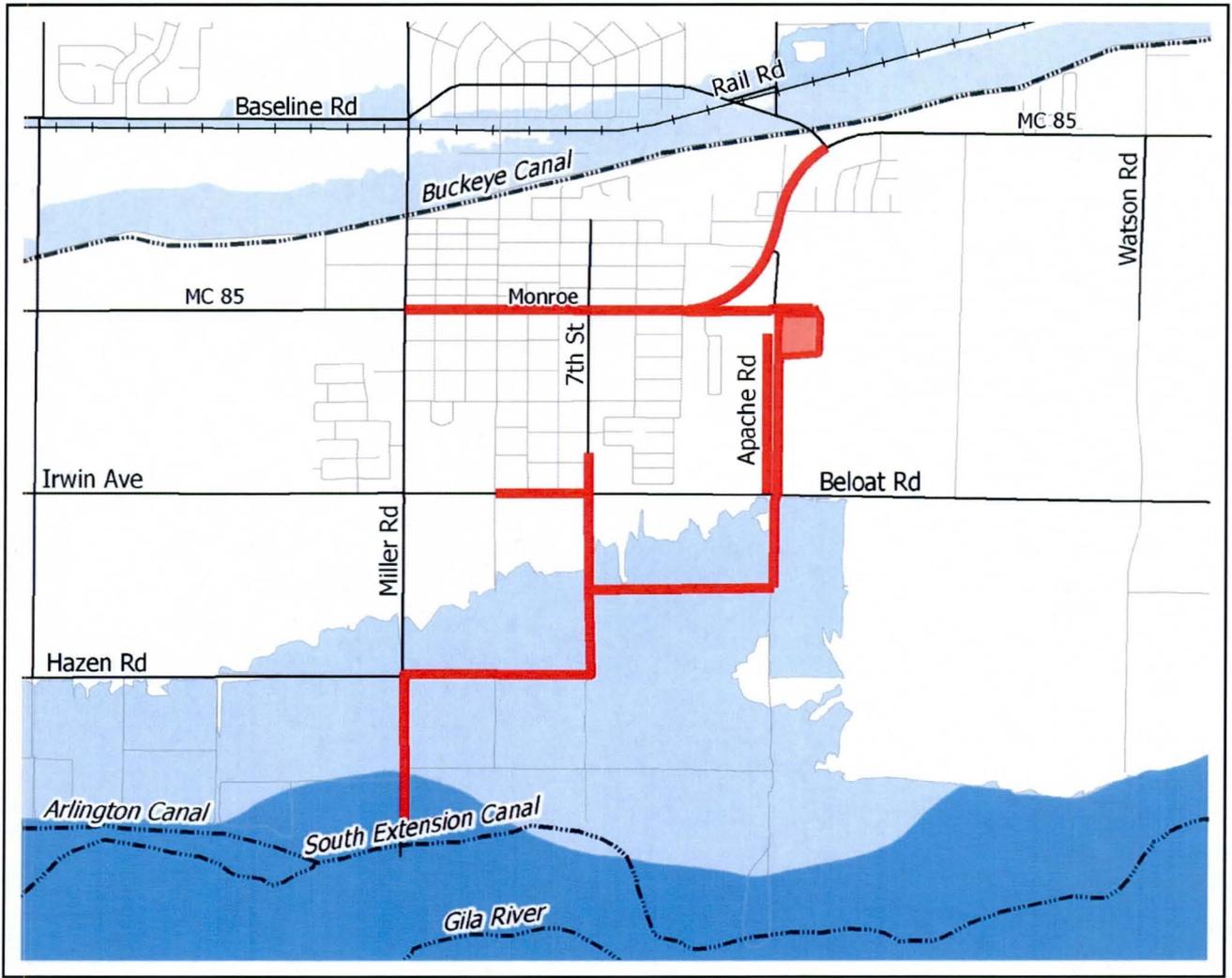
This project will relieve historic downtown Buckeye of frequent flooding by implementing storm drains, channels, retention basins, and an outlet infrastructure that will mitigate flood damages to residential, commercial, and industrial properties, government buildings, and schools, while increasing traffic safety and improving the community's flood insurance program rating.

The project's IGA commits the District to provide 50 percent reimbursement to the Town of Buckeye (the project's lead agency) no earlier than Fiscal Year 2011, by which time construction is expected to be complete.

### **Fiscal Year**

---

FY 2009	\$20,000
FY 2010	\$15,000
FY 2011	\$6,020,000
FY 2012	\$10,000
FY 2013	\$0
5-Year Program	<hr/> \$6,065,000



Location: T1S/R3W



**Legend**

- Proposed Basin
- Storm Drains and Open Channels Outfalls
- Floodplain
- Floodway

---

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

PCN: 300.01.31

## Mike Greenslade, P.E., Project Manager

602-506-5426

mdg@mail.maricopa.gov

Supervisory District: 2

Jurisdiction: Mesa

Origination: FCD Staff Recommendation - Phase II Structures Assessment Program

Resolution(s): FCD 2003R005

IGA(s): FCD 2004A009

Spook Hill FRS is a structural plan element of a Watershed Work Plan, prepared by the Natural Resources Conservation Service (formerly Soil Conservation Service) in January 1963, for the Buckhorn-Mesa Watershed Project located in Maricopa and Pinal counties. The dam 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 Arizona Department of Transportation (ADOT) is the lead agency in an effort to modify Spook Hill FRS to accommodate construction of the Power Road to University Drive segment of the Loop 202 freeway, which will pass over the dam and within the dam's floodway, and to address all identified dam safety deficiencies. Modifications correcting dam safety deficiencies include the installation of a central

filter throughout the dam to protect against cracking, slope erosion repair, and replacement of the principal spillway.

The District will provide easements to ADOT on District land, generating revenue that is expected to completely offset its \$5 million contribution to the modification costs.

### Fiscal Year

---

FY 2009	\$32,000
FY 2010	\$0
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$32,000



Location: T1N/R7E



- Legend**
- Freeway Overpass
  - Spook Hill FRS
  - - - Red Mountain Freeway
  - FEMA Floodplain
  - County Boundary
  - Apache Junction FRS
  - Apache Junction Floodway
  - Bulldog Floodway
  - Signal Butte FRS
  - Signal Butte Floodway
  - Spook Hill Floodway

---

# Powerline FRS Repairs

PCN: 310.XX.X1

## Tom Renckly, P.E., Project Manager

602-506-8610

trr@mail.maricopa.gov

Supervisory District: 1

Jurisdiction: Mesa

Origination: Dam Safety Review

Resolution(s): Pending

IGA(s): Pending

The District identified an earth fissure at Powerline FRS causing the Arizona Department of Water Resources to classify the dam as "unsafe, non-emergency, elevated risk."

Appropriate flood ALERT inspection and warning procedures have been put in place for this site-specific condition at the dam. The District anticipates site-specific dam safety remedial work, otherwise known as interim dam safety measures, will be required to assure the safety of the dam until its overall rehabilitation or replacement. Remedial work will likely include engineered, preventative updates to a segment of the dam.

Implementation is scheduled for Fiscal Year 2010.

### Fiscal Year

FY 2009	\$580,000
FY 2010	\$1,650,000
FY 2011	\$10,000
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$2,240,000



Location: T1S/R8E



**Legend**

-  Powerline FRS
-  Powerline Floodway
-  Vineyard FRS
-  County Border
-  Floodplain
-  Floodway

---

# Wickenburg Downtown Flooding Hazard Mitigation

PCN: 343.01.31

## Scott Vogel, P.E., Project Manager

602-506-4771

csv@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Wickenburg

Origination: FY 2005 Prioritization Procedure

Resolution(s): FCD 2005R008

IGA(s): FCD 2005A012, 2006A004

The Wickenburg Downtown Flooding Hazard Mitigation project includes approximately 5,000 feet of channel and levee improvements to capture the floodplain associated with Sol's Wash and a tributary, Hospital Wash, and convey the 100-year flows from upstream of Tegner Street to the Hassayampa River.

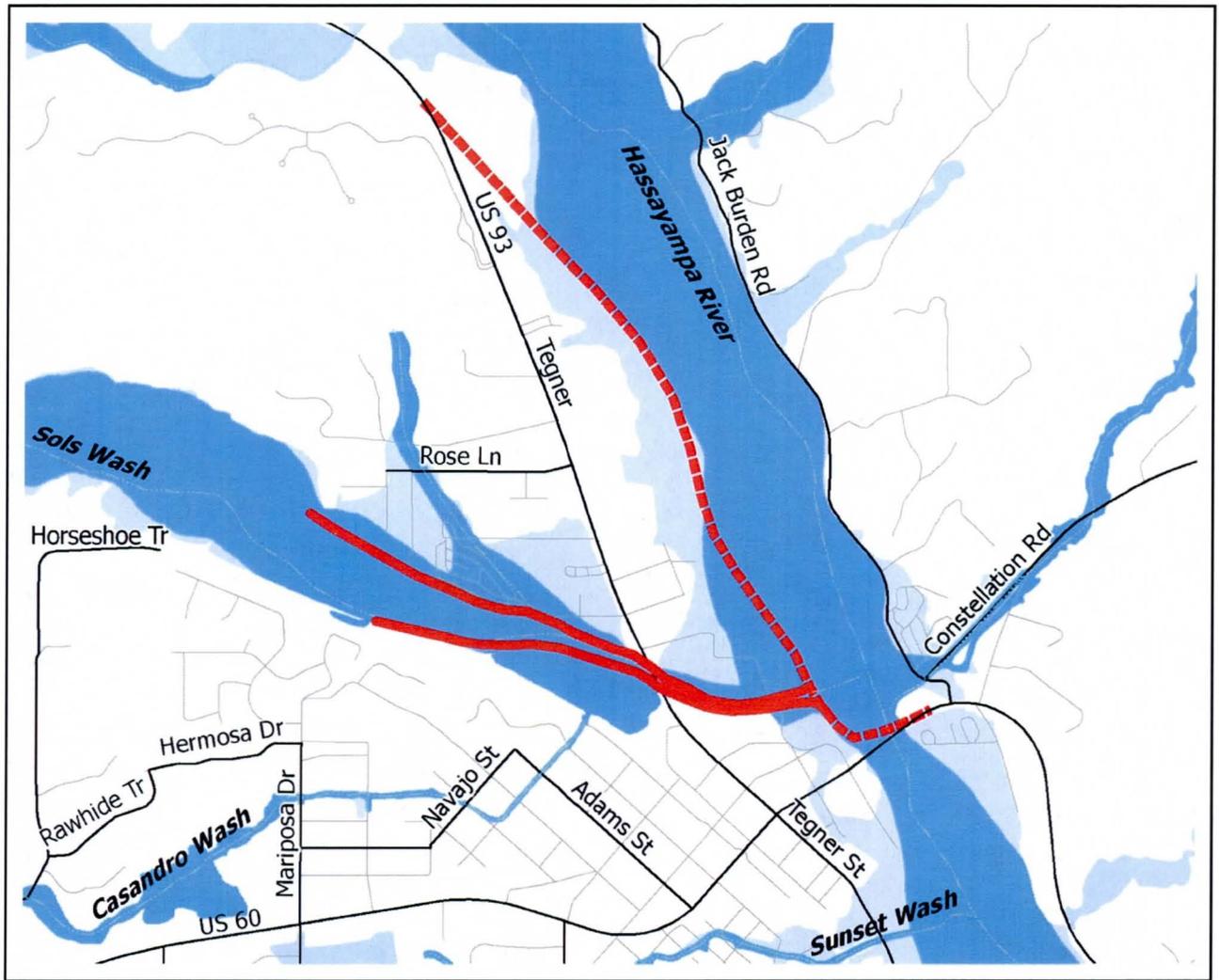
The project will provide a 100-year level of protection to portions of the Wickenburg downtown area subject to flooding and will provide flood control benefits along much of Sol's Wash within the Wickenburg town limits. It will also convey 100-year flood flows to the Highway 93 Interim Bypass Bridge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

Construction is underway and is expected to be completed in Fiscal Year 2009.

### **Fiscal Year**

---

FY 2009	\$2,256,000
FY 2010	\$0
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$2,256,000



Location: T7N/R5W



**Legend**

-  Proposed Levee & Channel Excavation
-  Proposed US 93 Alignment
-  FEMA Floodplain
-  FEMA Floodway

---

# New River

PCN: 400.06.31

Grand Avenue to Skunk Creek including Paradise Shores

## Scott Vogel, P.E., Project Manager

602-506-4771

csv@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Peoria

Origination: FY 2003 Prioritization Procedure

Resolution(s): FCD 2000R013

IGA(s): FCD 2002A010, 2004A004, 2007A006

The Middle New River Watercourse Master Plan (MNRWCMP) study undertaken by the District identified projects to improve the conveyance capacity of New River and provide bank protection. Improvements include channelization and bank protection for approximately two miles of New River and an 800-foot reach on the west side of New River south of Bell Road.

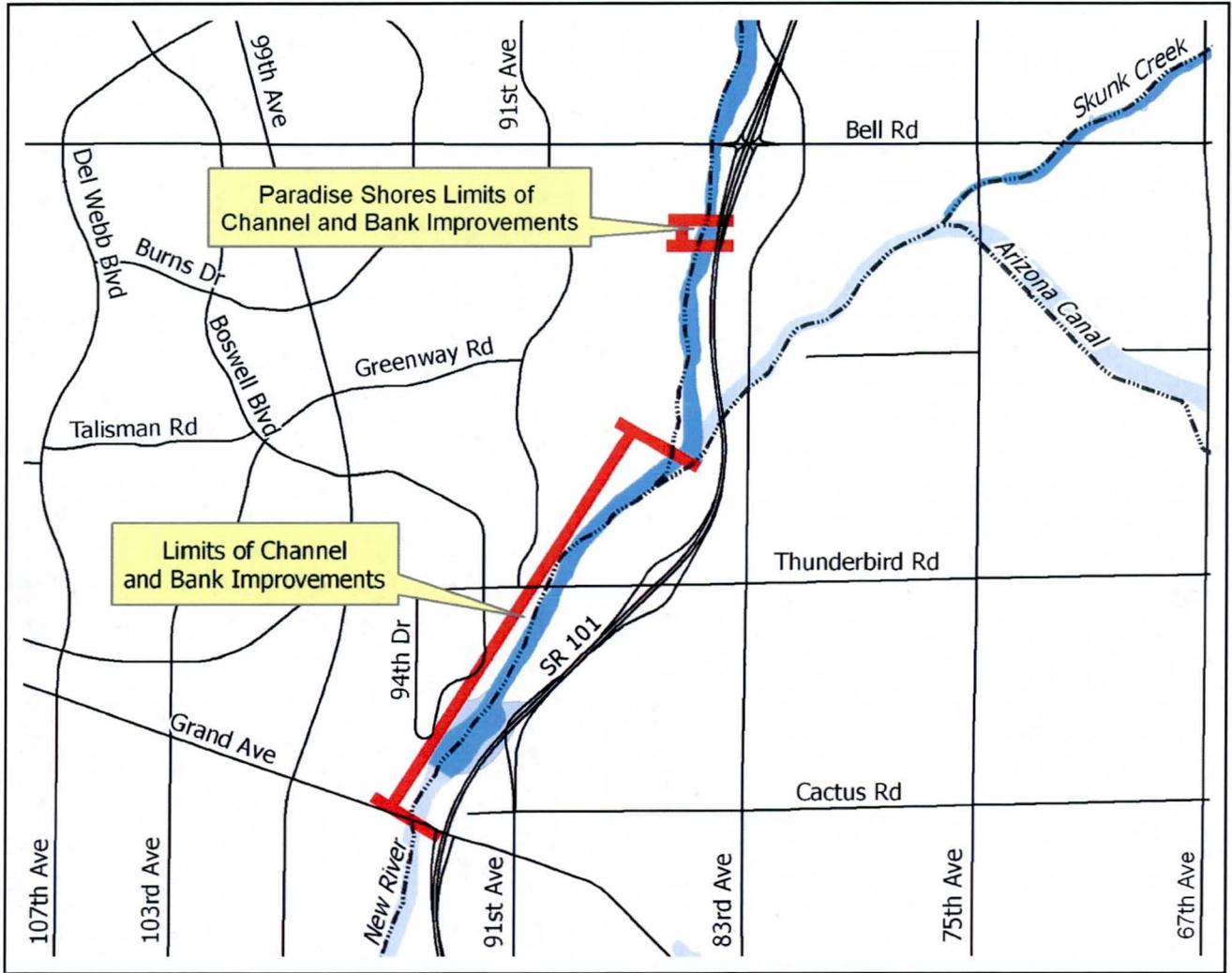
With the City of Peoria as a project partner, construction has been completed with the exception of channelization at the Thunderbird Road crossing. The City of Peoria will act as the lead agency for construction at Thunderbird Road, to be conducted in conjunction with road improvements anticipated in Fiscal Year 2009. District reimbursement to the City is

projected in Fiscal Year 2010 following the completion of construction.

This is the last reach of the New River that has not been improved consistent with the U.S. Army Corps of Engineers' "Phoenix, Arizona and Vicinity including New River" project.

### Fiscal Year

FY 2009	\$10,000
FY 2010	\$1,115,000
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<u>\$1,125,000</u>



Location: T3N/R1E, T4N/R1E



**Legend**

- Project Limits
- Floodplain
- Floodway

---

# Hermosa Vista/Hawes Road Storm Drain and Basin

PCN: 420.02.31

## Scott Vogel, P.E., Project Manager

602-506-4771

csv@mail.maricopa.gov

Supervisory District: 2

Jurisdiction: Mesa, Unincorporated Maricopa County

Origination: FY 2008 Prioritization Procedure

Resolution(s): FCD 2002R008

IGA(s): FCD 2004A002

The Spook Hill Area Drainage Master Plan (ADMP), completed in 2002, identified 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 Hermosa Vista/Hawes Road Storm Drain and Basin project is the first scheduled project in support of this ADMP and involves construction of a storm drain from Spook Hill FRS, along Hermosa Vista Drive, Hawes Road and McDowell Road. The storm drain connects to a local basin and a detention basin constructed at Hawes Road and Culver Street as a component of this project. The project will provide protection in conjunction with drainage

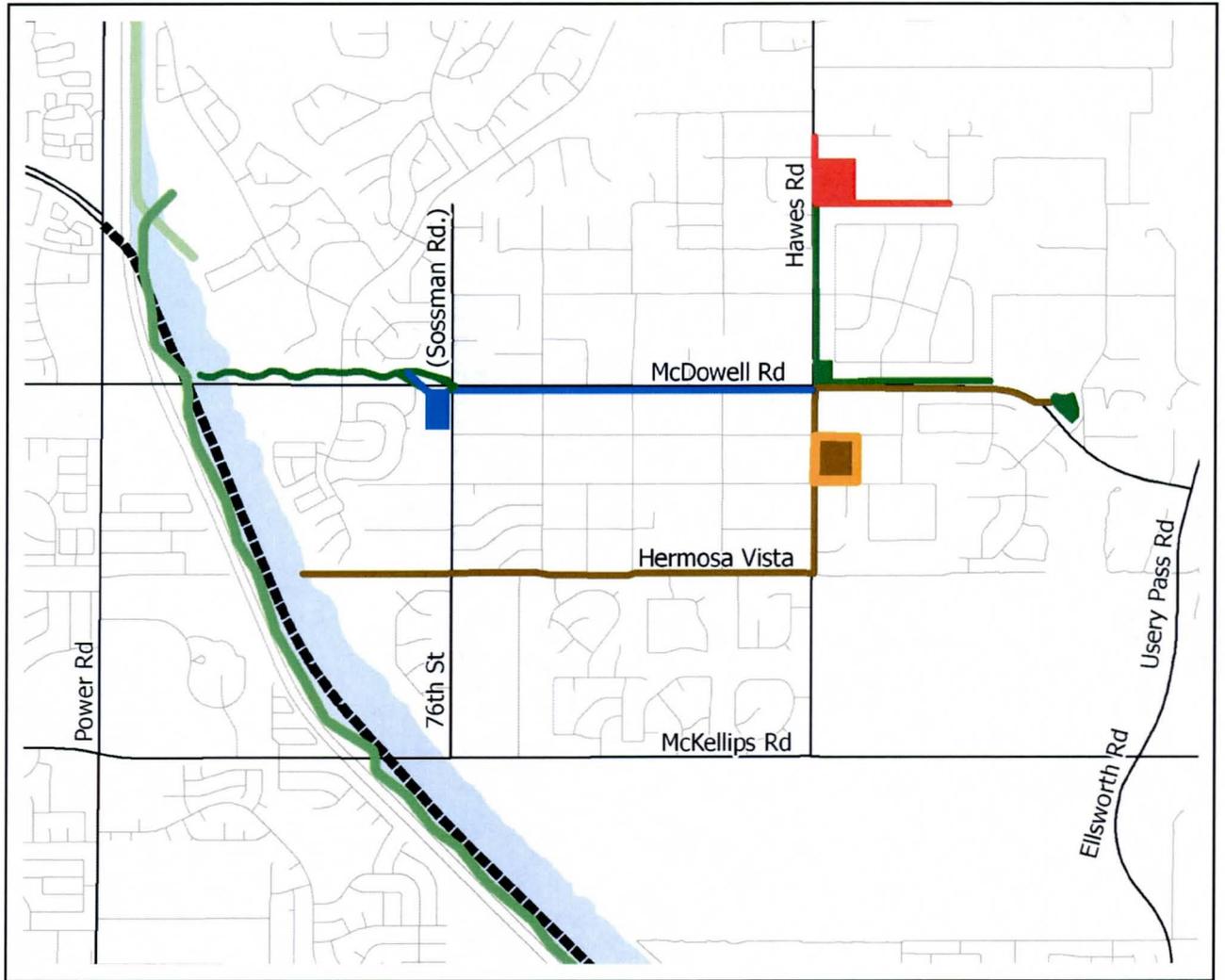
infrastructure constructed by the McDowell Road and Oak Street projects.

Construction is expected to begin in Fiscal Year 2009, with the City of Mesa as a project partner.

### **Fiscal Year**

---

FY 2009	\$7,440,000
FY 2010	\$1,460,000
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$8,900,000



Location: T1N/R7E



**Legend**

-  Existing Local Storm Drain and Basin
-  Hermosa Vista/Hawes Road Project (420.02.31)
-  McDowell Road Project (420.03.31)
-  Oak Street Project (420.XX.XX)
-  Spook Hill Basin Acquisition (420.01.32)
-  Red Mountain Freeway
-  Spook Hill FRS
-  Spook Hill Floodway
-  Floodplain
-  Floodway

---

# McDowell Road Basin & Storm Drain

PCN: 420.03.31

## Scott Vogel, P.E., Project Manager

602-506-4771

csv@mail.maricopa.gov

Supervisory District: 2

Jurisdiction: Mesa, Unincorporated Maricopa County

Origination: FY 2008 Prioritization Procedure

Resolution(s): FCD 2002R008

IGA(s): FCD 2004A002

The Spook Hill Area Drainage Master Plan (ADMP), completed in 2002, identified 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.

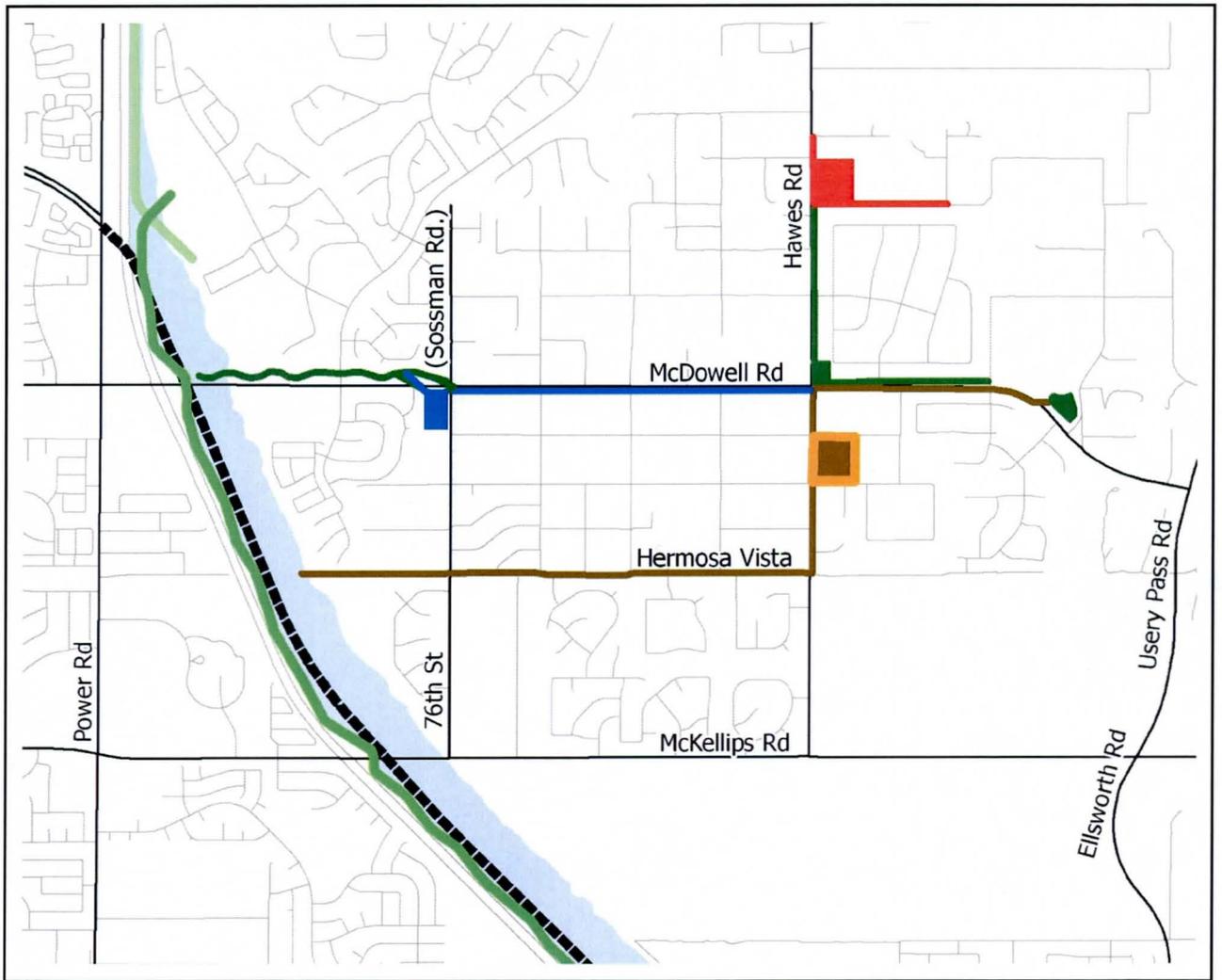
The McDowell Road Basin and Storm Drain project is the second scheduled project in support of this ADMP and involves construction of a basin at McDowell Road and 76th Street (Sossaman Road) and a storm drain east along McDowell Road to Hawes Road. This project will provide protection in conjunction with drainage infrastructure constructed by the Hermosa Vista/Hawes Road and Oak Street projects.

Construction is expected to begin in Fiscal Year 2010, with the City of Mesa as a project partner.

### **Fiscal Year**

---

FY 2009	\$15,000
FY 2010	\$3,781,000
FY 2011	\$2,220,000
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$6,016,000



Location: T1N/R7E



**Legend**

-  Existing Local Storm Drain and Basin
-  Hermosa Vista/Hawes Road Project (420.02.31)
-  McDowell Road Project (420.03.31)
-  Oak Street Project (420.XX.XX)
-  Spook Hill Basin Acquisition (420.01.32)
-  Red Mountain Freeway
-  Spook Hill FRS
-  Spook Hill Floodway
-  Floodplain
-  Floodway

---

# Oak Street Detention Basin and Storm Drain

PCN: 420.XX.X1

## Scott Vogel, P.E., Project Manager

602-506-4771

csv@mail.maricopa.gov

Supervisory District: 2

Jurisdiction: Mesa, Unincorporated Maricopa County

Origination: FY 2008 Prioritization Procedure

Resolution(s): FCD 2002R008

IGA(s): Pending

The Spook Hill Area Drainage Master Plan (ADMP), completed in 2002, identified 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.

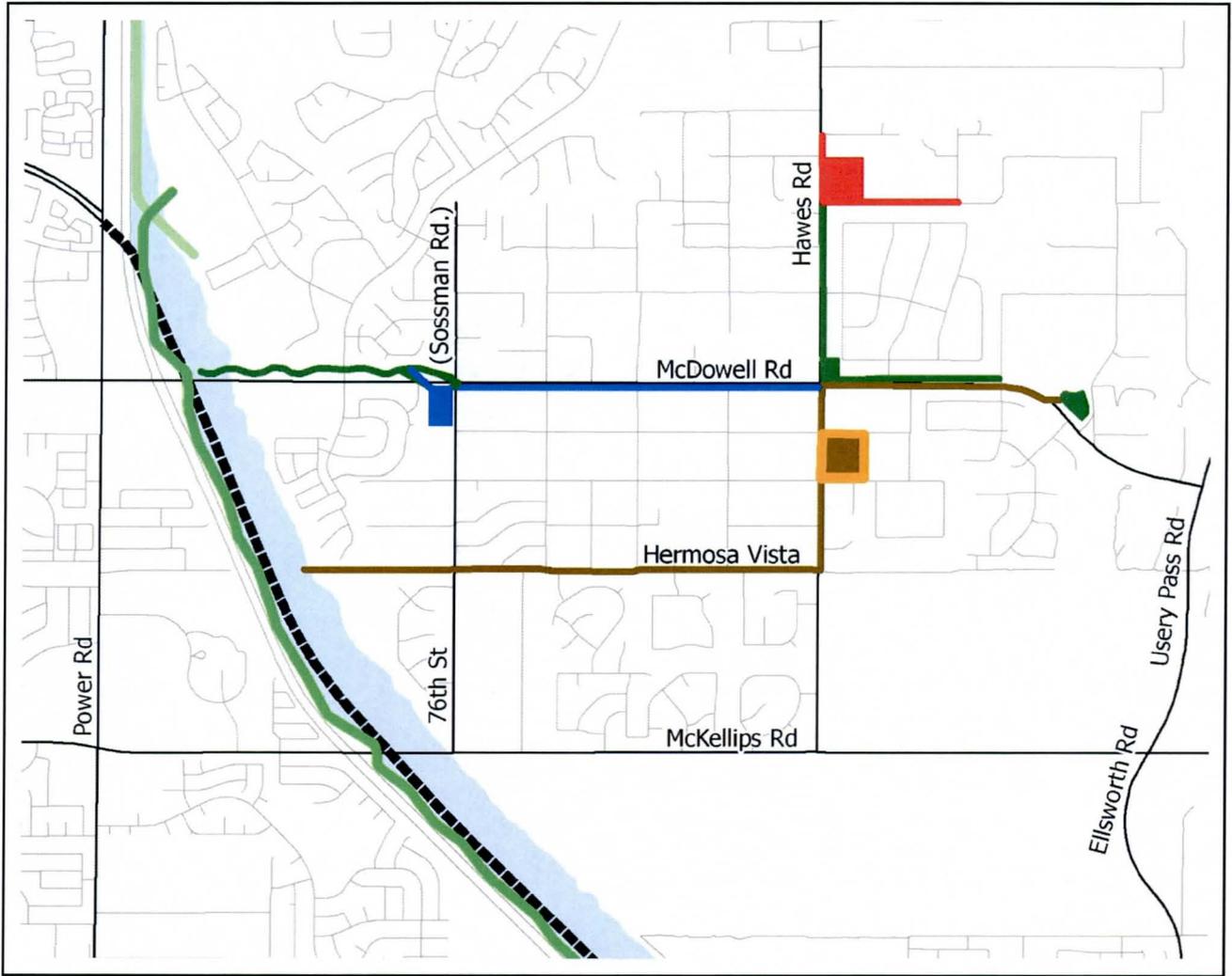
The Oak Street Detention Basin and Storm Drain project is the third scheduled project in support of this ADMP and involves construction of a basin at Oak Street and Hawes Road, and storm drains east along Oak Street and north along Hawes Road. The project will provide protection in conjunction with drainage infrastructure constructed by the Hermosa Vista/Hawes Road and McDowell Road projects.

Construction is expected to begin in Fiscal Year 2012, with the City of Mesa as a project partner.

### **Fiscal Year**

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FY 2009	\$0
FY 2010	\$360,000
FY 2011	\$20,000
FY 2012	\$2,160,000
FY 2013	\$10,000
5-Year Program	<hr/> \$2,550,000



Location: T1N/R7E



**Legend**

-  Existing Local Storm Drain and Basin
-  Hermosa Vista/Hawes Road Project (420.02.31)
-  McDowell Road Project (420.03.31)
-  Oak Street Project (420.XX.XX)
-  Spook Hill Basin Acquisition (420.01.32)
-  Red Mountain Freeway
-  Spook Hill FRS
-  Spook Hill Floodway
-  Floodplain
-  Floodway

---

# Siphon Draw Drainage Improvements

PCN: 442.11.31

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

602-506-2943

bao@mail.maricopa.gov

Supervisory District: 1

Jurisdiction: Mesa

Origination: FY 2008 Prioritization Procedure

Resolution(s): FCD 2003R003

IGA(s): FCD 2006A005

The Siphon Draw 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.

The project includes a channel along Meridian Road that intercepts the flow entering Maricopa County from Pinal County and conveys the flow to a detention basin constructed east of Meridian Road and north of Elliot Road. A storm drain will be constructed along Elliot Road to convey flow from the basins to the existing storm drain at Elliot Road and 104th Avenue.

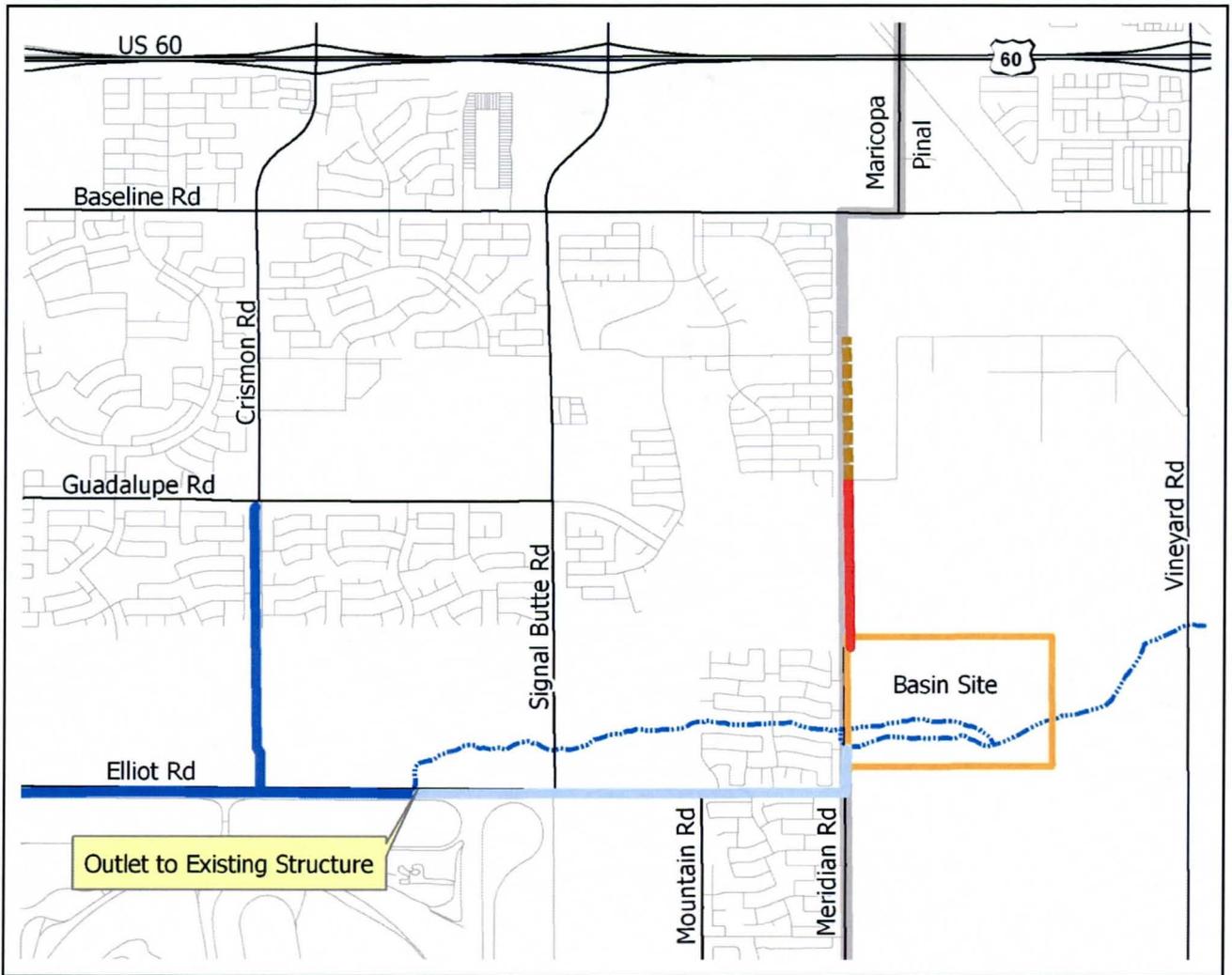
Construction of the storm drain and basin is anticipated to begin in Fiscal Year 2009 with the City of Mesa as a project partner.

Construction of the channel along Meridian Road will follow, likely in phases, pending partnering agreements.

### **Fiscal Year**

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FY 2009	\$3,929,000
FY 2010	\$8,700,000
FY 2011	\$2,650,000
FY 2012	\$60,000
FY 2013	\$20,000
5-Year Program	<hr/> \$15,359,000



Location: T1S/R7E, T1S/R8E



**Legend**

-  Basin Site (442.11.31)
-  Siphon Draw Wash
-  County Boundary
-  Channel Reach 1 (442.11.31)
-  Channel Reach 2 (442.11.31)
-  Storm Drain
-  Existing Facilities

---

# East Mesa Drain Reaches 4 & 7 Modification

PCN: 442.12.31

## Mike Duncan, P.E., CFM, Project Manager

602-506-4732

mwd@mail.maricopa.gov

Supervisory District: 2

Jurisdiction: Unincorporated Maricopa County

Origination: FY 2005 Prioritization Procedure

Resolution(s): FCD 2007R001

IGA(s): N/A

In June 1994, the District assumed maintenance responsibility (previously held by MCDOT) for the East Mesa Drains, 11 dedicated local drainage easements in Unincorporated Maricopa County. The District conducted a Candidate Assessment Report (CAR) in April 2004 to investigate improvement alternatives to mitigate the extensive maintenance costs associated with the drains. The consensus of the District identified Reaches 4 and 7 as the best targets for structural improvements to decrease maintenance costs.

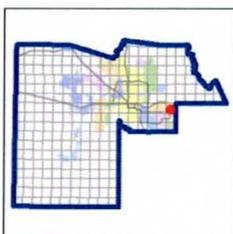
The bottom and side slopes of the Reach 4 channel have experienced scour erosion and maintenance complications associated with trees and trash; the Reach 7 channel has experienced chronic bank erosion from inflows across its east bank.

The project will be unilateral and will likely include installation of concrete lining. Design will be completed by District staff, and construction of Reach 7 improvements will begin in Fiscal Year 2009.

### **Fiscal Year**

---

FY 2009	\$360,000
FY 2010	\$660,000
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$1,020,000



Location: T1N/R7E



**Legend**

- East Mesa Drains - Reach #4
- East Mesa Drains - Reach #7
- Floodplain
- Floodway

---

# Rose Garden Lane Channel

PCN: 450.02.32

## Scott Vogel, P.E., Project Manager

602-506-4771  
csv@mail.maricopa.gov

Supervisory District: 4  
Jurisdiction: Peoria  
Origination: FY 2003 Prioritization Procedure  
Resolution(s): FCD 2001R012  
IGA(s): FCD 2003A012, 2004A007

The District completed the Glendale/Peoria Area Drainage Master Plan Update Study (G/P ADMP) in May 2001 which 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).

This project involves construction of an open channel along the north side of Rose Garden Lane and will provide a 100-year level of protection for an area between

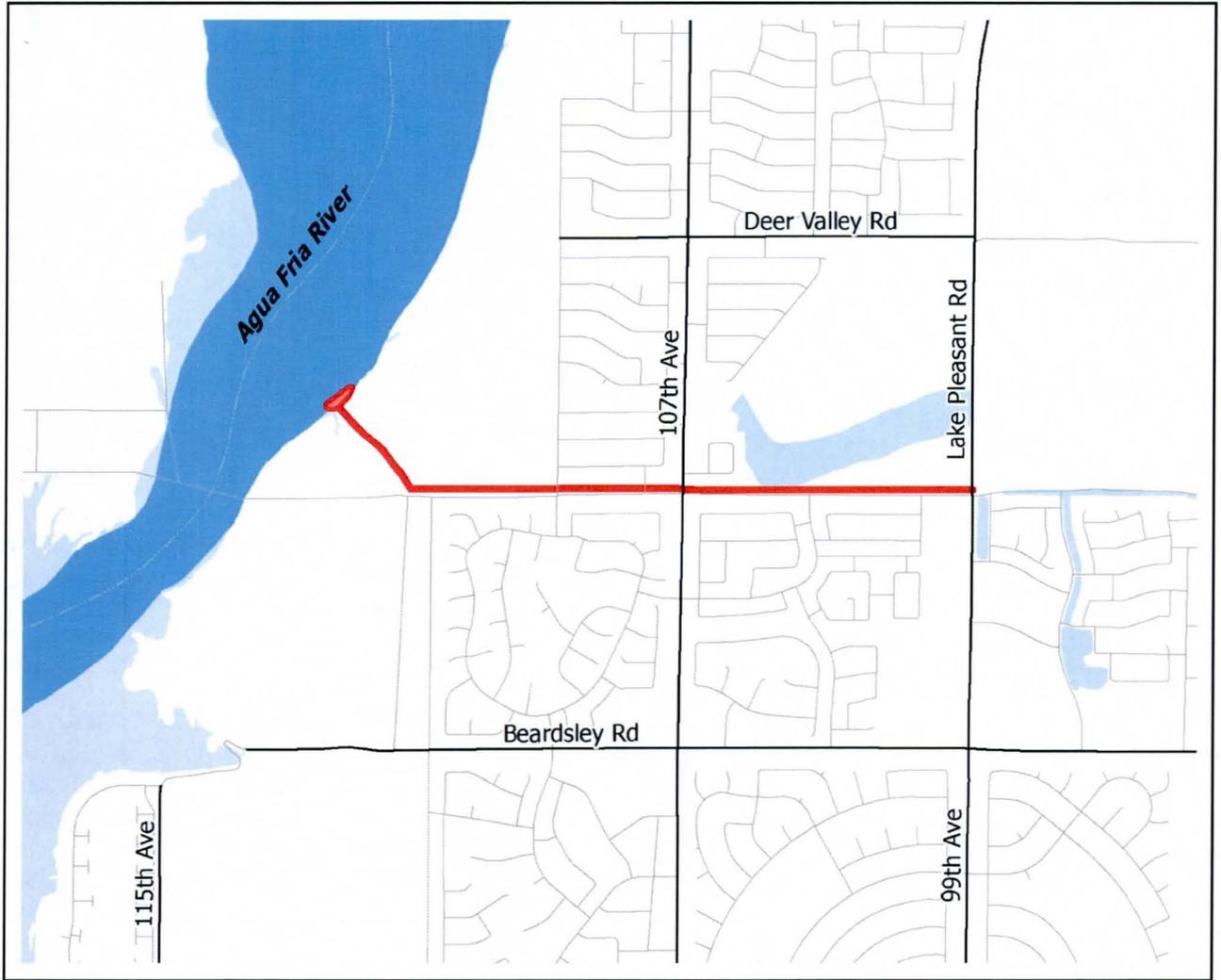
approximately Lake Pleasant Road and the Agua Fria River, south of Rose Garden Lane. The channel will accept flows that currently flow over Rose Garden Lane and overflow the Beardsley Channel and convey them to the Agua Fria River.

Intergovernmental agreements between the District and the City of Peoria are in place for the design and construction of the project. The City is the lead agency for all tasks, and construction is expected to be complete by Fiscal Year 2009.

### **Fiscal Year**

---

FY 2009	\$2,870,000
FY 2010	\$10,000
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$2,880,000



Location: T4N/R1E



**Legend**

- Proposed Basin
- Rose Garden Lane Channel
- FEMA Floodplain
- FEMA Floodway

---

# 83rd Avenue/Pinnacle Peak Road Drainage Improvements

PCN: 450.02.33

## Scott Vogel, P.E., Project Manager

602-506-4771

csv@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Peoria

Origination: FY 2003 Prioritization Procedure

Resolution(s): FCD 2001R012

IGA(s): FCD 2003A008, 2005A008

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 project design, land and rights-of-way (R/W) acquisitions, construction and construction management.

The project includes two detention basins and a series of storm drains along Pinnacle Peak Road, 83rd Avenue and nearby residential streets.

Improvements will provide a 100-year level of protection to an area between approximately 83rd and 87th Avenue, and south of Calle Lejos (one-half mile north of Pinnacle Peak

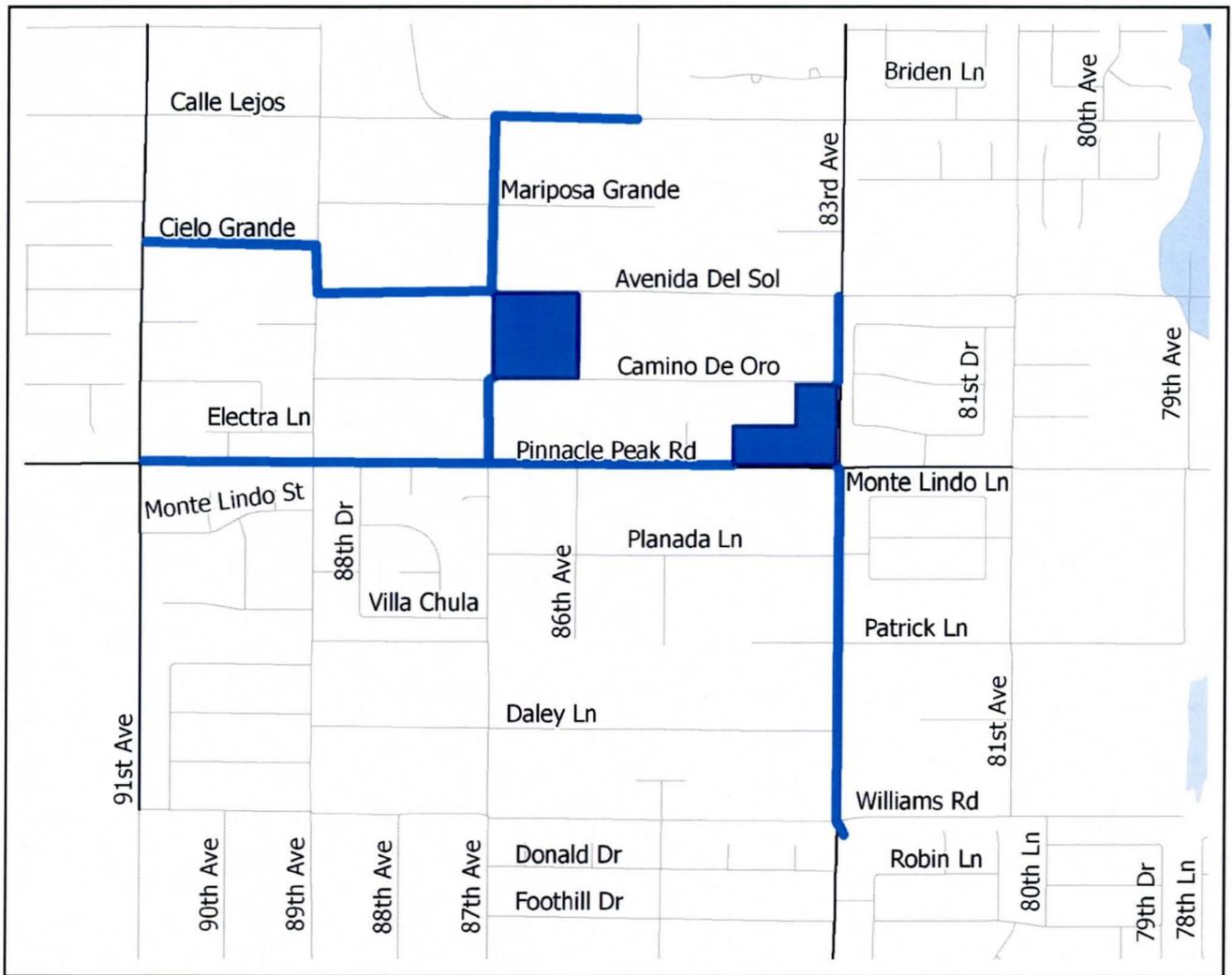
Road); a 10-year level of protection will be provided to an area between 87th and 91st avenues south of Cielo Grande and Pinnacle Peak Road. The project will tie in to existing infrastructure on the east side of 83rd Avenue, south of Williams Road.

The District is the lead agency for all tasks, with the City of Peoria as a project partner. Construction is in progress and will be completed in Fiscal Year 2009. The City and MCDOT will own, operate and maintain the completed project.

### **Fiscal Year**

---

FY 2009	\$742,000
FY 2010	\$0
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$742,000



Location: T4N/R1E



**Legend**

-  Channel/Storm Drain
-  Basins
-  Floodplain
-  Floodway

---

# 67th Avenue Storm Drain

PCN: 450.05.30

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

602-506-4768  
rcs@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Glendale, Peoria

Origination: FY 2000 Prioritization Procedure

Resolution(s): FCD 85-03

IGA(s): FCD 99015, 99015A

The City of Glendale is the lead agency for this project, which will provide 10-year storm drainage protection for a three-square-mile area lying within jurisdictional boundaries of 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 the City of Glendale. The outfalls for the project were constructed by the District along 67th Avenue and Cactus Road, and 67th Avenue and Olive Avenue, and are owned and operated by the City of Peoria.

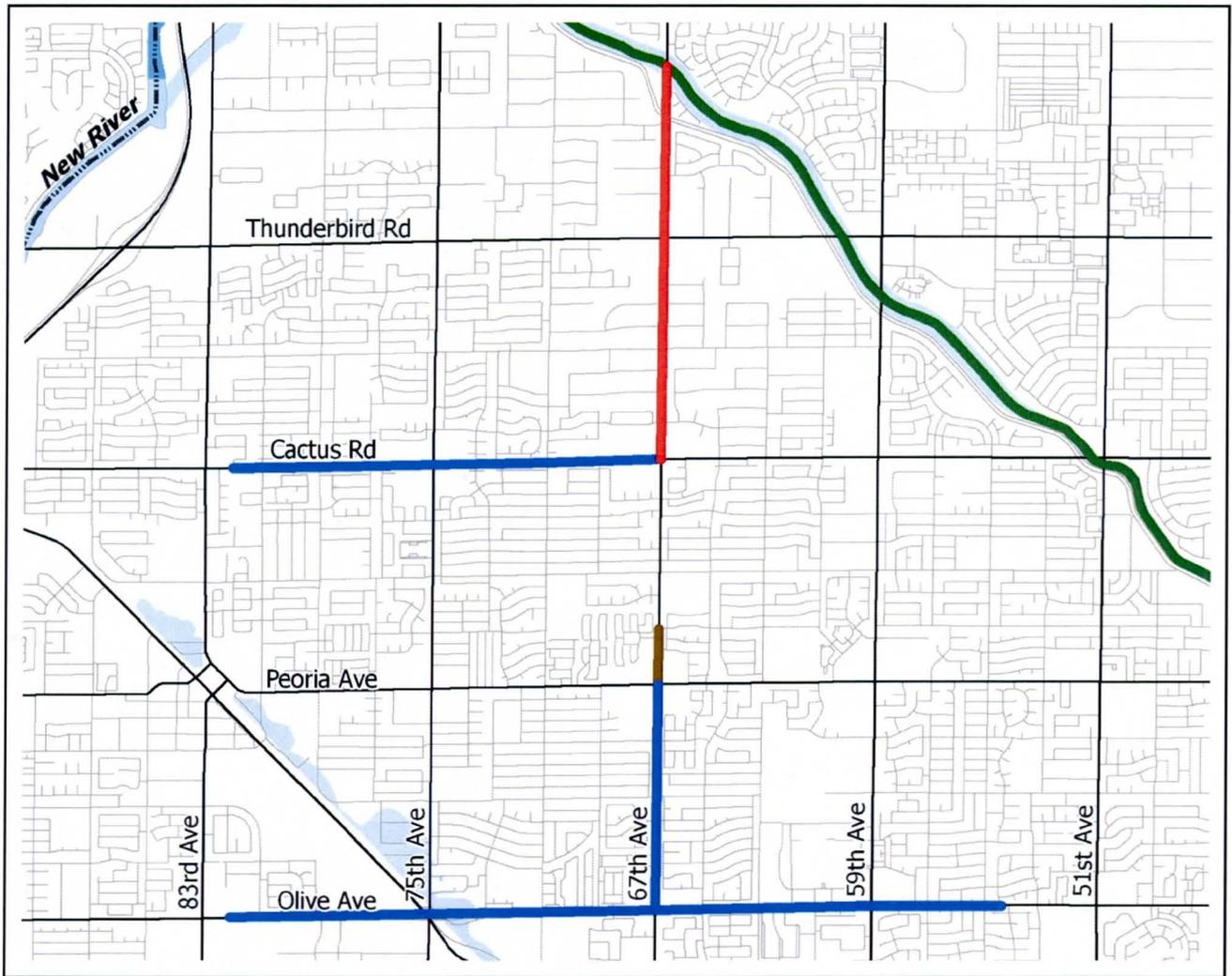
The District is contributing 50 percent of the project costs, estimated at \$3 million. The City of Glendale will own, operate and maintain the completed project.

The first phase of the project is complete and involved the installation of 200 ft. of storm drain at the intersection of 67th and Peoria Avenue. The remaining storm drain design and construction along 67th Avenue from Cactus Road to the Arizona Canal Diversion Channel is scheduled to be completed in Fiscal Year 2009.

### **Fiscal Year**

---

FY 2009	\$735,000
FY 2010	\$10,000
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$745,000



Location: T3N/R1E, T3N/R2E



**Legend**

-  Phase 1 (450.05.30)
-  Phase 2 (450.05.30)
-  Existing Storm Drain
-  Arizona Canal Diversion Channel
-  Floodplain
-  Floodway

---

# Pinnacle Peak Road Channel

PCN: 450.06.31

89th Avenue to the Agua Fria River

## Scott Vogel, P.E., Project Manager

602-506-4878

csv@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Peoria

Origination: FY 2007 Prioritization Procedure

Resolution(s): FCD 2001R012

IGA(s): Pending

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 recommended a number of solutions to flooding problems including a project along Pinnacle Peak Road from 87th Avenue to the Agua Fria River.

The City of Peoria is accomplishing the 100-year conveyance drainage component from 87th Avenue to 99th Avenue through development stipulations.

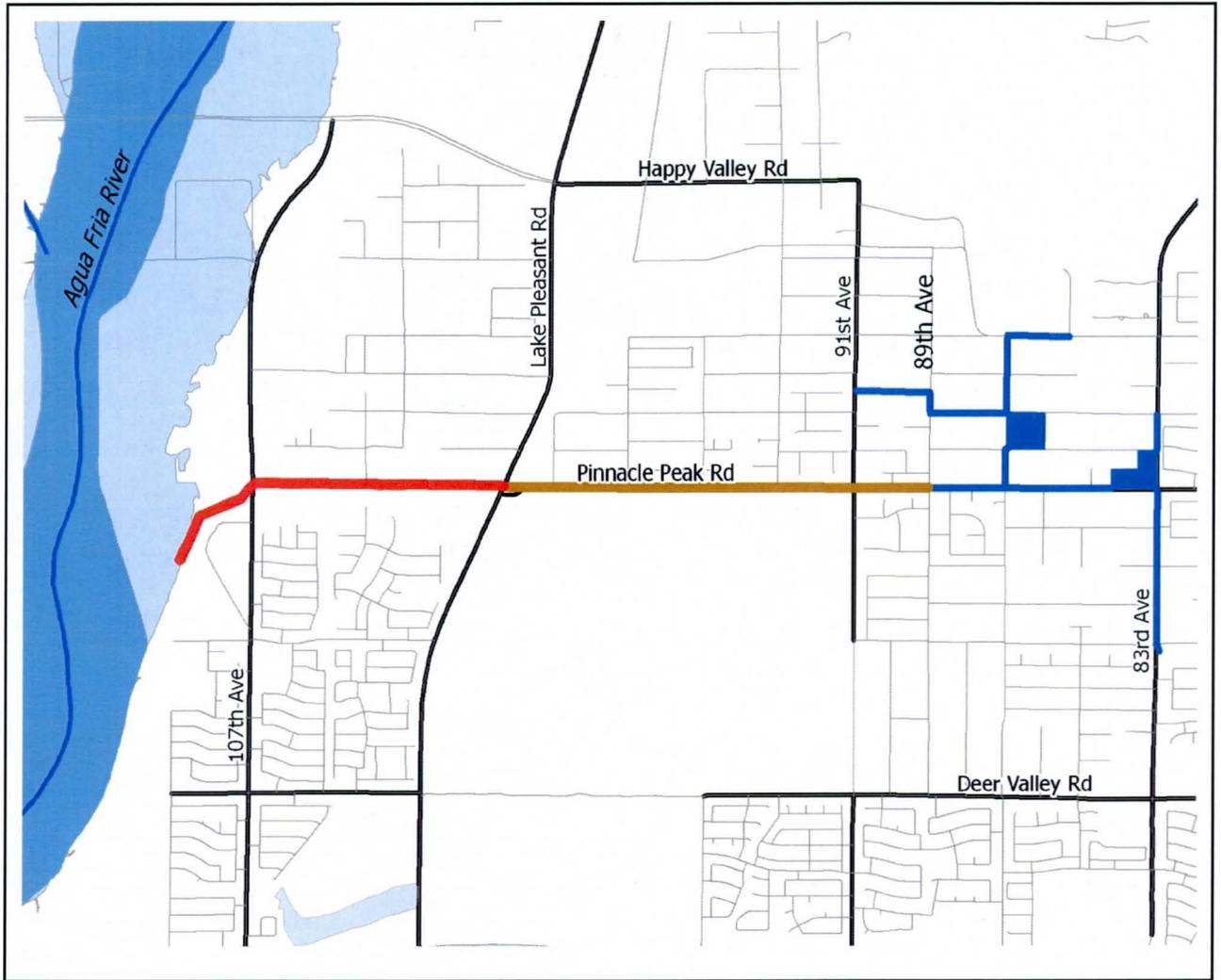
This project provides for drainage from 99th Avenue west to an ultimate outfall in the Agua Fria River. The project will also provide roadway improvements along this alignment.

The District expects to act as the lead agency for project design and construction. A project IGA is required.

### Fiscal Year

---

FY 2009	\$615,000
FY 2010	\$1,560,000
FY 2011	\$5,200,000
FY 2012	\$5,200,000
FY 2013	\$0
5-Year Program	<hr/> \$12,575,000



Location: T4N/R1E



**Legend**

-  Proposed Open Channel
-  Drainage to be implemented by developer
-  83rd Avenue and Pinnacle Peak Road Drainage Project (450.02.33)
-  Existing Basin
-  Floodplain
-  Floodway

---

# Pinnacle Peak Road and 67th Avenue Drainage Improvements

PCN: 450.08.31

## Raju Shah, P.E., Project Manager

602-506-4768  
rcs@mail.maricopa.gov

Supervisory District: 4  
Jurisdiction: Glendale, Peoria  
Origination: FY 2007 Prioritization Procedure  
Resolution(s): FCD 2001R012  
IGA(s): Pending

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 recommended a number of solutions to flooding problems including a project along Pinnacle Peak Road from the New River to 67th Avenue, north to Hatfield Road.

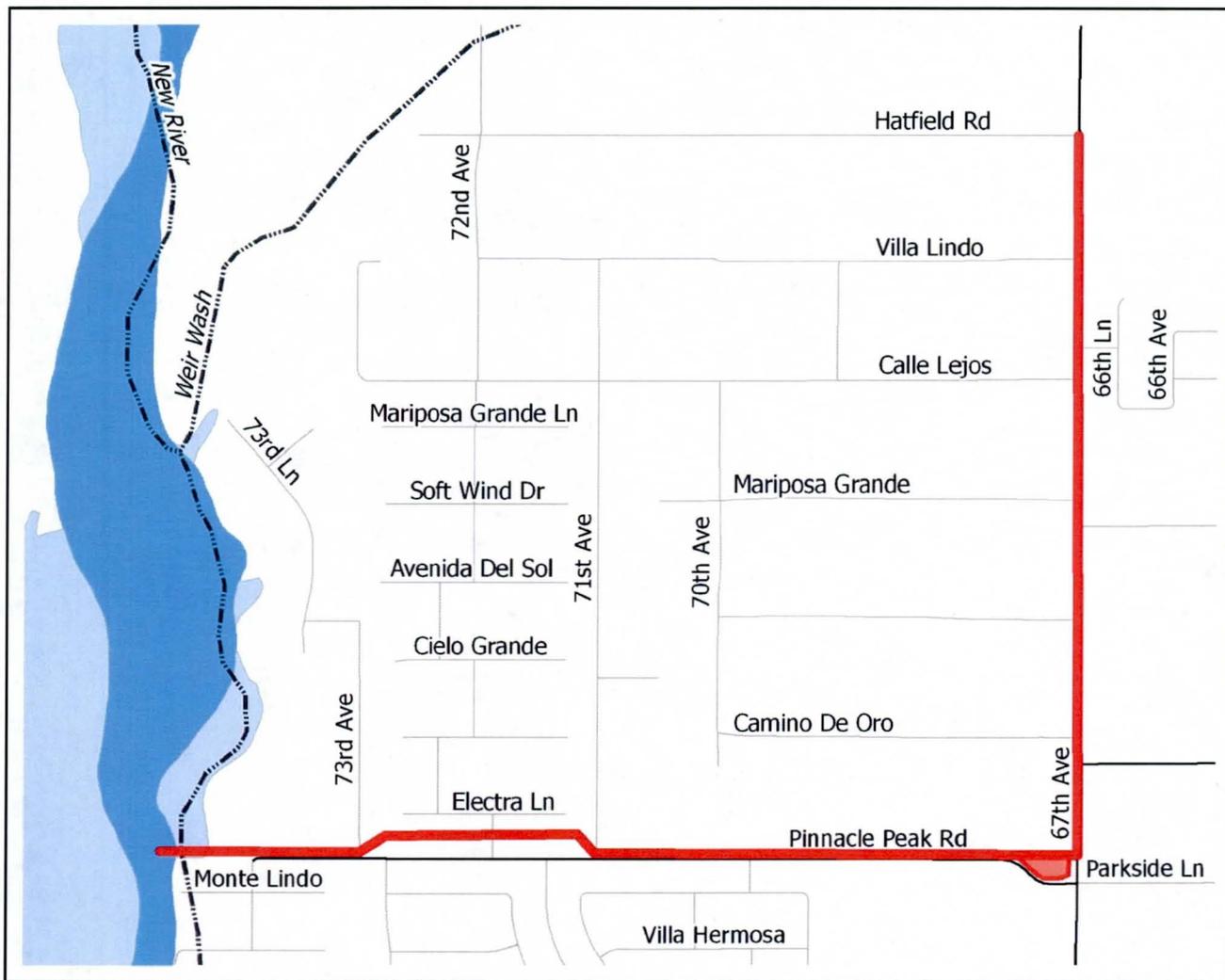
The recommended project will capture and convey 100-year storm flows from areas north of Pinnacle Peak Road and east of 67th Avenue, and discharge those flows to the New River. It will provide protection to existing, proposed and future developments downstream of Pinnacle Peak Road.

The District anticipates partnering with the City of Peoria. An IGA is required.

### **Fiscal Year**

---

FY 2009	\$0
FY 2010	\$0
FY 2011	\$1,120,000
FY 2012	\$2,700,000
FY 2013	\$4,200,000
5-Year Program	<hr/> \$8,020,000



Location: T4N/R1E



**Legend**

-  Proposed Storm Drain
-  Proposed Basin
-  Floodplain
-  Floodway

---

# Beardsley Road Channel

PCN: 450.XX.X1

## Scott Vogel, P.E., Project Manager

602-506-4771

csv@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Glendale, Peoria

Origination: FY 2007 Prioritization Procedure

Resolution(s): FCD 2001R012

IGA(s): Pending

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 recommended a number of solutions to flooding problems including this project that consists of a channel and culvert system along Beardsley Road from about 107th Avenue to the Agua Fria River.

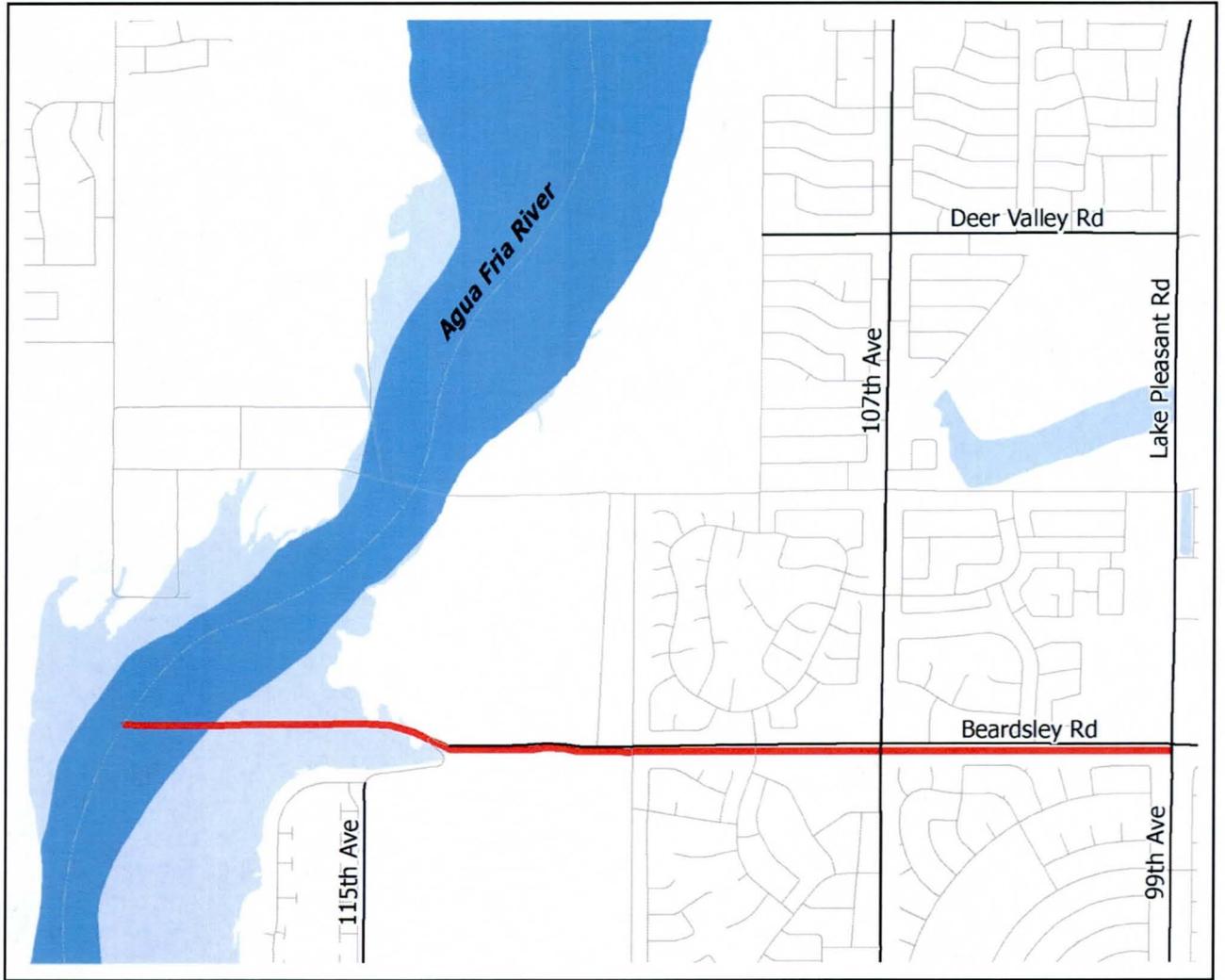
The District anticipates partnering with the City of Peoria in a 50-percent cost share, with the City being responsible for operation and maintenance responsibilities following construction. An IGA is required.

Construction will likely be completed outside the five-year CIP.

### **Fiscal Year**

---

FY 2009	\$0
FY 2010	\$0
FY 2011	\$595,000
FY 2012	\$1,350,000
FY 2013	\$0
5-Year Program	<hr/> \$1,945,000



Location: T4N/R1E



**Legend**

-  Beardsley Channel
-  FEMA Floodplain
-  FEMA Floodway

---

# White Tanks FRS No.3 Modifications

PCN: 470.04.30

## Mike Greenslade, P.E., Project Manager

602-506-5426

mdg@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Unincorporated Maricopa County

Origination: FY 1998 Prioritization Procedure

Resolution(s): FCD 2004R004

IGA(s): FCD 98032, 2004A006, 2004A006A-D

White Tanks FRS No.3 is ranked first in the nation by Natural Resources Conservation Service (NRCS) 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 percent federal, 35 percent local cost share basis, and NRCS is additionally providing technical assistance for the project. The District and NRCS completed the final work plan and environmental assessment in 2004 and signed an IGA for the project early in Fiscal Year 2005.

In Fiscal Year 2004, the District contracted an alternative evaluation and chose to modify the dam. The first phase of dam modification design is complete, and construction is underway.

The first phase included plugging and abandoning existing corrugated metal pipe (CMP) outlets, construction of principal pipe outlets to replace the existing CMP outlets, and construction of a soil cement embankment section and cutoff walls in the dam's south fissure risk zone.

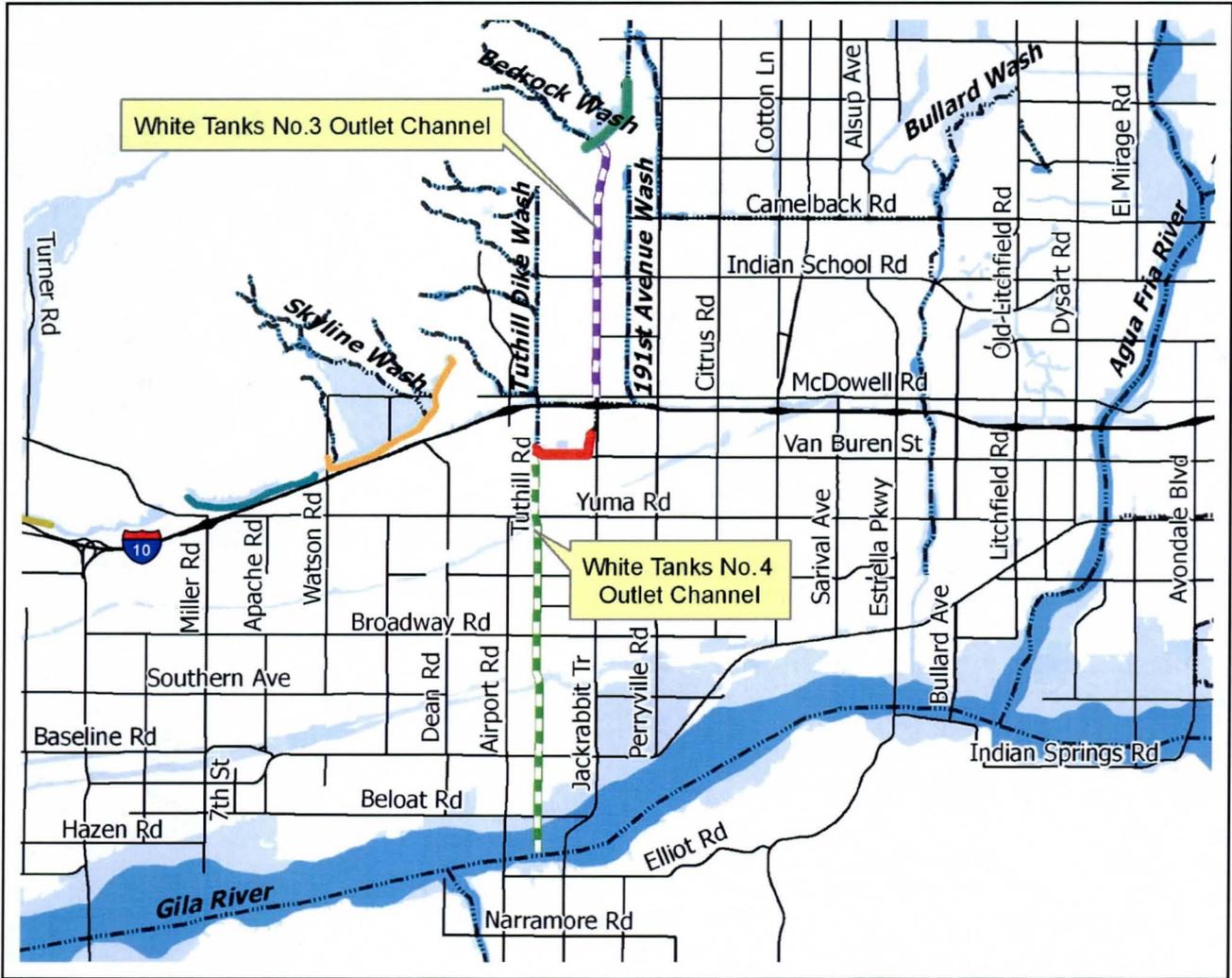
The second phase of design is in progress and includes a new emergency spillway structure, the north fissure risk zone embankment segment and the non-fissure risk zone embankment segment. The second phase of construction is expected to begin in Fiscal Year 2009.

A third phase of the project, that precedes the second phase chronologically, is in progress and constructs the dam's north inlet channel (see PCN 470.04.31).

### **Fiscal Year**

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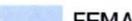
FY 2009	\$5,538,000
FY 2010	\$3,310,000
FY 2011	\$10,000
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$8,858,000



Location T2N/R2W, T1N/R2W



**Legend**

-  White Tanks No.3 Outlet Channel
-  White Tanks No.4 Outlet Channel
-  Buckeye FRS No.1
-  Buckeye FRS No.2
-  Buckeye FRS No.3
-  White Tanks FRS No.3
-  White Tanks FRS No.4
-  FEMA Floodplain
-  FEMA Floodway

---

# White Tanks FRS No.3 North Inlet Channel

PCN: 470.04.31

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

602-506-2943

bao@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Unincorporated Maricopa County

Origination: FY 1998 Prioritization Procedure

Resolution(s): FCD 2002R019

IGA(s): FCD 2003A009, 2004A005, 2004A005A, 2004A006, 2005A003, 2005A003A

The White Tanks FRS No.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 box culvert road/canal crossing at Olive Avenue, a box culvert road/canal crossing 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 formerly broke out over the Beardsley Canal, inundating a residential area. The NIC Project protects 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. The second phase of the project will improve the existing channel south of Northern Avenue.

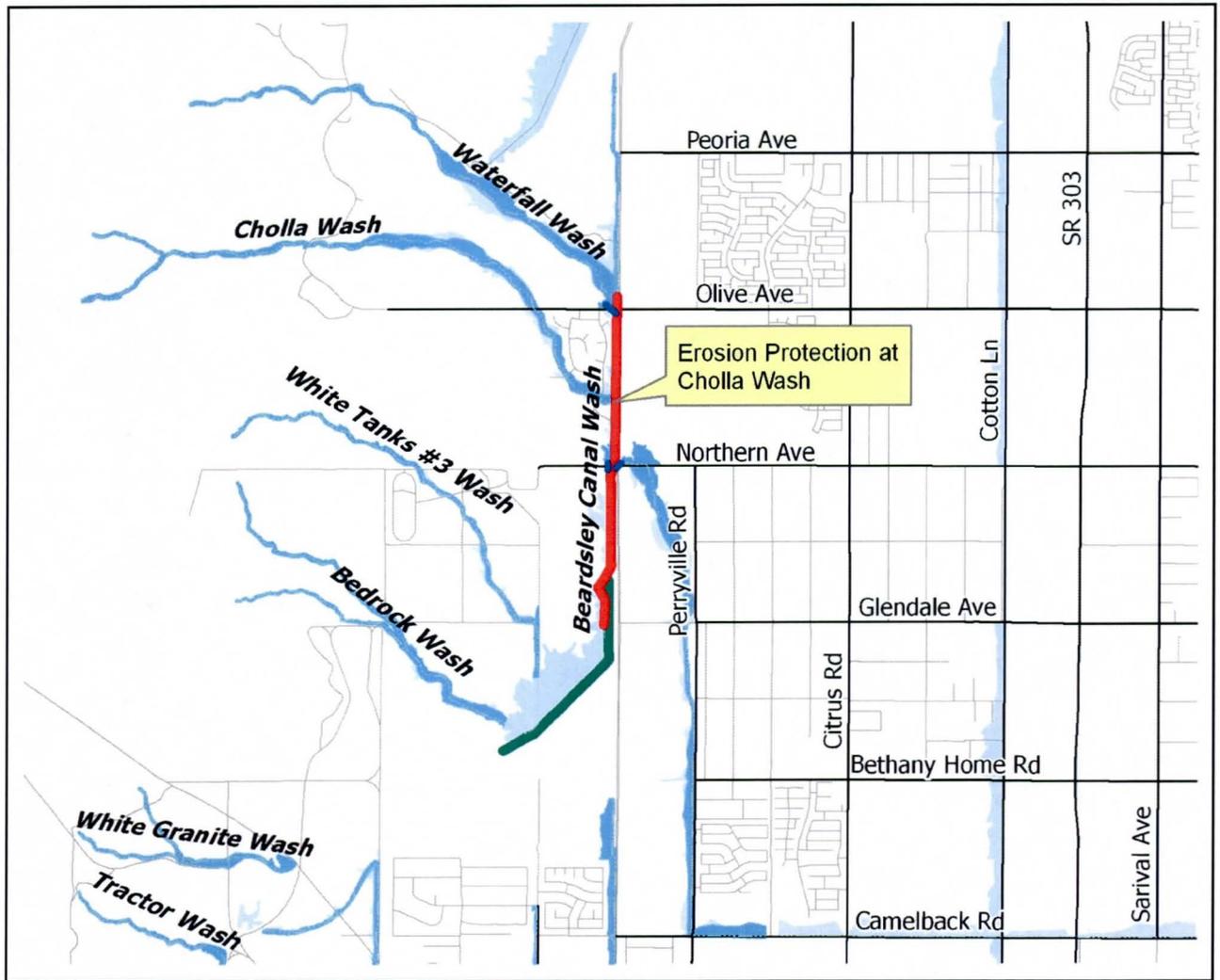
Construction of the channel from Olive Avenue south to Northern Avenue is complete. Construction of the channel from Northern Avenue south to White Tanks FRS No.3 is in progress, and is expected to be completed in Fiscal Year 2009.

This is a joint project with the Maricopa County Municipal Water Conservation District Number One, owner of the Beardsley Canal, and the District. The Maricopa County Department of Transportation also cost shared for the box culvert at Olive Avenue.

### **Fiscal Year**

---

FY 2009	\$1,390,000
FY 2010	\$0
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$1,390,000



Location: T2N/R2W, T3N/R2W



**Legend**

-  Box Culvert
-  White Tanks No. 3 North Inlet Channel
-  White Tanks FRS No. 3
-  FEMA Floodplain
-  FEMA Floodway

---

# White Tanks FRS No.3 Outlet Channel

PCN: 470.04.32

## Valerie Swick, P.E., Project Manager

602-506-2929

vas@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Buckeye / Unincorporated Maricopa County

Origination: FY 2006 Prioritization Procedure

Resolution(s): FCD 2004R011

IGA(s): Pending

In Fiscal Year 2006, the District examined a series of alternatives associated with the rehabilitation of White Tanks FRS No.4. Project recommendations included an outlet channel from White Tanks FRS No.3 to White Tanks FRS No.4 (this project), rehabilitation of White Tanks FRS No.4 (project 201.02.31) and an outlet channel from White Tanks FRS No 4 to the Gila River (project 201.01.31).

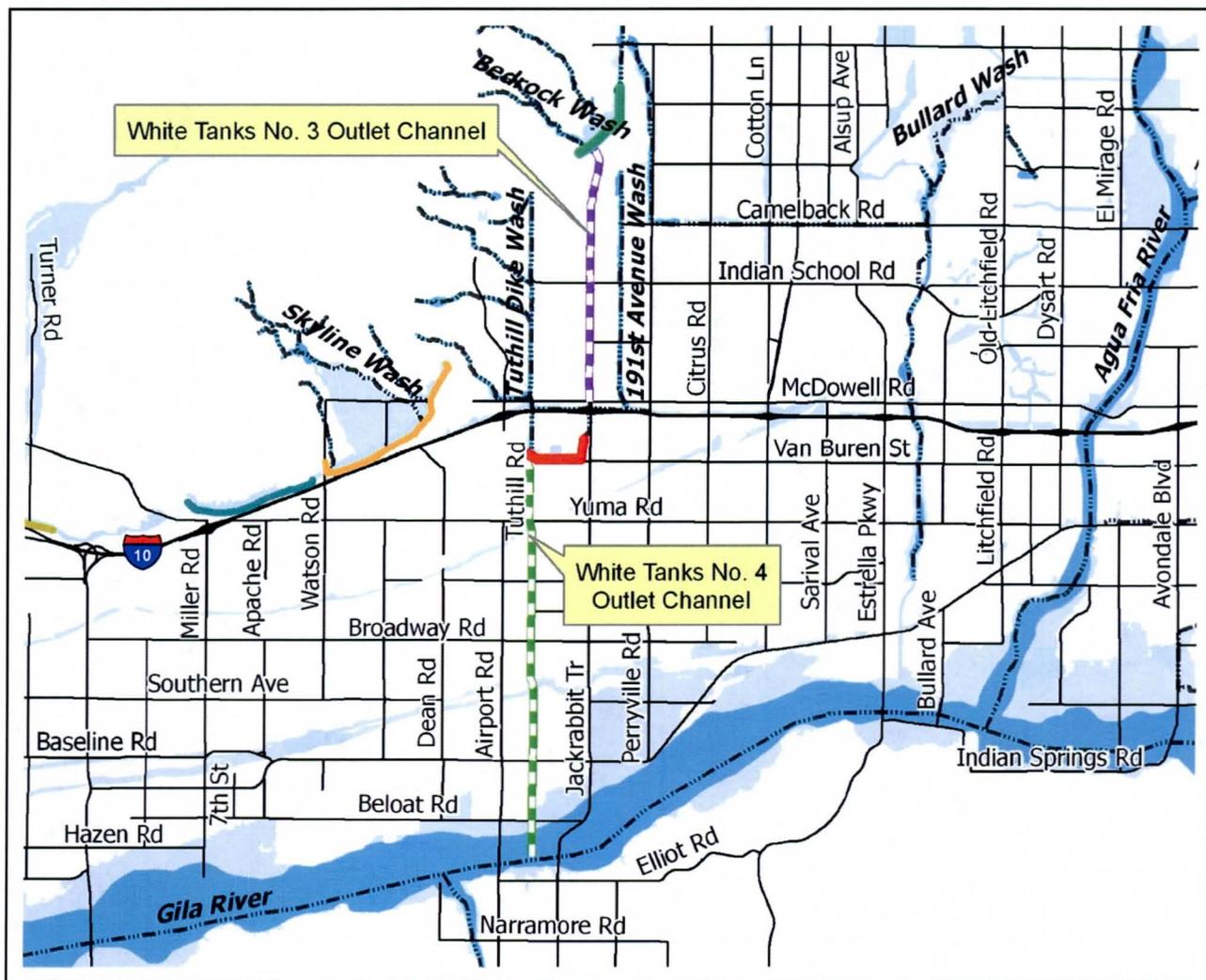
This project provides conveys storm water from behind White Tanks FRS No.3 and provides conveyance for 100-year flows. The White Tanks FRS No.4 Outlet Channel project would provide an ultimate outfall for this storm water to the Gila River.

Resolution FCD 2004R011 authorizes advanced land acquisitions required for the

White Tanks FRS No.3 Outlet Channel due to the rapid development in the area. Acquisitions are expected in Fiscal Year 2009 for land most threatened by valuation increases.

### Fiscal Year

FY 2009	\$2,470,000
FY 2010	\$4,545,000
FY 2011	\$1,650,000
FY 2012	\$100,000
FY 2013	\$6,200,000
5-Year Program	<u>\$14,965,000</u>



Location: T1N/R2W, T2N/R2W



**Legend**

-  White Tanks No.3 Outlet Channel
-  White Tanks No.4 Outlet Channel
-  Buckeye FRS No.1
-  Buckeye FRS No.2
-  Buckeye FRS No.3
-  White Tanks FRS No.3
-  White Tanks FRS No.4
-  FEMA Floodplain
-  FEMA Floodway

---

# Litchfield Park Drainage System

PCN: 470.08.30

## Scott Vogel, P.E., Project Manager

602-506-4771

csv@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Litchfield Park

Origination: FY 2008 Prioritization Procedure

Resolution(s): FCD 98-01

IGA(s): FCD 98-010

This project, requested by the City of Litchfield Park, is a multiphase storm drain project between the City and the District. It is also the final project to be implemented to resolve flooding issues in this area of the County. Other completed projects include the Colter Channel and the Roosevelt Irrigation District (RID) Overchute project.

The project consists of a series of storm drains constructed north of Indian School Road to capture and convey storm water to the RID Overchute structure located south of Indian School Road, at Old Litchfield Road. It is anticipated that the City will be the lead agency for all tasks.

An amendment to the existing IGA with the City is required to increase the District's cost share and contribute funding to complete construction.

### **Fiscal Year**

---

FY 2009	\$160,000
FY 2010	\$93,000
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$253,000



Location: T2N/R1W



- Legend**
- Existing Storm Drain
  - - - Proposed Open Channel
  - Proposed Storm Drain
  - RID Overchute
  - Floodplain
  - Floodway

---

# Reems Road Channel & Basin

PCN: 470.12.31

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

602-506-2943

bao@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Unincorporated Maricopa County, City of Glendale, City of Surprise

Origination: FY 2007 Prioritization Procedure

Resolution(s): FCD 2002R014

IGA(s): FCD 2002A014, 2002A014A, 2004A019, 2004A019A, 2006G005, 2007G003

This project includes a flood control channel along the west side of Reems Road from south of Peoria Avenue to the Dysart Drain at the Falcon Dunes Golf Course, and a 42-acre basin north of Olive Avenue.

The channel and basin will provide 100-year flood protection.

The City of Surprise is constructing the channel from Peoria Avenue north to Waddell Road. 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 Peoria Avenue. MCDOT has agreed to cost share to extend box culverts at Olive and Butler to their ultimate length. The District has also entered into cost-share agreements with two

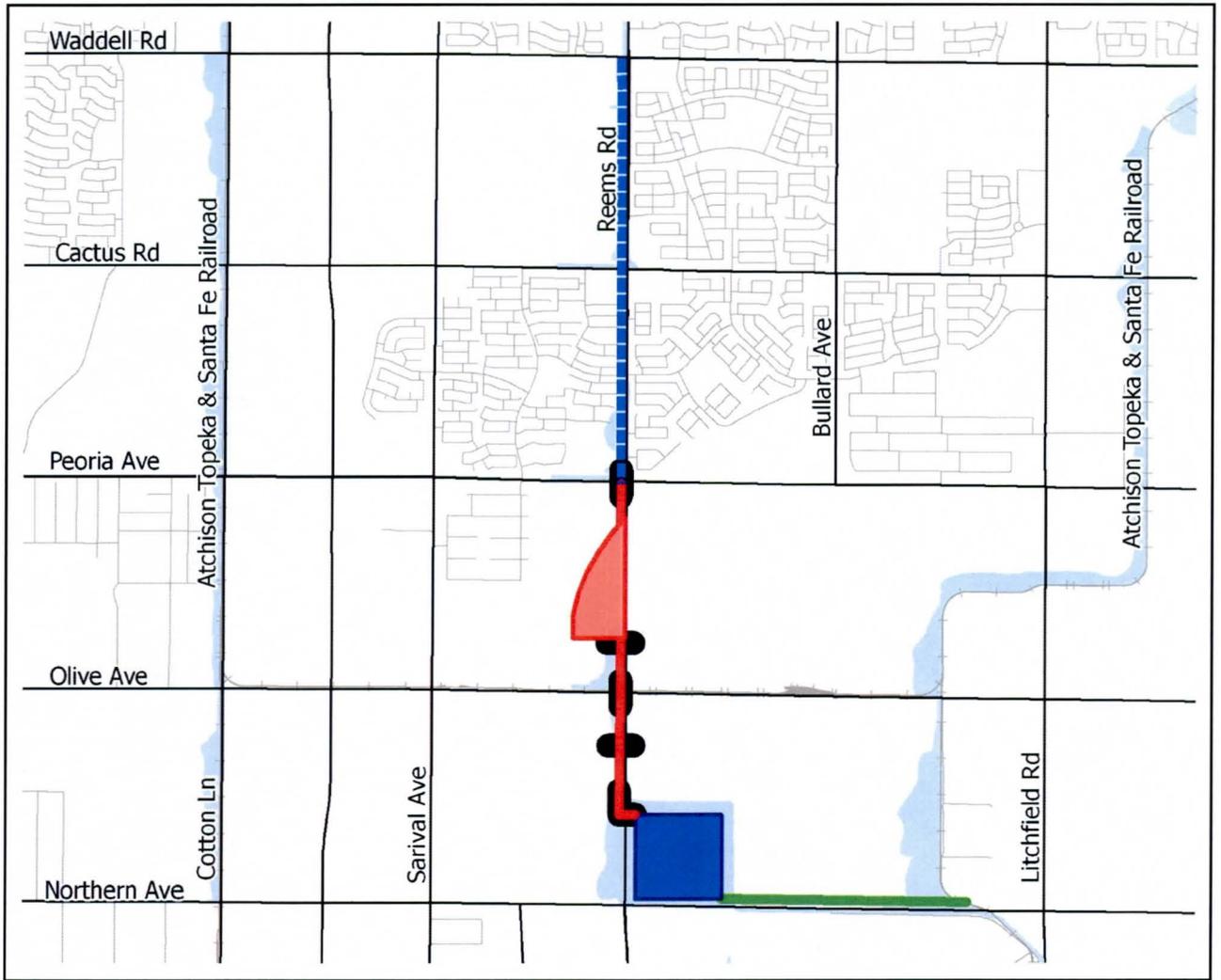
developers for extended box culverts on developer-owned property.

Portions of the City of Surprise's component of the project are in place. Construction of the District's project component is in progress with an expected completion date in Fiscal Year 2010.

### **Fiscal Year**

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FY 2009	\$5,253,000
FY 2010	\$10,000
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$5,263,000



Location: T3N/R1W



**Legend**

-  Reems Basin
-  Reems Channel
-  Channel Implemented by City of Surprise
-  Existing Basin
-  Dysart Drain
-  Roadway/Channel Crossing
-  Railroads
-  FEMA Floodplain
-  FEMA Floodway

---

# Bullard Wash Phase II

PCN: 470.13.31

## Scott Vogel, P.E., Project Manager

602-506-4771

csv@mail.maricopa.gov

Supervisory District: 4 & 5

Jurisdiction: Goodyear

Origination: FY 2002 Prioritization Procedure

Resolution(s): FCD 2000R016, 2000R016A

IGA(s): FCD 2001A006, 2003A002, 2006A010, 2003A011

Bullard Wash is included within the Loop 303 Corridor/White Tanks ADMP, which recommends wash improvements. Phase I of the project, from the Gila River to Lower Buckeye Road, was constructed as a District/City of Goodyear project. Phase II includes an earthen/greenbelt channel along the Bullard Wash alignment from Lower Buckeye Road to McDowell Road and a detention basin just south of McDowell Road. Landscaping and trails are anticipated along the channel alignment and within the basin.

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. This stormwater would otherwise collect in streets, farm fields, and

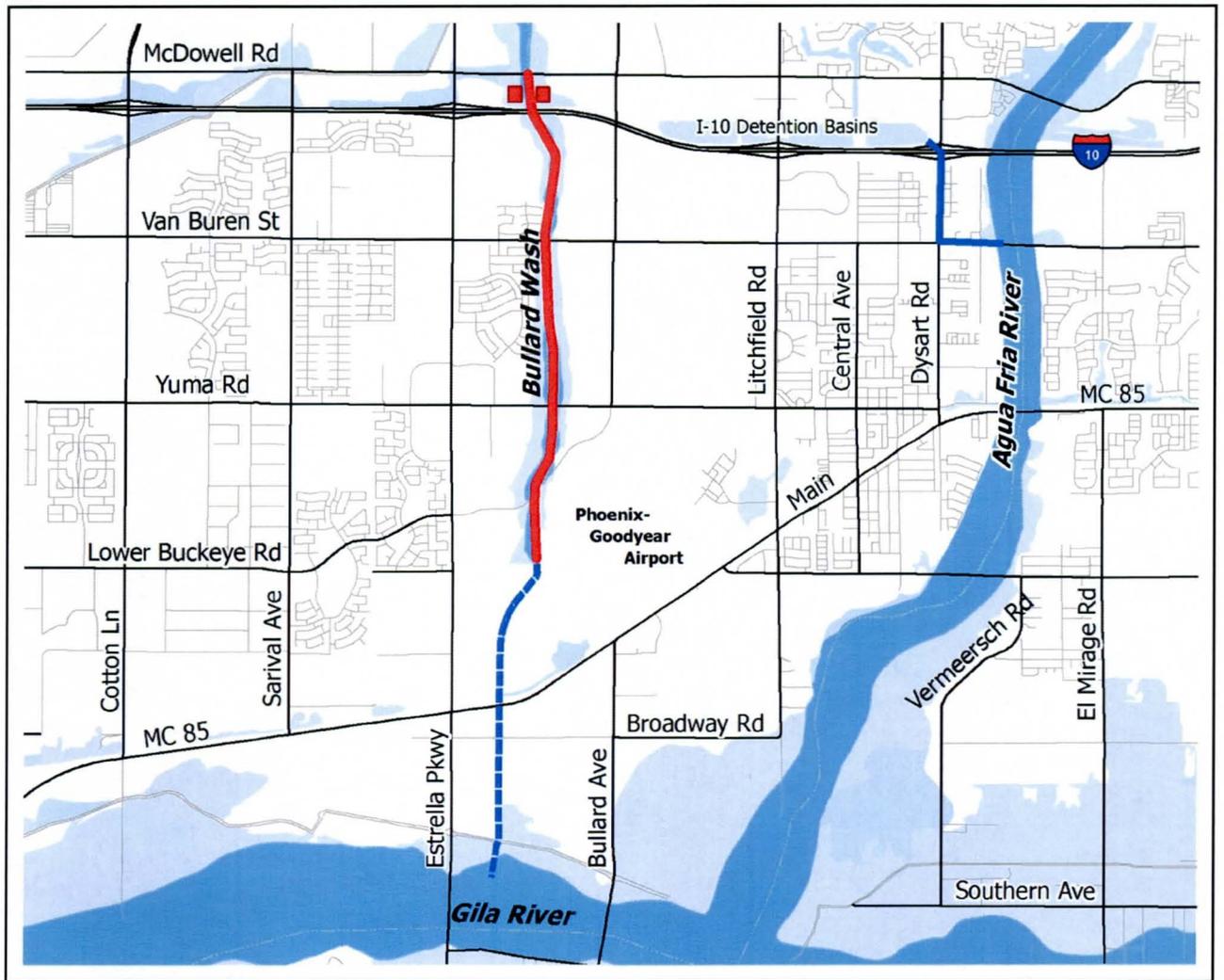
residential and commercial areas. Design of Bullard Wash from Lower Buckeye Parkway to I-10 is complete, and IGAs with the City for construction of the project are in place.

Construction timing is dependent upon the availability of District and City funding and will likely occur outside the five-year CIP.

### Fiscal Year

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FY 2009	\$0
FY 2010	\$0
FY 2011	\$10,000
FY 2012	\$10,000
FY 2013	\$6,250,000
5-Year Program	<hr/> \$6,270,000



Location: T1N/R1W



**Legend**

- Proposed Basins
- Bullard Channel Proposed Phase II
- Existing Outfall
- Bullard Channel Phase I
- FEMA Floodplain
- FEMA Floodway

---

# Loop 303 Drainage Improvements

PCN: 470.14.31

## Mike Duncan, P.E., CFM, Project Manager

602-506-4732

mwd@mail.maricopa.gov

Supervisory District: 4

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

Origination: FY 2006 Prioritization Procedure

Resolution(s): FCD 2005R017

IGA(s): FCD 2007A005

The Loop 303 Corridor/White Tanks ADMP consisted of an area drainage master plan to determine guidelines for stormwater management and structural mitigation measures for flooding in the White Tanks area. This included analysis of approximately 220 square miles of watershed, which extends from Grand Avenue south to the Gila River, 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 associated with SR-303L.

The District will partner with the Arizona Department of Transportation (ADOT) in this

regional project, and intends to construct drainage solutions from Van Buren Street to the Gila River, while ADOT will construct the project from Van Buren Street to approximately Bell Road. Construction of the District's portion of the project will likely precede construction of SR-303L.

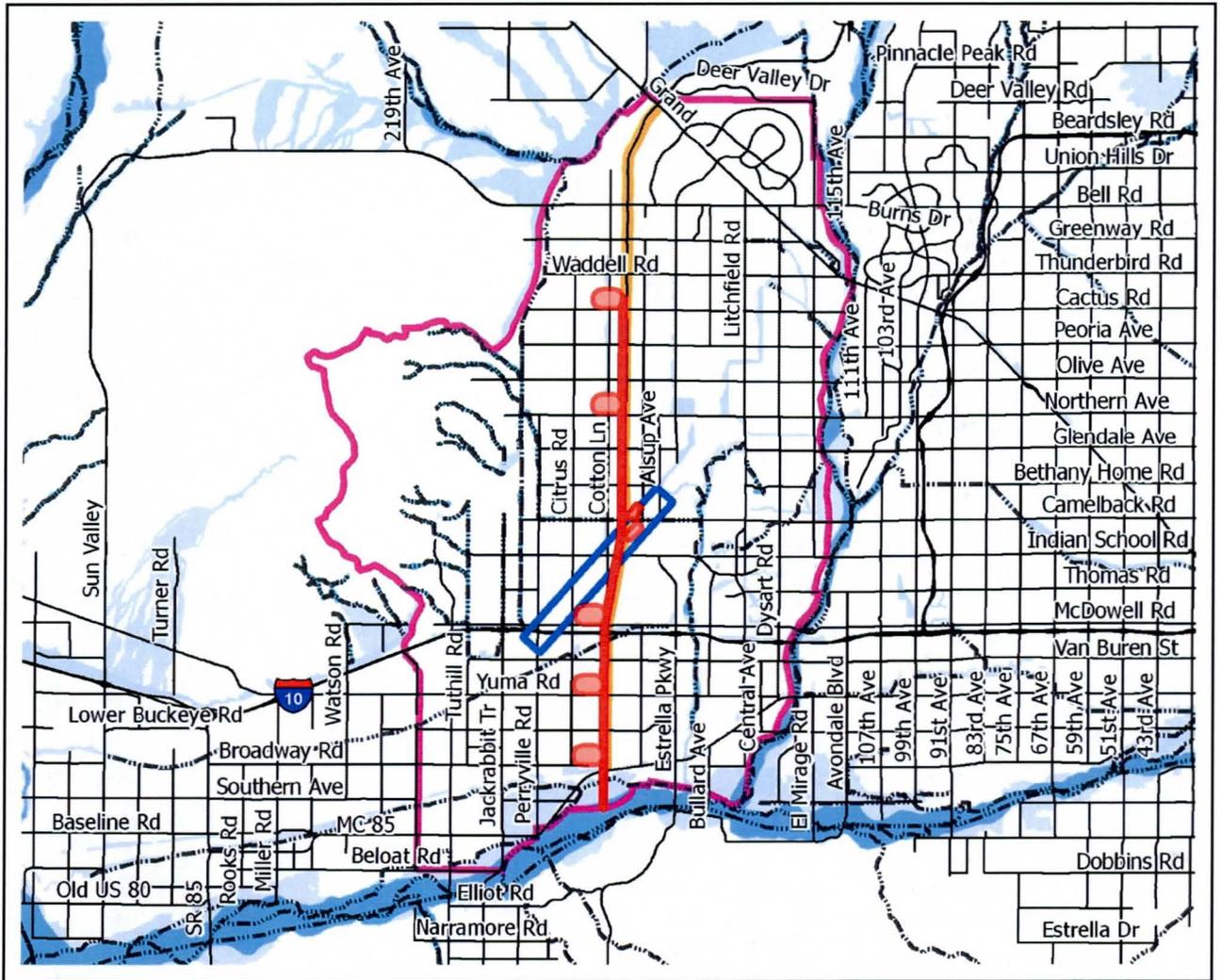
Additional partnering agreements with the City of Goodyear are anticipated.

Advance land acquisition is planned for Fiscal Year 2009, and construction is anticipated late in the five-year CIP.

### **Fiscal Year**

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FY 2009	\$2,392,000
FY 2010	\$1,617,000
FY 2011	\$2,667,000
FY 2012	\$7,267,000
FY 2013	\$7,250,000
5-Year Program	<hr/> \$21,193,000



Location: T1N/R2W, T1N/R1W, T2N/R2W,  
 T2N/R1W, T3N/R2W, T3N/R1W,  
 T4N/R2W, T4N/R1W



**Legend**

- Proposed Basins
- Proposed Channels
- Crash Zone
- Loop 303
- Study Boundary
- FEMA Floodplain
- FEMA Floodway

---

# Northern Parkway Drainage Improvements PCN: 470.15.31

Loop 303 to Reems Road

## Greg Jones, P.E., Project Manager

602-506-5537

glj@mail.maricopa.gov

Supervisory District: 4

Jurisdiction: Peoria

Origination: FY 2007 Prioritization Procedure

Resolution(s): FCD 2007R002

IGA(s): Pending

The Maricopa County Department of Transportation (MCDOT)/Glendale Northern Parkway project constructs a drainage channel along the north side of the parkway from SR-303L to Reems Road, subsequently connecting to the Dysart Basin at Falcon Dunes Golf Course.

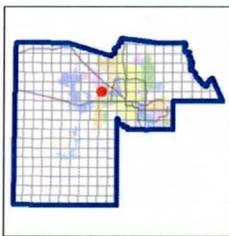
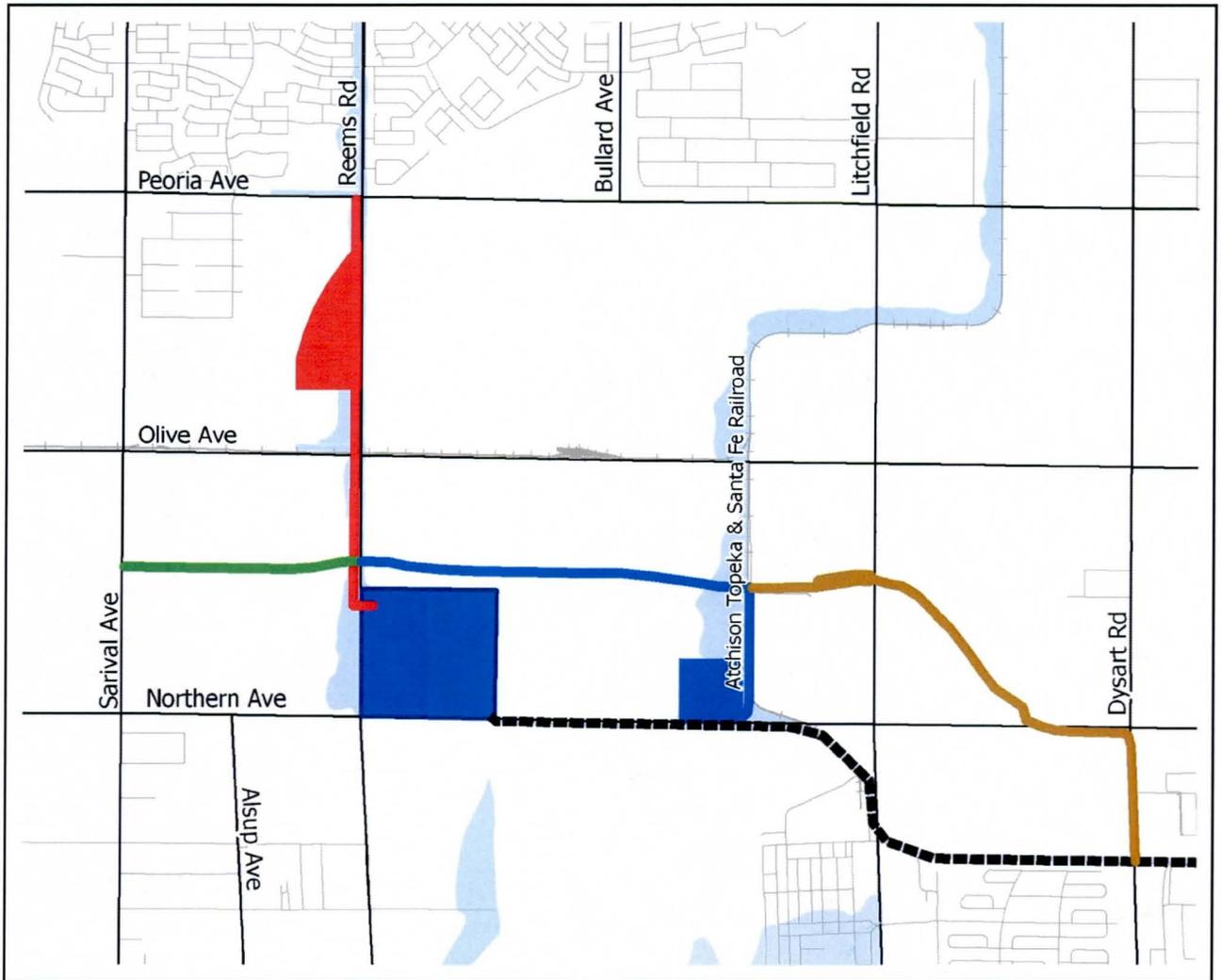
The project provides 100-year protection for local farms, future development and roadway traffic.

The District intends to enter into a cost-share arrangement with MCDOT and the City of Glendale. Construction is expected late in the five-year CIP.

### **Fiscal Year**

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FY 2009	\$15,000
FY 2010	\$310,000
FY 2011	\$785,000
FY 2012	\$1,020,000
FY 2013	\$2,020,000
5-Year Program	<hr/> \$4,150,000



Location: T3N/R1W



**Legend**

- Northern Parkway Drainage Improvements (Loop 303 to Reems Road) (470.15.31)
- Northern Parkway Drainage Improvements (Proposed Phase II)
- Northern Parkway Drainage Improvements (Proposed Phase III)
- Reems Road Channel & Basin (470.12.31)
- Existing Storm Drain
- Railroads
- FEMA Floodplain
- FEMA Floodway

---

# Elm Lane Drainage Mitigation

PCN: 470.16.31

## Mike Duncan, P.E., CFM, Project Manager

602-506-4732

mwd@mail.maricopa.gov

Supervisory District: 5

Jurisdiction: Avondale

Origination: FY 2008 Prioritization Procedure

Resolution(s): FCD 2007R003

IGA(s): FCD 2007A008

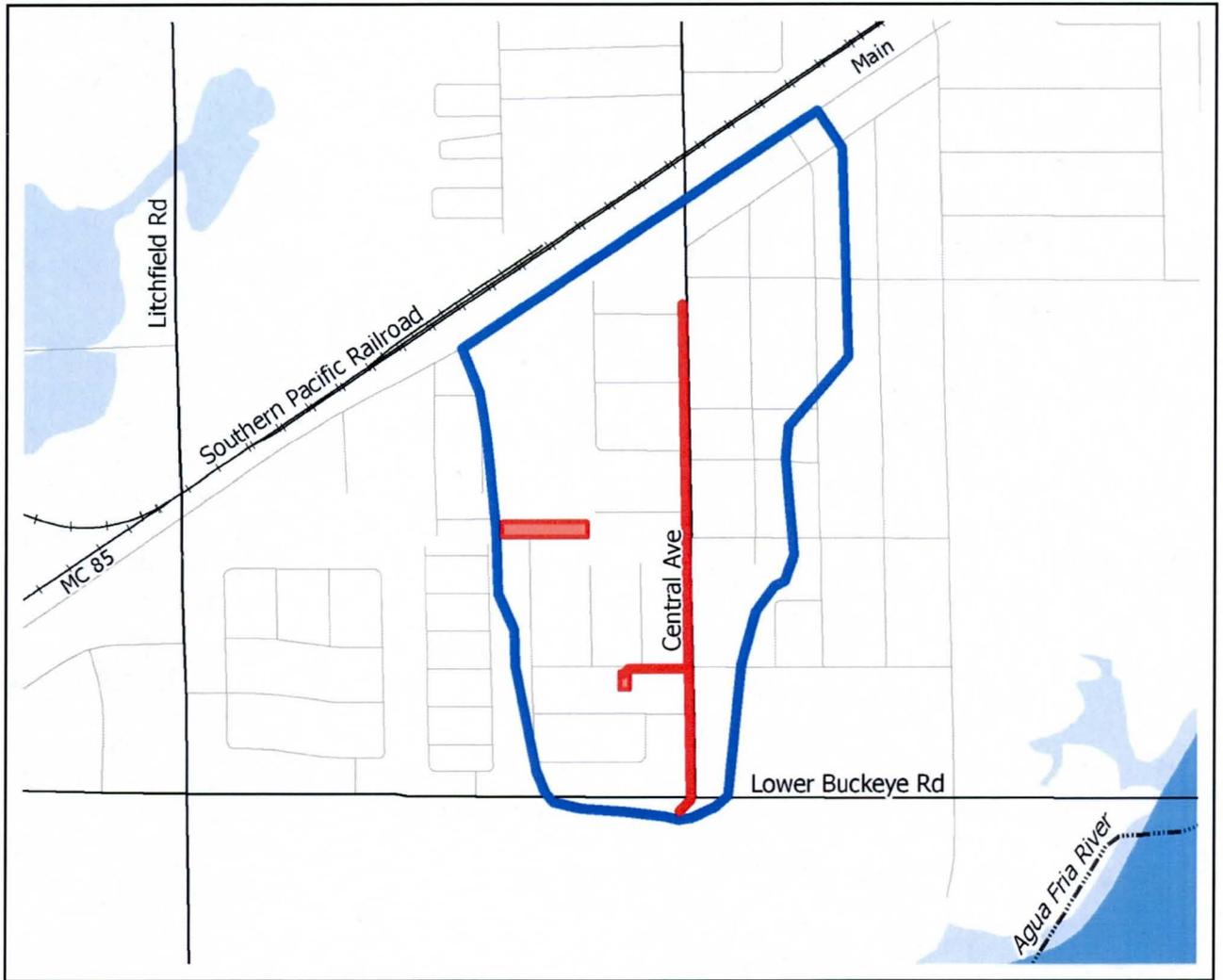
The Elm Drainage Mitigation Project at Central Avenue and Elm Lane in Avondale involves the construction of approximately one-half mile of storm drains with catch basins, one or two retention basins and an outfall culvert. The drainage improvements will provide protection from a 10-year storm event.

The project resulted from an alternatives mini-study conducted by the City of Avondale in response to flooding in streets and homes.

The City of Avondale will act as the project's lead agency, and the District will share in 50-percent of the total project cost.

### Fiscal Year

FY 2009	\$65,000
FY 2010	\$15,000
FY 2011	\$1,020,000
FY 2012	\$0
FY 2013	\$0
5-Year Program	<u>\$1,100,000</u>



Location: T1N/R1W



**Legend**

-  Proposed Storm Drain
-  New Retention Basin
-  Drainage Basin Area
-  Railroad
-  Floodplain
-  Floodway

---

# Sonoqui Wash Channelization

PCN: 480.04.32

Chandler Heights Road to Crismon Road

## Raju Shah, P.E., Project Manager

602-506-4768

rsc@mail.maricopa.gov

Supervisory District: 1

Jurisdiction: Queen Creek

Origination: FY 2006 and FY 2007 Prioritization Procedures

Resolution(s): FCD 2001R001

IGA(s): Pending

The second phase of Sonoqui Wash Channelization includes the segment of the existing wash southeast from Chandler Heights Road to Riggs Road, and along Riggs Road to Crismon Road. The proposed channel will be designed to collect and convey the 100-year flow to prevent flooding to property adjacent to the wash.

The existing floodplain from Chandler Heights Road to Riggs Road will be contained within the proposed 200-foot-wide channel. The Riggs Road to Crismon Road portion of Sonoqui Wash collects overland flow from the south and conveys it into the main branch of Sonoqui Wash.

This is a joint project between the District and the Town of Queen Creek. The Town of Queen Creek is expected to act as the lead agency, and

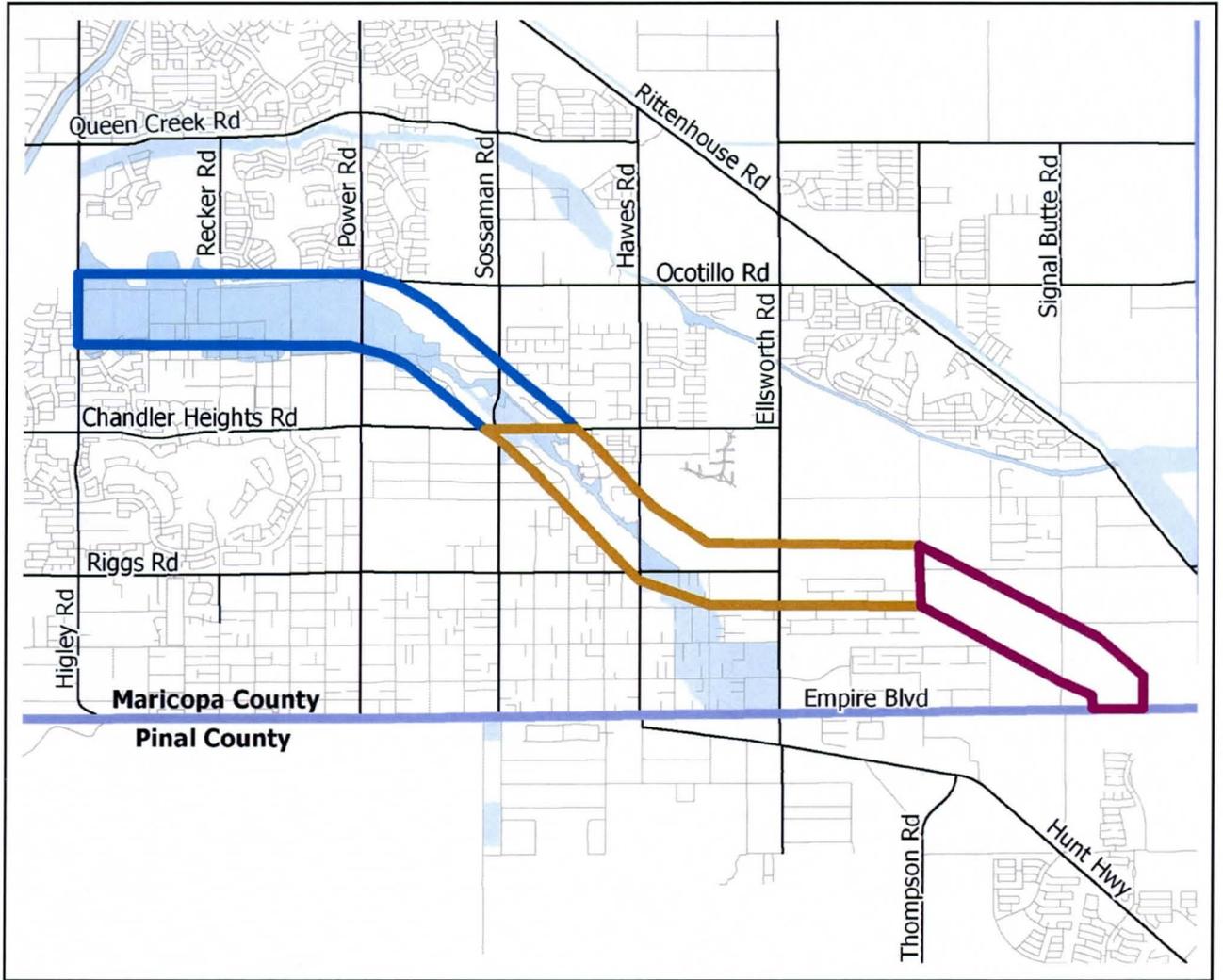
the Town will be responsible for channel operation and maintenance costs. An IGA between the District and the Town is required.

Advance right-of-way acquisition is scheduled for Fiscal Year 2009, pending the availability of Town funding and the consummation of required partnering agreements. Design and construction are anticipated late in the five-year CIP.

### **Fiscal Year**

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FY 2009	\$1,010,000
FY 2010	\$60,000
FY 2011	\$1,620,000
FY 2012	\$4,200,000
FY 2013	\$4,200,000
5-Year Program	<hr/> \$11,090,000



Location: T2S/R6E, T2S/R7E



**Legend**

**Sonoqui Wash Channelization**

-  Completed Channelization
-  Chandler Heights Road to Crismon Road Channelization (480.04.32)
-  Crismon Road to Empire Boulevard Channelization (480.04.34)
-  County Border
-  Floodplain
-  Floodway

---

# Sonoqui Wash Channelization

PCN: 480.04.34

Crismon Road to Empire Boulevard

## Raju Shah, P.E., Project Manager

602-506-4768

rsc@mail.maricopa.gov

Supervisory District: 1

Jurisdiction: Queen Creek

Origination: FY 2006 and FY 2007 Prioritization Procedures

Resolution(s): FCD 2001R001

IGA(s): Pending

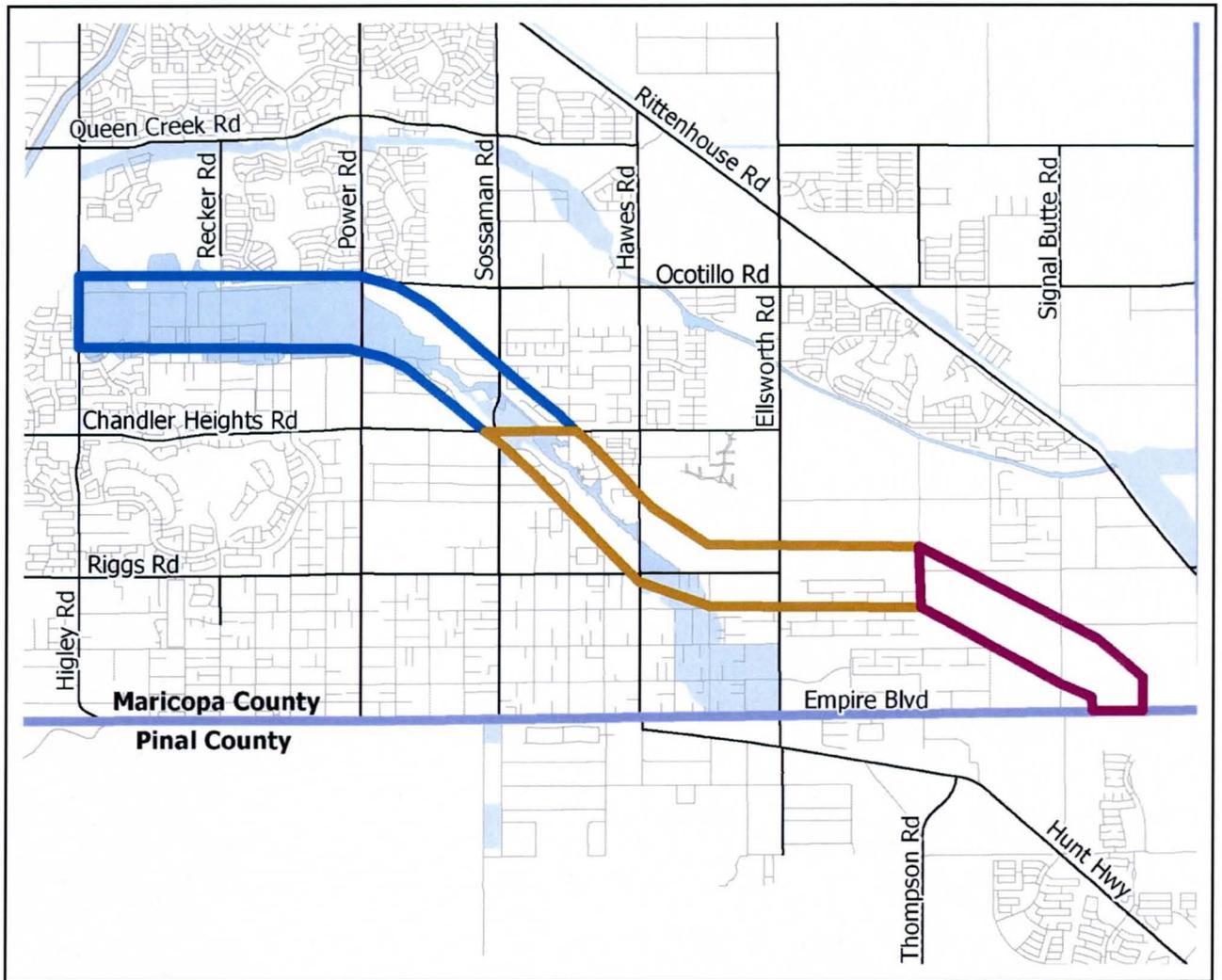
The third phase of Sonoqui Wash Channelization includes channelization southeast from the intersection of Crismon Road and Riggs Road, to Pinal County. The proposed channel will be designed to collect and convey the 100-year flow.

This is envisioned as a joint project between the District and the Town of Queen Creek. The Town will act as the lead agency, and partial implementation by developers is expected.

An IGA between the District and the Town is required.

### Fiscal Year

FY 2009	\$5,000
FY 2010	\$0
FY 2011	\$0
FY 2012	\$10,000
FY 2013	\$10,000
5-Year Program	<u>\$25,000</u>



Location: T2S/R7E



**Legend**

**Sonoqui Wash Channelization**

-  Completed Channelization
-  Chandler Heights Road to Crismon Road Channelization (480.04.32)
-  Crismon Road to Empire Boulevard Channelization (480.04.34)
-  County Border
-  Floodplain
-  Floodway

---

# Queen Creek Channel

PCN: 480.05.31

Recker Road to Higley Road

## Scott Vogel, P.E., Project Manager

602-506-4771

csv@mail.maricopa.gov

Supervisory District: 1

Jurisdiction: Queen Creek

Origination: FY 2005 Prioritization Procedure

Resolution(s): FCD 2004R014

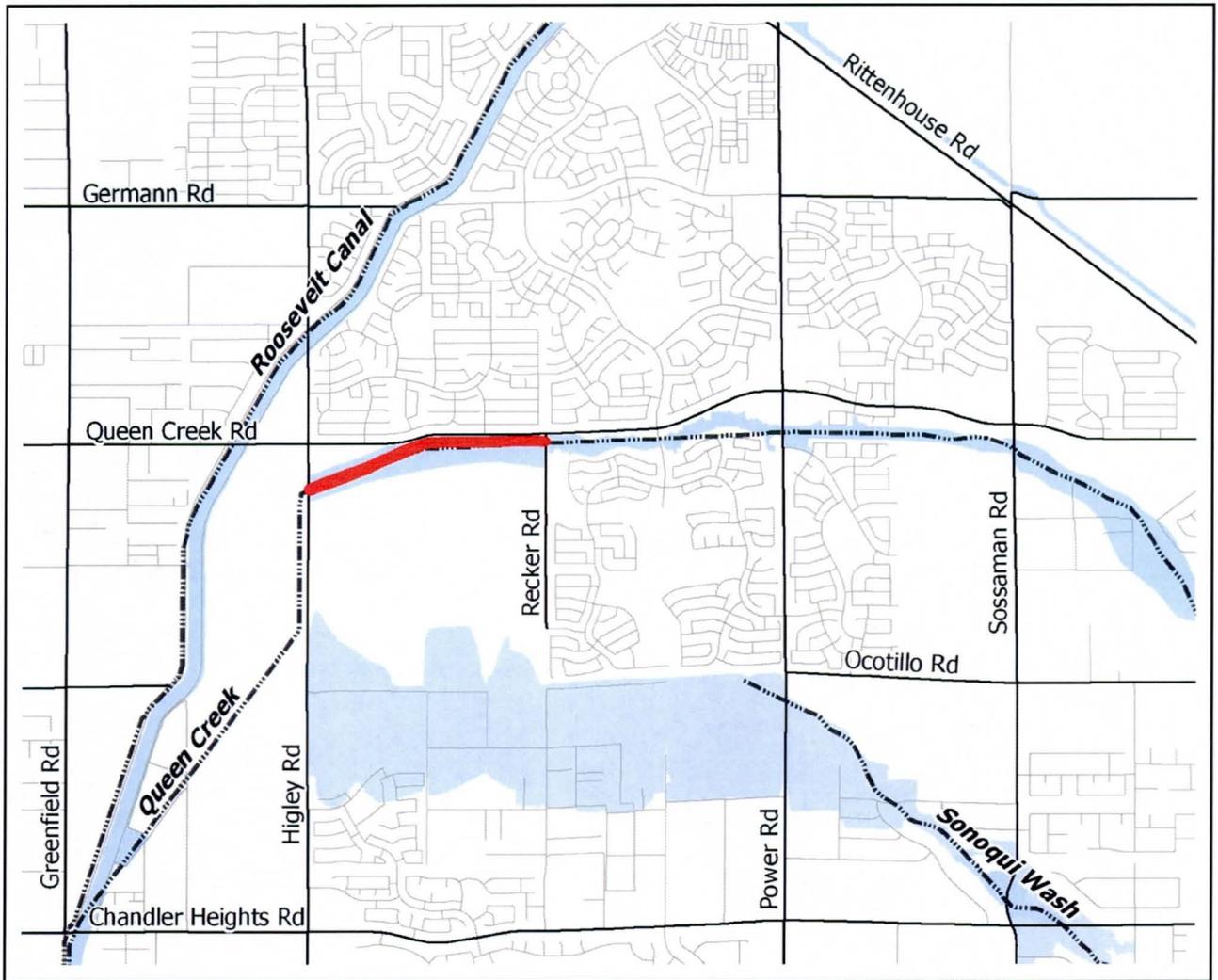
IGA(s): FCD 2005A006

The Town of Gilbert proposed improvements to Queen Creek Wash from Recker to Higley roads to complete channel improvements that have already been accomplished upstream of Recker and downstream of Higley. This project replaces the existing wash with a natural desert 100-year capacity channel.

In accordance with the IGA, the Town is the lead agency for the project and will own, operate and maintain the completed project; the District's cost share is limited to a cap of \$1 million. The Town has completed design and construction is in progress, with an anticipated completion date in Fiscal Year 2009.

### Fiscal Year

FY 2009	\$204,000
FY 2010	\$0
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$204,000



Location: T2S/R6E



**Legend**

-  Area to be Improved
-  FEMA Floodplain
-  FEMA Floodway

---

# Queen Creek Road Basin

PCN: 491.04.31

## Raju Shah, P.E., Project Manager

602-506-4768  
rcs@mail.maricopa.gov

Supervisory District: 1  
Jurisdiction: Chandler  
Origination: FY 2008 Prioritization Procedure  
Resolution(s): FCD 2001R003  
IGA(s): FCD 2004A014

The Queen Creek Road Basin was identified as one element of the recommended plan of the Higley ADMP. The off-line basin alleviates 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 completed basin will retain approximately 158 acre-feet of storage volume for up to a 100-year frequency storm event.

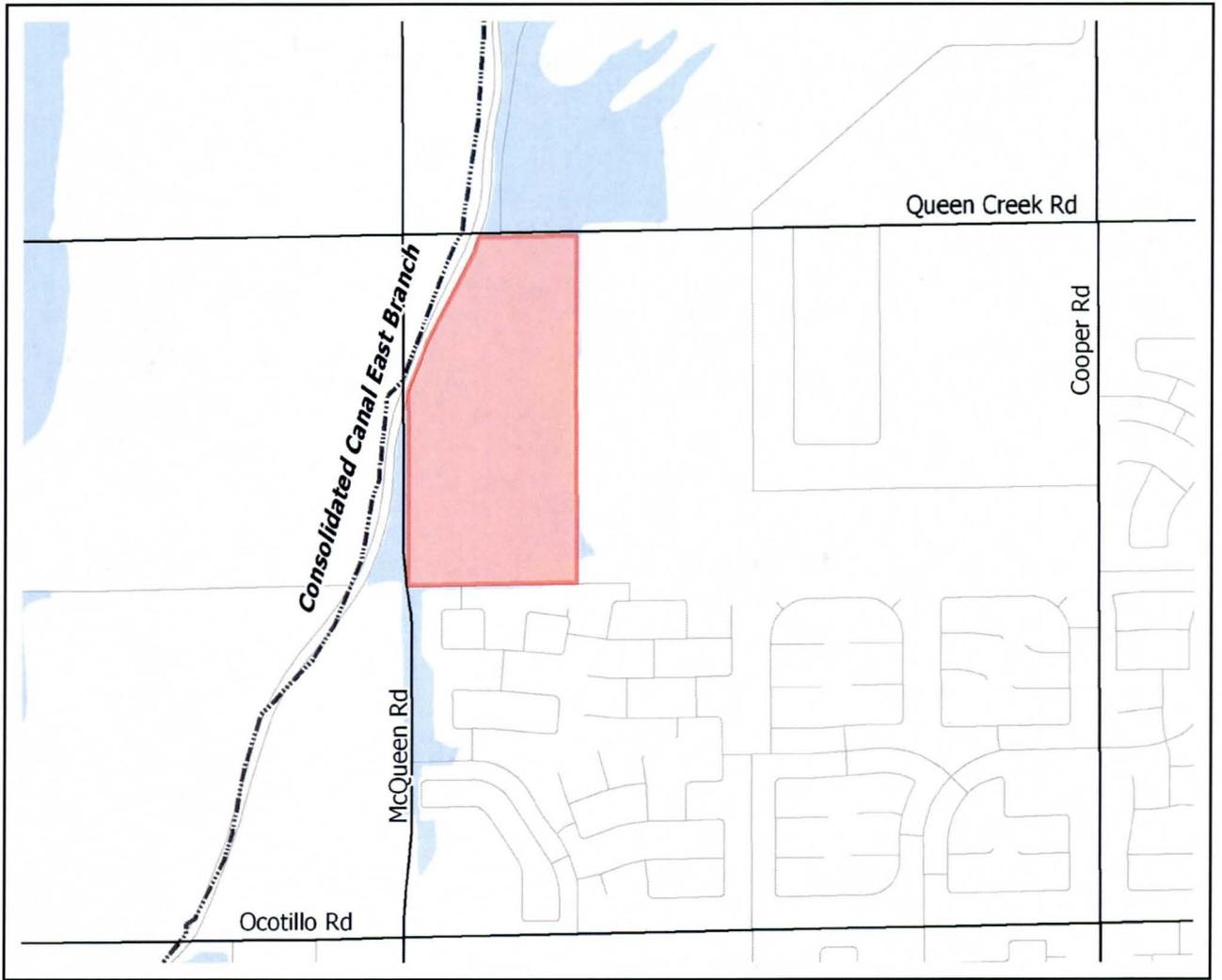
The City of Chandler is the lead agency for project design and construction, and will own, operate and maintain the completed basin. The City plans to develop the basin site into a regional park.

The District is participating in a cost-share IGA, with a contribution not to exceed \$2.2 million.

Design is in progress, and construction is scheduled to begin in Fiscal Year 2009.

### Fiscal Year

FY 2009	\$2,210,000
FY 2010	\$0
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<u>\$2,210,000</u>



Location: T2S/R5E



**Legend**

- Queen Creek Road Basin
- FEMA Floodplain
- FEMA Floodway

---

# 75th Avenue Storm Drain and Durango Regional Conveyance Channel

PCN: 565.04.31

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

602-506-2943

bao@mail.maricopa.gov

Supervisory District: 5

Jurisdiction: Phoenix, Unincorporated Maricopa County

Origination: FY 2004 Prioritization Procedure

Resolution(s): FCD 2002R012A

IGA(s): FCD 2002A015, 2002A015A, 2003A014, 2003A014A

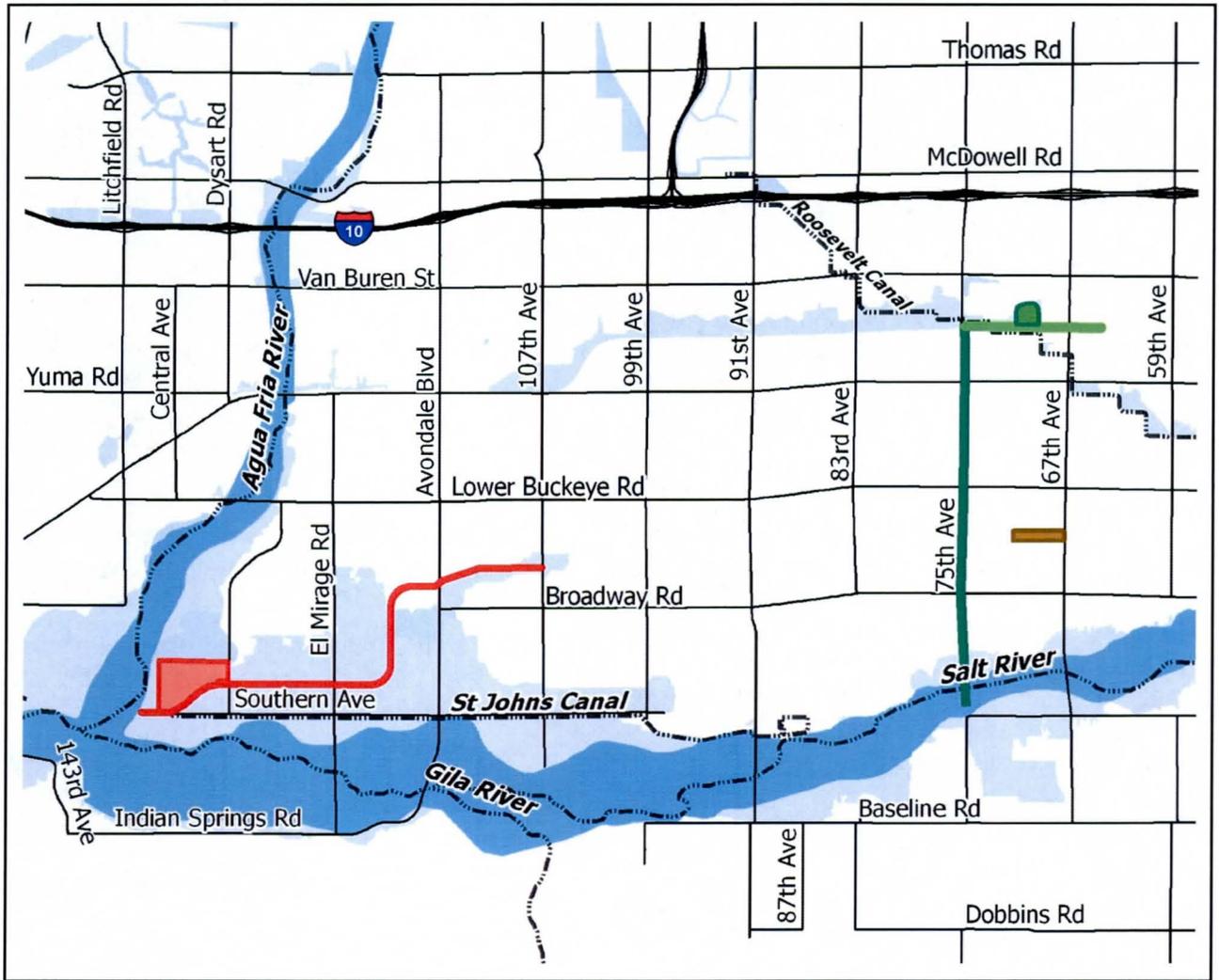
The 75th Avenue Storm Drain and Durango Regional Conveyance Channel (DRCC) was recommended by the Durango ADMP and was requested by the City of Phoenix. The project will provide an interim regional outfall channel and is the first phase of the DRCC project. Project improvements will reduce flooding hazards north of the Union Pacific Railroad and remove approximately 71 structures from an identified floodplain.

The City is the lead agency for design of both the storm drain and the DRCC, and is the lead agency for storm drain construction which began in Fiscal Year 2006. The District will be the lead agency for construction of the first phase of the DRCC, scheduled to begin in early Fiscal Year 2010.

### **Fiscal Year**

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FY 2009	\$2,355,000
FY 2010	\$7,781,000
FY 2011	\$2,130,000
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$12,266,000



Location: T1N/R1E, T1N/R2E



**Legend**

- DRCC Phase I Basin (565.04.31)
- DRCC Storm Drain Phase I (565.04.31)
- 75th Avenue Storm Drain (565.04.31)
- Santa Maria Basin (565.04.31)
- DRCC (107th Avenue to Agua Fria) - (565.04.32)
- DRCC (107th Avenue to Agua Fria) - Basin (565.04.32)
- FEMA Floodplain
- FEMA Floodway

---

# Durango Regional Conveyance Channel

PCN: 565.04.32

107th Ave. to the Agua Fria River

## Greg Jones, P.E., Project Manager

602-506-5537

Glj@mail.maricopa.gov

Supervisory District: 5

Jurisdiction: Avondale

Origination: FY 2003 Prioritization Procedure

Resolution(s): FCD 2006R009

IGA(s): Pending

The District completed the Durango Area Drainage Master Plan to develop and evaluate solutions to mitigate flooding hazards in the Durango drainage area. The study recommended a regional channel and basin in the vicinity of the Salt River Project Buckeye Feeder Channel to intercept storm water flows and provide an outfall to the Agua Fria River.

This project constructs the portion of the recommended plan located between 107th Avenue and the Agua Fria River, and between Lower Buckeye Road and Southern Avenue. The project would reduce flooding hazards and provide a 100-year outfall in the Durango drainage area.

The City of Avondale submitted the project for consideration under the Fiscal Year 2003

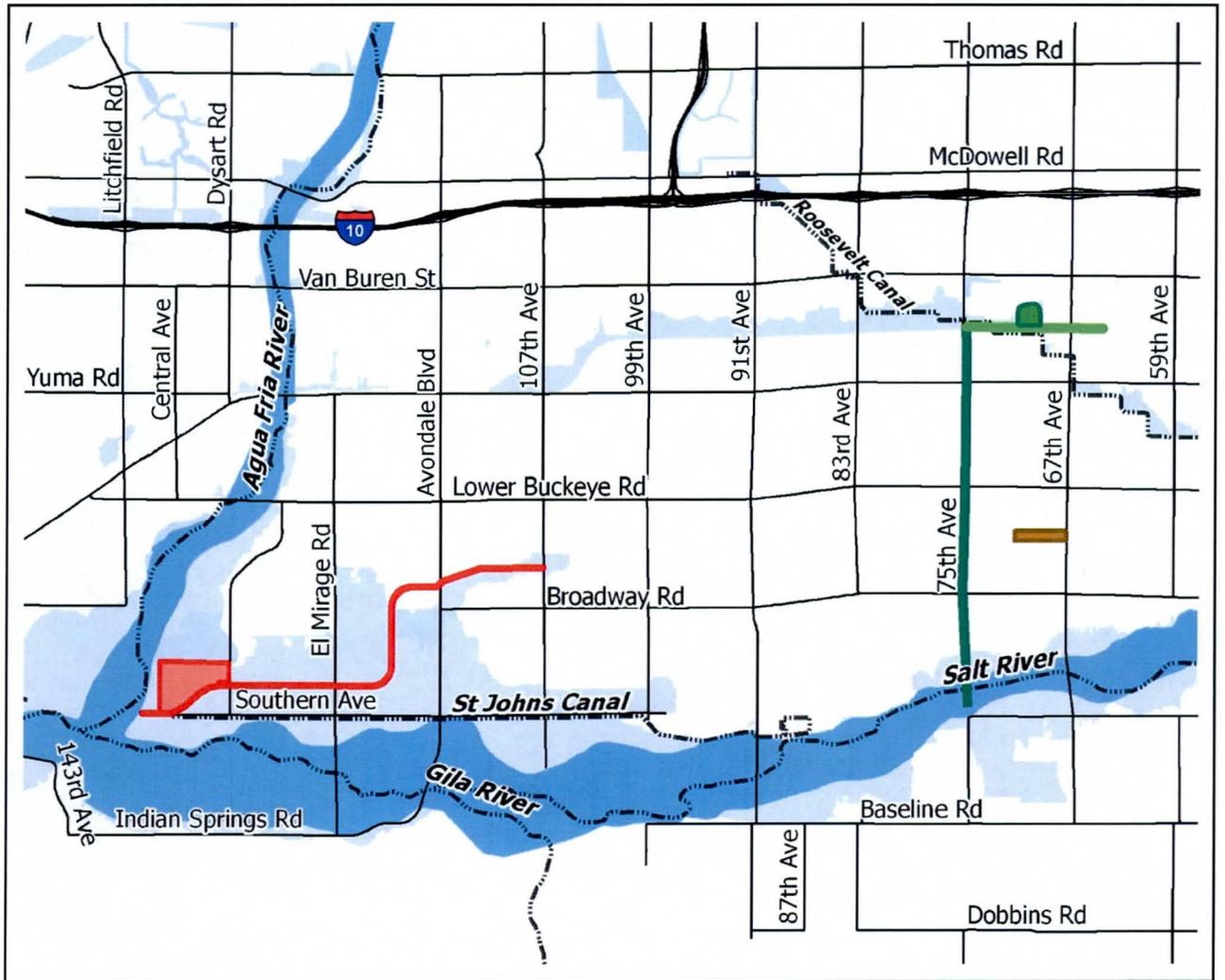
Prioritization Procedure, and the District anticipates participating in a cost-share agreement with the City.

The District and the City are pursuing cost-share commitments from area developers, and project implementation will likely await these commitments.

### Fiscal Year

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FY 2009	\$15,000
FY 2010	\$15,000
FY 2011	\$40,000
FY 2012	\$60,000
FY 2013	\$60,000
5-Year Program	<hr/> \$190,000



Location: T1N/R1E, T1N/R2E



**Legend**

- DRCC Phase I Basin (565.04.31)
- DRCC Storm Drain Phase I (565.04.31)
- 75th Avenue Storm Drain (565.04.31)
- Santa Maria Basin (565.04.31)
- DRCC (107th Avenue to Agua Fria) - (565.04.32)
- DRCC (107th Avenue to Agua Fria) - Basin (565.04.32)
- FEMA Floodplain
- FEMA Floodway

---

## 9th Avenue Storm Drain

PCN: 580.07.31

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

602-506-4768

rca@mail.maricopa.gov

Supervisory District: 3

Jurisdiction: Phoenix

Origination: FY 2007 Prioritization Procedure

Resolution(s): FCD 2005R005

IGA(s): FCD 2005A016

The 9th Avenue Storm Drain Project was identified within the Sunnyslope Candidate Assessment Report as one of several storm drains required in the Sunnyslope area to prevent local flooding during smaller events. The City of Phoenix has received numerous drainage complaints from this area. The City requested that the District initiate a drainage study to identify drainage problems and recommend solutions.

The project, starting at Peoria Avenue along 9th Avenue and ending at the Arizona Canal Diversion Channel (ACDC), consists of a storm drain system of pipe sizes ranging from 24" to 78", inlet and outlet structures and catch basins. The project will provide a 10-year level of flood protection to the properties located in the watershed.

The City is the lead agency for design and construction of the project, and the District has entered into a 50-percent construction cost-share agreement.

Construction is in progress with an estimated completion date in Fiscal Year 2009.

The City will own, operate and maintain the completed storm drain system.

### **Fiscal Year**

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FY 2009	\$958,000
FY 2010	\$0
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$958,000



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# Scatter Wash Basin Improvements

PCN: 590.03.31

## Mike Duncan, P.E., CFM, Project Manager

602-506-4732

mwd@mail.maricopa.gov

Supervisory District: 3 & 4

Jurisdiction: Phoenix

Origination: FY 2005 Prioritization Procedure

Resolution(s): FCD 2004R012

IGA(s): FCD 2004A016

The Scatter Wash Basin Improvement project originated from an Arizona Department of Transportation (ADOT) proposal and consists of improvements to Scatter Wash at the Interstate-17 crossings, culvert improvements, and construction of an off-line basin. The completed improvements will provide a 100-year level of protection.

The District entered into an IGA with ADOT and the City of Phoenix to fund 28 percent of the total project costs, not to exceed \$1,008,000.

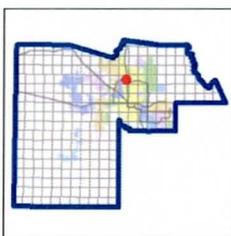
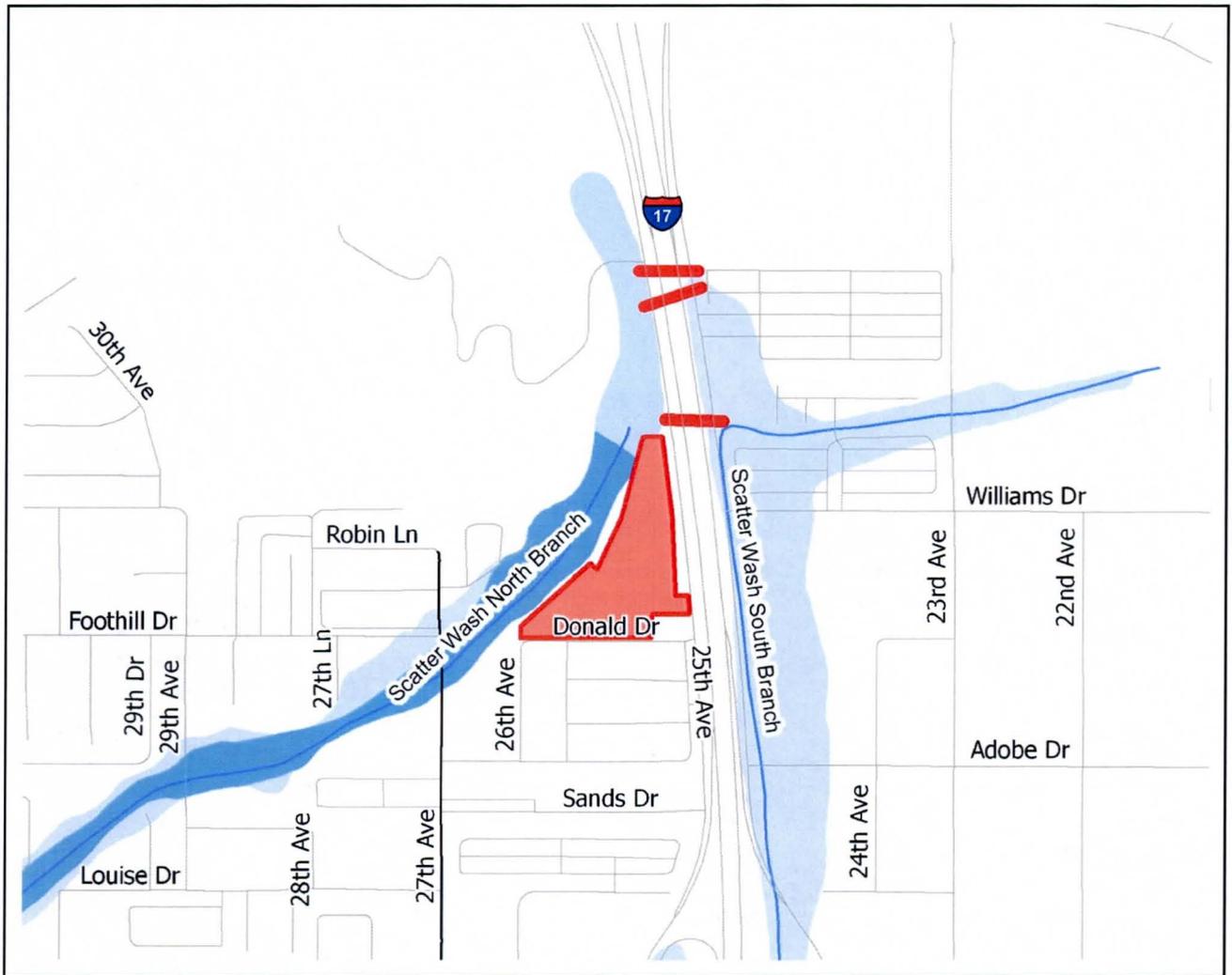
ADOT is the lead agency for design, right-of-way acquisition and construction, and the City and ADOT will share operation and maintenance responsibilities.

Project design and right-of-way acquisition are complete, and construction is underway.

### **Fiscal Year**

---

FY 2009	\$5,000
FY 2010	\$0
FY 2011	\$0
FY 2012	\$0
FY 2013	\$0
5-Year Program	<hr/> \$5,000



Location: T4N/R2E



**Legend**

- Scatter Wash Basin
- Culvert Improvement Area
- FEMA Floodplain
- FEMA Floodway

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# Bethany Home Outfall Channel

PCN: 620.03.32

## Scott Vogel, P.E., Project Manager

602-506-4771

csv@mail.maricopa.gov

Supervisory District: 4 & 5

Jurisdiction: Glendale, Phoenix

Origination: FY 1999 Prioritization Procedure

Resolution(s): FCD 98-12, 98-12A

IGA(s): FCD 2000A013, 2002A003

The Bethany Home Outfall Channel project includes a linear basin and channel along the Grand Canal extending westerly from 63rd 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, extending west from the Agua Fria Freeway (SR-101L) to the New River along the Bethany Home Road alignment, has been completed by ADOT with District participation. ADOT increased the size of their channel to accommodate additional flows from the east.

Phase II of the project includes a channel from the Agua Fria Freeway alignment to 63rd

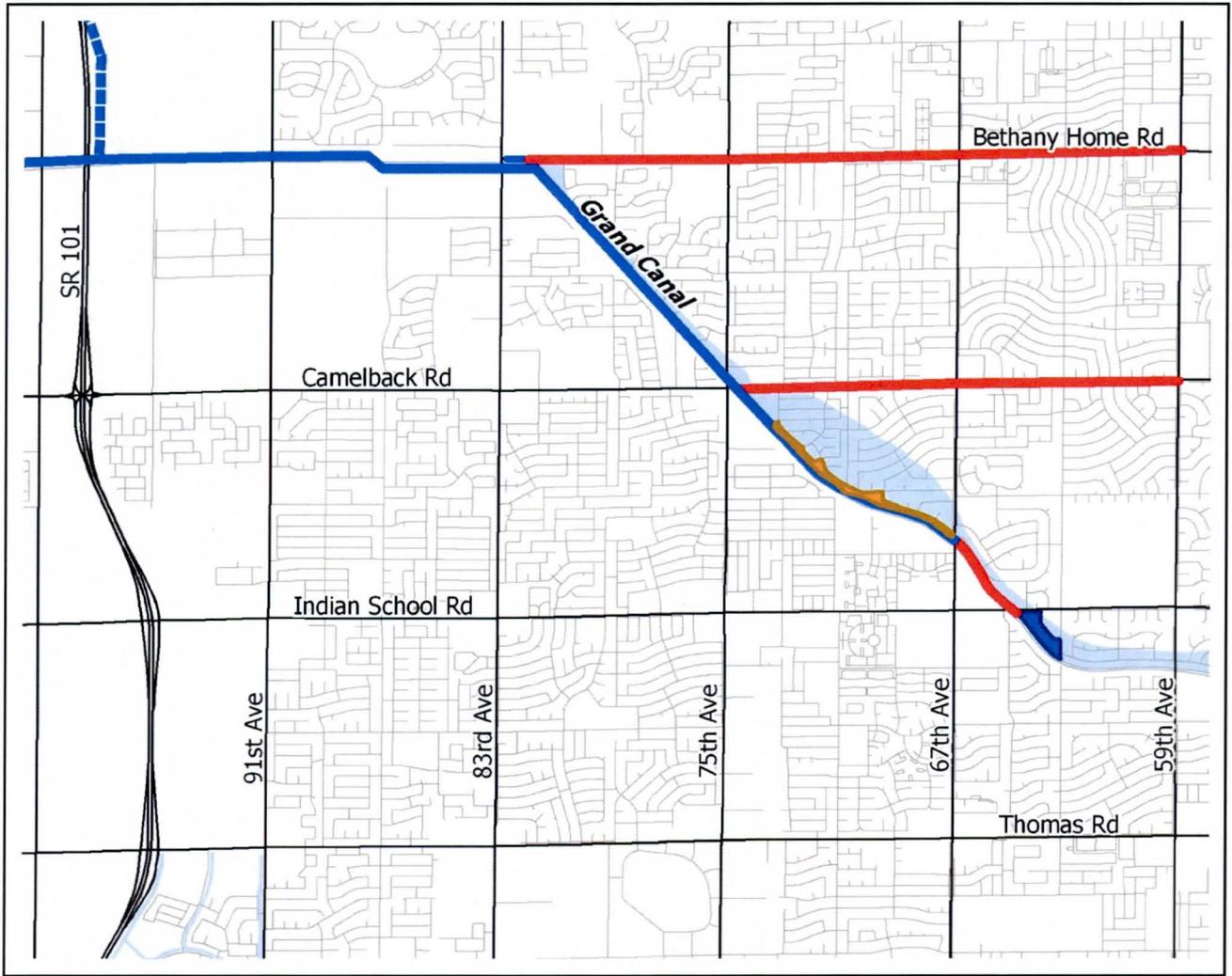
Avenue. The ADMP also recommends 10-year capacity storm drains, located within Bethany Home Road and Camelback Road, extending from 59th Avenue to the Outfall Channel. Preliminary estimates indicate that the cost to construct this 100-year channel and 10-year storm drains is approximately \$67 million. The cost share for the project is approximately 50 percent District, and 25 percent each for the cities of Glendale and Phoenix.

Construction of portions of the project from SR-101L to 67th Avenue is complete. Design and construction of the remainder of the improvements will be phased over several years, with completion anticipated in 2012.

### Fiscal Year

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FY 2009	\$2,180,000
FY 2010	\$4,461,000
FY 2011	\$3,480,000
FY 2012	\$7,950,000
FY 2013	\$0
5-Year Program	<hr/> \$18,071,000



Location: T2N/R1E, T2N/R2E



**Legend**

-  ADOT Channel
-  Existing Channel
-  Proposed Storm Drain
-  Sunset Detention Basin
-  Linear Detention Basin
-  FEMA Floodplain
-  FEMA Floodway

---

# Downtown Phoenix Drainage System (Phase I)

PCN: 625.01.30

## Mike Duncan, P.E., CFM, Project Manager

602-506-4732

mwd@mail.maricopa.gov

Supervisory District: 5

Jurisdiction: Phoenix

Origination: FY 2008 Prioritization Procedure

Resolution(s): FCD 2008R001

IGA(s): Pending

The Fiscal Year 2008 Prioritization Procedure recommended this project as a component of the Downtown Phoenix Drainage Improvements Project that was concurrently being studied under the Metro ADMP. The Metro ADMP subsequently recommended the Downtown Phoenix Drainage Improvements Project as a subset of its recommended downtown alternative.

The project's conceptual design involves the installation of drainage features along 1st Avenue, from Van Buren Street to Hadley Street; along Jefferson Street from 19th Avenue to 3rd Avenue; and in the vicinity of Fillmore Street and 3rd Avenue. Specific alignments will be determined during the final design process.

Design is in progress, and construction is anticipated in Fiscal Years 2010 and 2011.

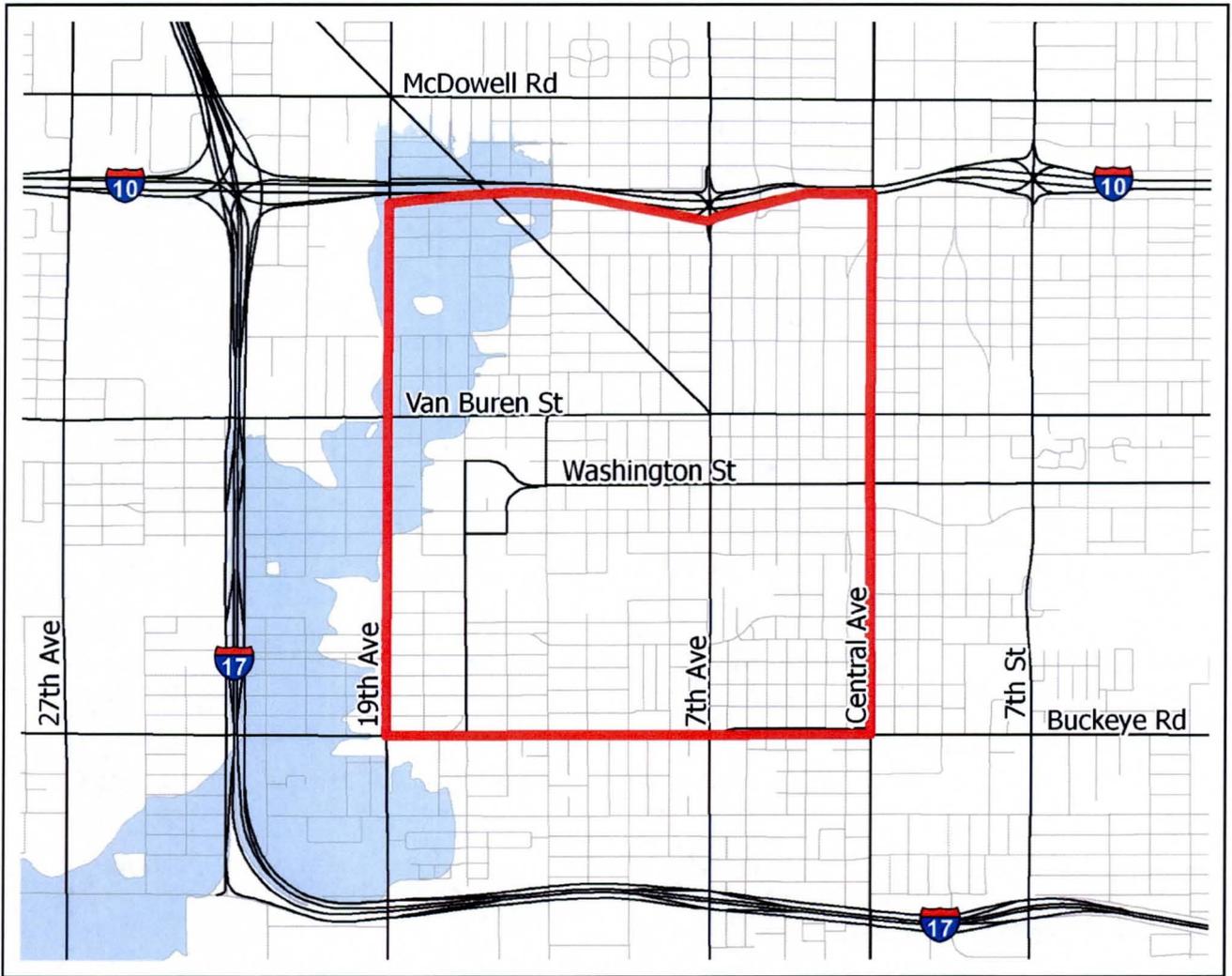
When combined with the complete downtown system recommended by the ADMP, this project will deliver a 10-year level of protection for the downtown area.

Phoenix is acting as lead agency for project design and construction, and the District intends to contribute 50 percent of the project cost. A project IGA is required.

### **Fiscal Year**

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FY 2009	\$430,000
FY 2010	\$1,445,000
FY 2011	\$4,350,000
FY 2012	\$30,000
FY 2013	\$0
5-Year Program	<hr/> \$6,255,000



Location: T1N/R3E



**Legend**

-  Downtown Phoenix Drainage System Improvements (Phase 1)
-  Floodplain
-  Floodway

---

# Floodprone Property Assistance Program

## John Hathaway, P.E., Project Manager

602-506-0503

Joh@mail.maricopa.gov

Supervisory District: 1, 2, 3, 4, & 5

Jurisdiction: Maricopa County

Origination: Floodprone Property Assistance Program

Resolution(s): Pending

IGA(s): N/A

Less than 18 percent 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, and as floodplains were delineated, many residents learned that their homes were within regulatory floodplains.

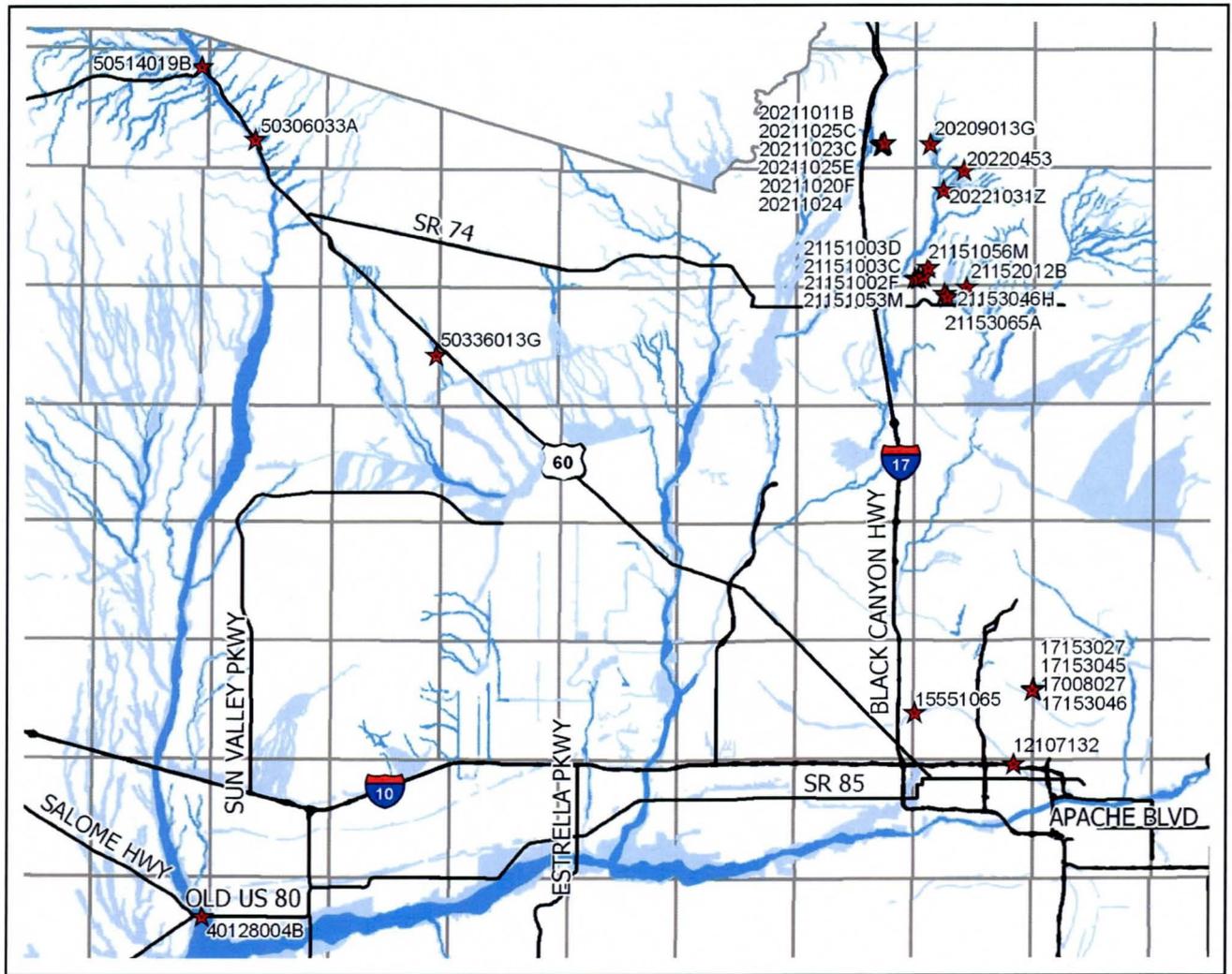
The Floodprone Property Assistance Program (FPAP) involves the voluntary purchase of properties in flood hazard areas where structural solutions are infeasible or impractical. Program applicants are scored and ranked under objective criteria.

Existing structures on purchased properties are demolished and removed; property may be preserved as open space, sold, or leased for uses compatible with adjacent properties and floodplain regulations.

### **Fiscal Year**

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FY 2009	\$1,558,000
FY 2010	\$2,030,000
FY 2011	\$1,030,000
FY 2012	\$1,030,000
FY 2013	\$2,030,000
5-Year Program	<hr/> \$7,678,000



**Legend**

- ★ FPAP Parcels
- Light Blue Floodplain
- Dark Blue Floodway
- Black Outline Township & Range

**Appendix A**  
**Completed Capital Projects**  
Through Fiscal Year 2008

## Appendix A-1 Completed Capital Projects Southeast Region

**South/east of Agua Fria River, Arizona Canal Diversion Channel, Buckhorn-Mesa Structures, Estrella Mountains  
Through Fiscal Year 2008**

Project	Location	Year
24th Ave. and Camelback Rd. Basin	24th Ave. and Camelback Rd.	2008
43rd Ave. and Southern Ave. Detention Basin	43rd Ave. and Southern Ave.	2005
43rd Ave. Storm Drain	43rd Ave., Broadway Rd. to Baseline Rd.	2000
48th St. Drain	48th St., Baseline Rd. to I-10	1988
Adobe St. Structures over EMF	Adobe St. 1/2 mi. east of Greenfield Rd.	1990
ADOT Pit and Diversion Channel	I-10, Elliot Rd. to 1/4 mi. south of Warner Rd.; I-10 and 1/4 mi. south of Warner Rd.	1987
Alma School Drain	McLellan Rd. alignment, Tempe Canal at Alma School Rd. to the Salt River	1969
Arizona Canal Diversion Channel	Arizona Canal, 37th Street to New River	1994
Baseline Rd. Bridges over EMF and RWCD Canal	Baseline Rd., 1/4 mile east of Recker Rd. alignment	1984
Baseline Rd. Storm Drain	Baseline Rd., 7th Ave. to 43rd Ave.	2002
Bethany Home Outfall Channel (Phase I)	Bethany Home Rd., SR-101L to New River	2000
Bethany Home Outfall Channel (Phase IIA)	Bethany Home Rd., SR-101L to 83rd Ave.	2004
Broadway Rd. Bridge over RWCD Canal	Broadway Rd., 1/4 mi. east of Higley Rd.	1986
Broadway Rd. Collector Channel (Broadway Rd. to EMF)	Approximately 1/2 mi. east of Higley Rd., Broadway Rd south for 1/3 mi. to EMF	1998
Cactus Rd. Storm Drain (67th Ave. to 75th Ave.)	Cactus Rd., 67th Ave. to 75th Ave.	1998
Central Arizona Project Detention Basin No. 1	Approximately Sossaman Rd. alignment and approximately McLellan Rd. alignment	2001
Central Arizona Project Detention Basin No. 2	93rd St. and University Dr.	2001
Central Arizona Project Detention Basin No. 3	Approximately 96th St. and University Dr.	2001
Central Arizona Project Detention Basin No. 4	Crismon Rd. and Apache Tr.	2001
Central Chandler Area Drainage System	Area bounded by Ray Rd. (N), Pecos Rd. (S), SR-101L (W), Arizona Ave. (E)	2005
East Maricopa Floodway	Between Val Vista Dr. and Sossaman Rd., Thomas Rd. to GRIC to the Gila River	1989
Elliot Rd. Basin and Channel	Approx. Elliot Rd., approx. Signal Butte Rd. to SR-202L; Crismon Rd. 0.5 mi. north	2007
Elliot Rd. Bridges at RWCD Canal and Floodway	Elliot Rd. and approximately 142nd St. alignment	1983
Ellsworth Rd. Channel at Phoenix-Mesa Gateway Airport	North and East boundaries of Phoenix-Mesa Gateway Airport	2008
Gila Drain Storm Drain	Rural Rd., 1/2 mi. south of Guadalupe Rd. to 1/2 mi. south of Warner Rd. (Hanger Park)	1988
Gilbert Crossroads Park Basin	Greenfield Rd. and Ray Rd.	1992
Guadalupe Box and Channel	Guadalupe Rd., Sossaman Rd. to the EMF at Power Rd.	1989
Guadalupe Drainage Improvement Project	Town of Guadalupe (Various Basins)	2003
Guadalupe FRS	West side of I-10, between Guadalupe Rd. and Baseline Rd.	1975
Hawes Rd. Channel (Emelita Ave. to Main St.)	Hawes Rd., Apache Tr. (Main St.) To Emelita Ave. (1/2 mi. north of Southern Ave.)	2004
Holly Acres Levee and Bank Stabilization	Gila River North Bank, El Mirage Rd. to 113th Ave.	1984
Indian School Rd. (107th Ave. to Agua Fria)	Indian School Rd., 107th Ave. to Agua Fria River	1989
Maryvale Stadium West Inlet Channel	Grand Canal, between Indian School Rd. and Osborn Rd., 57th Ave. to 51st Ave.	2001
Northern and Orangewood Storm Drain	Between Butler Dr. and Glendale Ave., 63rd Ave. to Agua Fria River	2001
Old Cross Cut Canal	48th St., Arizona Canal to McDowell Rd.	1991
Olive Ave. Storm Drain (67th Ave. to 91st Ave.)	Olive Ave., 67th Ave. to 91st Ave.	1992
Powerline Floodway	Powerline FRS, southwest to Ray Rd. alignment at GM, to EMF at Sossaman Rd.	1968
Powerline FRS	US-60 and Guadalupe Rd. alignment	1967
Price Road Drain	SR-101L (Price), Salt River to 1/2 mi. south of Guadalupe Rd. (Carriage Lane Park)	1993
Queen Creek Channel (Hawes to Power)	Queen Creek, Hawes Rd. to Power Rd.	2006
Rittenhouse FRS	US-60, Queen Creek Rd. alignment	1969
Rittenhouse Road Channel	Rittenhouse Rd., Queen Creek Rd. to the EMF at Pecos Rd.	1997
Salt River Channel (McClintock Dr. to Price Rd.)	North bank of Salt River, McClintock Dr. to Price Rd.	1998
Salt River Channel (Price Rd. to McKellips Rd.)	Salt River, Price Rd. to McKellips Rd.	1998
Salt River Channel (SR-143 to McClintock Dr.)	Salt River, SR-143 to McClintock Dr.	1991
Salt River Low Flow Ch. (19th Ave. to I-10) (Phx. Rio Salado)	Salt River, 19th Ave. to I-10 at approximately 30th St. alignment	2002
Sonoqui Wash Channelization (Higley to Chandler Heights)	Sonoqui Wash, Higley Rd. and Ocotillo Rd. to Chandler Heights Rd. and Sossaman Rd.	2008
Sossaman Channel and Basin	Sossaman Rd., Southern Ave. to Guadalupe Rd. (Basin at US-60)	1977
Southeast Phoenix Regional Drainage System	SR-202L and 48th St.	2002
Southeast Valley Regional Drainage System	SR-202L to Pecos Rd. 1/2 mi. west of Kyrene Rd., to I-10, south to the Gila Drain floodway	2002
University Drive Basin	64th St. and University Dr.	1992
Vineyard FRS	US-60 and Ray Rd. alignment	1968
Williams Field Rd. at RWCD Bridge	Williams Field Rd. and Roosevelt Water Conservation District Canal	1981

## Appendix A-2 Completed Capital Projects Northeast Region

**North/east of Arizona Canal Diversion Channel, Salt River, Buckhorn-Mesa Structures and New River  
Through Fiscal Year 2008**

Project	Location	Year
7th Ave. Bridge over ACDC	7th Ave. and approximately Minnezona Ave. alignment	1989
7th Ave. Storm Drain (Union Hills Dr. to Cave Creek Wash)	7th Ave., Union Hills Dr. to Cave Creek Wash	1995
7th St. Bridge over ACDC	7th St., 1/3 mi. north of Northern Ave.	1989
10th St. Wash Detention Basin No. 1	12th St. and Peoria Ave.	1996
10th St. Wash Detention Basin No. 2	11th St. and Alice Ave.	1997
10th St. Wash Improvements (Alice to ACDC)	10th St., Alice Ave to ACDC at Griswold Rd. alignment	2008
12th St. Bridge over ACDC	12th St., 1/2 mi. north of Glendale Ave.	1991
25th Ave. Bridge over ACDC	24th Ave., 1/4 mi. north of Dunlap Ave.	1987
29th Ave. Bridge over ACDC	29th Ave., 1/4 mi. north of Dunlap Ave.	1987
32nd St. Bridge over ACDC	32nd St., 1/4 mi. south of McDowell Rd.	1991
35th Ave. Bridge over ACDC	35th Ave., 1/3 mi. north of Dunlap Ave.	1987
43rd Ave. and Peoria Ave. Bridges over ACDC	43rd Ave and Peoria Ave.	1988
51st Ave. and Cactus Road Bridges over ACDC	51st Ave. and Cactus Rd.	1984
59th Ave. Bridge over ACDC	59th Ave., 1/4 mi. south of Thunderbird Rd.	1983
67th Ave. Bridge over ACDC	67th Ave. and approximately Acoma Dr.	1985
67th Ave. Storm Drain (Bell Rd. to ACDC)	67th Ave., Bell Rd. to ACDC at Acoma Dr.	1990
75th Ave. Bridge over ACDC	75th Ave., 1/2 mi. south of Bell Rd.	1985
83rd Ave. Bridge over Skunk Creek	83rd Ave. and Skunk Creek	1990
83rd Ave. Grade Control Structure (Skunk Creek)	83rd Ave. and Skunk Creek	2003
91st Ave. and Bell Rd. Drainage	91st Ave., Bell Rd. to Greenway Rd.; Greenway Rd., 91st Ave. to New River	1991
Adobe Dam	Skunk Creek at Deer Valley Rd. alignment and 39th Ave. alignment	1982
Apache Junction FRS and Floodway	Lost Dutchman Blvd. and Idaho Rd.	1988
Beardsley Rd. Drainage System (7th Ave. to 23rd Ave.)	Beardsley Rd., 7th Ave. to 23rd Ave.	1995
Bulldog Floodway	Apache Junction FRS to Signal Butte FRS	1988
Cactus Rd. Flood Control System	Cactus Rd., Scottsdale Rd. to 64th St.; 68th St., Cactus Rd. to Mescal Park	1991
Camelback Side Drain Extension	Camelback Rd., 64th St. to 68th St; Lafayette Blvd., 64th St. to 68th St.	1986
Carefree Town Center Drainage	Area bounded by Sundance Tr. / Tom Darl. Dr. (NW), Bloody Bas. Rd. / Tranquil Tr. (SE)	2002
Cave Buttes Dam	16th St. alignment and Happy Valley Rd. alignment	1980
Cave Buttes Dam Dike No. 1	18th St. alignment and Happy Valley Rd. alignment	1980
Cave Buttes Dam Dike No. 2	32nd St. alignment , 1/2 mi. north of Happy Valley Rd. alignment	1980
Cave Buttes Dam Dike No. 3	9th St. alignment and Dixileta Dr. alignment	1980
Cave Creek Channelization	Deer Valley Rd. to Arizona Canal	1991
Cave Creek Dam	16th St. alignment and Jomax Rd. alignment	1923
Doubletree Ranch Road System	Doubletree Ranch Rd., Tatum Blvd to Indian Bend Wash at 58th St. alignment	2004
Dreamy Draw Dam	SR-51 and Northern Ave.	1973
Glendale Ave. Bridge over ACDC	Glendale Ave. and 16th St. alignment	1990
Golden Eagle Park Dam	Golden Eagle Blvd. and Palisades Blvd.	2002
Greenway Parkway Channel (9th St. to Cave Creek Rd.)	Greenway Parkway, 9th St. to Cave Creek Rd.	2002
Indian Bend Wash	Between Hayden Rd. and Scottsdale Rd., Indian Bend Rd. to Salt River at SR-202L	1985
Maryland Ave. Bridge over ACDC	Maryland Ave. and 20th St. alignment	1991
New River Channelization (Bethany Home Rd. to Skunk Creek)	New River, Bethany Home Rd. to Olive Ave.	1996
New River Dam	Alignment of 79th Ave. and approximately Pinnacle Vista Rd.	1985
New River Dam Dike No. 1	Lake Pleasant Rd. and Dixileta Dr. Alignment	1985
Northern Ave. Bridge over ACDC	Northern Ave. and 16th St. alignment	1989
Northern Ave. Bridge over New River	Northern Ave. and New River	1992
Oak St. Storm Drain (58th St. to Indian Bend Wash)	Oak Street, 58th St. to Indian Bend Wash	2000
Osborn Rd. Storm Drain	Between Osborn Rd. and Thomas Rd., 60th St. to Ind. Bend Wash at 76th St. and Earll Dr.	2001
Paradise Valley Detention Basin No. 4	Paradise Valley Community College (Component of Upper E. Fork Cave Creek)	1991
Pass Mountain Diversion Channel	McKellips Rd., Crismon Rd. to Signal Butte Rd., south to behind Signal Butte FRS	1987
Scatter Wash Channel	Scatter Wash, 55th Ave. to 35th Ave.	1995
Scottsdale Rd. Drainage (Thunderbird to Doubletree Ranch)	Approximately Scottsdale Rd., Thunderbird Rd. to Doubletree Ranch Rd.	2008
Signal Butte Floodway	Between Mclellan Rd. and Adobe Rd., Signal Butte FRS to CAP at Ellsworth Rd.	1984
Signal Butte FRS	Southwest of Signal Butte Rd. and McKellips Rd.	1987
Skunk Creek / ACDC Low Flow Channel	Skunk Creek, New River to 75th Ave.; ACDC, 73rd Ave. to Skunk Creek	2007
Skunk Creek Channel and Levee	Skunk Creek, approximately Jomax Rd. alignment to Central Arizona Project	1983
Skunk Creek Channel Imp. (75th Ave. to 51st Ave.)	Skunk Creek, 75th Ave. to 51st Ave.	2000
Skunk Creek Sports Complex Bank Protection	Skunk Creek, New River to 75th Ave.	1999
Spook Hill FRS and Floodway	McKellips Rd. and 76th St. alignment	1979
Tatum Wash Detention Basin	45th St. and Shea Blvd.	1998
Upper East Fork Cave Creek	Area bounded by SR-101L (N), Bell Rd. (S), 9th St. (W), 32nd St. (E); 4 basins & PVCC	1996

**Appendix A-3**  
**Completed Capital Projects**  
**Northwest-Southwest Regions**  
**West of New River, Agua Fria River and Estrella Mountains**  
**Through Fiscal Year 2008**

Project	Location	Year
Agua Fria Channelization	Agua Fria River, Camelback Rd. to 1/4 mi. south of Lower Buckeye Rd.	1988
Avondale Landfill Excavation	Dysart Rd. and Buckeye Rd.	1986
Buckeye FRS No. 1	I-10, 331st Ave. to 257th Ave.	1975
Buckeye FRS No. 2	I-10, 254th Ave. to 237th Ave.	1975
Buckeye FRS No. 3	I-10, 235th Ave. to 215th Ave.	1975
Bullard Wash (Phase 1)	Bullard Wash, Lower Buckeye Rd. alignment to Gila River	2001
Camelback Ranch Levee	Agua Fria River and Camelback Rd.	1999
Casandro Wash Dam	North of US-60, between Mariposa Dr. alignment and Los Altos Dr. alignment	1996
Casandro Wash Outlet	Jackson St., Navajo St. to Mohave St.; Mohave St., Jackson St. to Casandro Wash	1996
Centennial Levee	South of I-10, T2N/R9W, T2N/R10W	1985
Colter Channel	Between Camelback Rd. and Missouri Ave., Litchfield Rd. to Agua Fria River	1995
Dysart Drain	Between Olive Ave. and Glendale Ave., Reems Rd. to Agua Fria River	1996
El Mirage Drain	El Mirage Rd., from Deer Valley Rd. to a point 1 1/4 mi. south, to Agua Fria River	1990
Gila / Salt River Clearing (Gillespie Dam to 91st Ave.)*	Gila / Salt River, Gillespie Dam to 107th Ave.	1985
Harquahala FRS	I-10, T2N/R9W, T3N/R9W, T3N/R10W	1982
Harquahala Floodway	I-10, T2N/R9W, T3N/R9W, T3N/R10W	1982
McMicken Dam	Area bounded by Grand Ave. (N), Peoria Ave. (S), 165th Ave. (E), 199th Ave. (W)	1956
McMicken Dam Outlet Channel	Extends 5.5 mi. northeast of northeast end of McMicken Dam	1956
Perryville Bank Stabilization	North bank of Gila River, between Perryville Rd. and Cotton Ln.	1984
Roosevelt Irrigation District Canal Overchute	Litchfield Rd. and RID Canal	1998
Saddleback Diversion Channel	South of I-10, T2N/R8W, T1N/R8W	1981
Saddleback FRS	South of I-10, T2N/R8W, T1N/R8W	1981
Sun City Drains	Sun City, T4N/R1W	1990
Sun City West Drains	Sun City West, T3N/R1E	1990
Sunnycove Dam	Kellis Rd. alignment and Turtleback Ln. alignment	1976
Sunset / Sunnycove Pipeline	Sunnycove Dam, to a point 1 mi. northeast	1976
Sunset Dam	South of US-60, between Cucuracha St. alignment and Whipple Ct. alignment	1976
White Tanks FRS No. 3	Jackrabbit Tr. alignment and Glendale Ave. alignment	1954
White Tanks FRS No. 4	Jackrabbit Tr. and Van Buren St.	1954

\*Initially cleared; conditions subsequently reversed.

**Appendix B**  
**Regional Flood Control Structures**  
Operated by Other Agencies

## **Appendix B**

### **Regional Flood Control Structures Operated by Other Agencies**

As a component of its comprehensive flood hazard mitigation report, the District is required to report existing area flood control facilities, including those constructed by other agencies. The structures listed below are not owned or operated by the District but provide significant flood control benefits to Maricopa County.

#### **Salt River Project Dams**

Through a network of dams, reservoirs and canals, the Salt River Project (SRP) provides power and water to a substantial portion of Maricopa County. By their nature, Salt River Project's seven dams and six associated reservoirs provide incidental flood control benefits along the Salt and Verde Rivers. Note that all listed reservoir capacities apply to water conservation storage; incidental flood control storage capacity varies.

- Theodore Roosevelt Dam and Theodore Roosevelt Reservoir are located on the Salt River, 56 miles northeast of central Phoenix. The dam was completed in 1911 and modified in 1996. This modification increased the capacity of the reservoir from 1,382,000 acre-feet to 2,209,000 acre-feet, with 557,000 acre-feet dedicated to floodwater storage. Under the cost-share agreement known as "Plan Six", the District contributed funding to the flood control component of this United States Bureau of Reclamation project.
- Horse Mesa Dam and Apache Lake Reservoir are located on the Salt River, 44 miles northeast of central Phoenix and downstream of Theodore Roosevelt Dam. Reservoir capacity is 245,000 acre-feet.
- Mormon Flat Dam and Canyon Lake Reservoir are located on the Salt River, 36 miles northeast of central Phoenix and downstream of Horse Mesa Dam. Reservoir capacity is 58,000 acre-feet.
- Stewart Mountain Dam and Saguaro Lake Reservoir are located on the Salt River, 32 miles northeast of central Phoenix and downstream of Mormon Flat Dam. Reservoir capacity is 70,000 acre-feet.
- Granite Reef Diversion Dam is located at the confluence of the Salt and Verde Rivers, 24 miles northeast of central Phoenix, and diverts flows into the Arizona Canal and Eastern Canal, irrigation canals serving the Phoenix Metropolitan Area.
- Horseshoe Dam and Horseshoe Reservoir are located on the Verde River, 43 miles north of central Phoenix. Reservoir capacity is 143,000 acre-feet.
- Bartlett Dam and Bartlett Reservoir are located on the Verde River, 36 miles northeast of central Phoenix and downstream of Horseshoe Dam. Reservoir capacity is 180,000 acre-feet.

#### **United States Bureau of Reclamation Dams**

- New Waddell Dam, constructed in 1992, and Lake Pleasant Reservoir are located on the Agua Fria River, 30 miles northwest of central Phoenix. The dam and reservoir replaced the smaller Waddell Dam and provide water supply and Central Arizona Project (CAP) regulatory water storage. Reservoir capacity is 1,101,000 acre-feet, including 811,800 acre-feet dedicated to water storage. There is no dedicated flood storage capacity; however, incidental flood storage

capacity is available dependent upon dam and CAP operations and basin runoff upstream of the dam.

▪ Coolidge Dam, constructed in 1928, and San Carlos Reservoir are located on the Gila River, 100 miles southeast of the Phoenix Metropolitan Area. The dam and reservoir provide irrigation and power production. Original reservoir capacity was 1,206,000 acre-feet, but sediment buildup has reduced this capacity to 805,000 acre-feet. The reservoir has historically stored flood flows from the Gila River, essentially eliminating floodwater contributions from the Upper Gila River that would otherwise have reached the Phoenix Metropolitan Area. The dam does have flood control gates on its emergency spillway that became inoperable shortly after construction; new gates have been designed but not installed.

**Appendix C**  
**Pending Recommended Projects**

## **Appendix C**

### **Pending Recommended Projects**

The District's annual Prioritization Procedure recommends new projects, submitted by District staff or by other agencies, for eventual inclusion in the CIP. The period between the District recommending a project and reserving funding for a project varies and is unique to the individual project; it may be several months, or it may be many years.

Agencies submitting projects may have dedicated funding readily available. Alternately, municipalities may submit projects to the Prioritization Process en masse following the adoption of a drainage plan, with the intent of implementing the recommended projects sequentially over many years; elections for storm drain bonds identified as a project's funding source may fail; or tertiary project partners may cause delay.

The table provided on the following page documents the District's queue of previously recommended projects that, for various reasons, are not included in the CIP.

## Projects Not Included in the 5-Year Capital Improvement Program Included in the District 15-Year Plan

### Recommended by Prioritization Procedures Through Fiscal Year 2009

Cost Estimates Per Original Submittals

Year	Description	Sponsor	Est. District Cost	Est. Total Cost
1998	Pima Freeway / TPC-Area Flood Control System	Scottsdale	2,100,000	4,200,000
1998	Rawhide Wash Detention Basin	Scottsdale	12,000,000	20,000,000
2000	McCormick Ranch Lakes Channel Improvements	Scottsdale	200,000	400,000
2000	Meridian North and South Channels	Mesa	1,800,000	2,400,000
2000	Western El Mirage Drainage System	El Mirage	750,000	1,500,000
2001	Arcadia Area Drainage Project	Phoenix	6,000,000	12,000,000
2001	Waddell Rd. and Lower El Mirage Wash Channel	Surprise	256,000	772,000
2002	Bethany Home Rd. Storm Drain (59th Ave. to 51st Ave.)	Glendale	1,575,000	3,150,000
2002	Higley Outfall Basins	Chandler	9,121,000	9,121,000
2002	Higley Outfall Channels	Chandler	12,888,000	12,888,000
2002	Sand Tank Wash Flood Control Improvements	Gila Bend	10,534,000	11,707,000
2002	South Gila Bend Drainage Improvements	Gila Bend	283,000	283,000
2003	Durango Regional Conveyance Channel (75th Ave. to Agua Fria)	Avondale	29,000,000	58,000,000
2004	Land Acquisition for Consolidated Canal Diversion Channel	Chandler	4,800,000	4,800,000
2005	Gila River Bank Stabilization	BWCDD	2,925,000	4,500,000
2005	Powerline Floodway Detention Basin	Mesa	1,050,000	1,400,000
2006	27th Ave. and South Mountain Ave. Detention Basin	Phoenix	1,800,000	3,600,000
2006	43rd Ave. and Baseline Rd. Detention Basin	Phoenix	1,800,000	3,600,000
2006	Cloud Rd. Channel	Queen Creek	288,000	1,846,000
2006	Gila River Channel at Cotton Lane	MCDOT	2,700,000	14,500,000
2006	Highline Western Canal Storm Drain Improvements	Tempe	1,720,000	3,440,000
2007	Skunk Creek Channel at Pinnacle Peak Rd. and 35th Ave.	Phoenix	4,250,000	8,500,000
2007	Skunk Creek Levees at the Central Arizona Project	FCDMC	2,670,000	8,900,000
2007	Sonoqui Wash Channel (Crismon to Empire)	Queen Creek	5,300,000	12,500,000
2008	Downtown Phoenix Drainage Improvements (Full Plan)	Phoenix	5,500,000	11,000,000
2008	Ellsworth Rd. and McKellips Rd. Drainage System	Mesa	5,600,000	8,600,000
2008	Ellsworth Rd. Drainage System (McKellips to McDowell)	Mesa	2,320,000	3,560,000
2008	Happy Valley Parkway Grade Control Structure at Agua Fria	MCDOT	1,000,000	2,000,000
2008	Northern Parkway and AT&SF Channel (Reems to 143rd Ave.)	MCDOT	3,189,000	6,377,000
2008	Pecos North and South Basins	Mesa	11,625,000	15,500,000
2008	Pecos Rd. Channel	Mesa	10,500,000	14,000,000
2008	Upper Camelback Wash	Scottsdale	7,757,800	14,200,000
2009	20th Ave. and Turney Ave. Detention Basin and Storm Drain	Phoenix	6,500,000	13,000,000
2009	Granite Reef Wash Flood Mitigation (Thomas to SR-202L)	Scottsdale	23,534,400	28,500,000
2009	Las Haciendas Drainage Improvements	Phoenix	100,000	200,000
2009	Northern Parkway Channel (143rd Ave. to Dysart)	MCDOT	2,717,000	5,433,000
Total			196,153,200	326,377,000



**Appendix D**  
**Completed Drainage Studies and Master Plans**  
Through Fiscal Year 2008

## Appendix D-1 Completed Drainage Studies and Master Plans Southeast Region

**South/east of Agua Fria River, Arizona Canal Diversion Channel, Buckhorn-Mesa Structures, Estrella Mountains  
Through Fiscal Year 2008**

Watershed	Title	Type*	Year
Lower / Upper East Maricopa Floodway	Queen Creek / Sonoqui Wash	HMP	2000
Lower Arizona Canal Diversion Channel	Durango	ADMP	2005
Lower Arizona Canal Diversion Channel	Maryvale	ADMS	1997
Lower East Maricopa Floodway	East Maricopa Floodway Capacity Mitigation	Study	2000
Lower East Maricopa Floodway	East Mesa	ADMP	1998
Lower East Maricopa Floodway	Gilbert-Chandler	ADMS	1988
Lower East Maricopa Floodway	Gilbert-Chandler Update	ADMS	1994
Lower East Maricopa Floodway	Higley	ADMP	2000
Lower East Maricopa Floodway	Southeast Mesa	ADMS	1996
South Mountain	Laveen	ADMS	1994
South Mountain	Laveen / South Phoenix	ADMP	2001
Upper East Maricopa Floodway	East Maricopa County	ADMS	1987
Upper East Maricopa Floodway	Queen Creek	ADMS	1991

\* Acronym list:

ADMP: Area Drainage Master Plan

ADMS: Area Drainage Master Study

DMP: Drainage Master Plan

HMP: Hydraulic Master Plan

WCMP: Watercourse Master Plan

## Appendix D-2 Completed Drainage Studies and Master Plans Northeast Region

North/east of Arizona Canal Diversion Channel, Salt River, Buckhorn-Mesa Structures and New River  
Through Fiscal Year 2008

Watershed	Title	Type*	Year
Cave Creek	Adobe Dam / Desert Hills	ADMP	2003
Cave Creek	Apache Wash	DMP	1990
Cave Creek	Carefree	DMP	2004
Cave Creek	Cave Creek	DMP	2008
Evergreen	Fountain Hills	ADMP	1997
Lower New River	Glendale / Peoria	ADMP	1987
Lower New River	Glendale / Peoria Update	ADMP	2002
Lower New River	Middle New River	WCMP	2001
Lower Verde	Rio Verde	ADMP	2006
Middle Indian Bend	Granite Reef Wash	DMP	2002
Middle Indian Bend	Scottsdale Road Corridor (Paradise Valley, Scottsdale, Phoenix)	DMP	2002
Skunk Creek	Skunk Creek	WCMP	2001
Upper Arizona Canal Diversion Channel	Arizona Canal Diversion Channel	ADMP	1993
Upper Arizona Canal Diversion Channel	Upper Cave Creek / Apache Wash	WCMP	2001
Upper Arizona Canal Diversion Channel	Upper East Fork Cave Creek	ADMP	1987
Upper New River	Upper New River	ADMP	2008

\* Acronym list:

ADMP: Area Drainage Master Plan  
 ADMS: Area Drainage Master Study  
 DMP: Drainage Master Plan  
 HMP: Hydraulic Master Plan  
 WCMP: Watercourse Master Plan

**Appendix D-3**  
**Completed Drainage Studies and Master Plans**  
**Northwest-Southwest Regions**  
**West of New River, Agua Fria River and Estrella Mountains**  
**Through Fiscal Year 2008**

Watershed	Title	Type*	Year
Gila Bend / Painted Rock / Theba	Gila Bend	ADMP	2003
Lower Agua Fria	Agua Fria River	WCMP	2001
Lower Agua Fria	North Peoria	ADMP	2002
Lower Centennial	Aguila	ADMP	2004
Lower Hassayampa	Lower Hassayampa	WCMP	2007
Lower Hassayampa	Sun Valley	ADMP	2006
Lower Hassayampa	Wickenburg	ADMS	1992
Lower Hassayampa / Buckeye Valley	Buckeye / Sun Valley	ADMS	2007
Trilby	Wittmann	ADMS	1989
Waterman	El Rio	ADMP/WCMP	2006
White Tanks A and B	Agua Fria River	WCMP	2001
White Tanks A and B	Loop 303 Corridor / White Tanks Update	ADMP	1995
White Tanks A and B	White Tanks / Agua Fria	ADMS	1992

\* Acronym list:

ADMP: Area Drainage Master Plan  
ADMS: Area Drainage Master Study  
DMP: Drainage Master Plan  
HMP: Hydraulic Master Plan  
WCMP: Watercourse Master Plan

**Appendix E**  
**Projected Capital Improvement Program**  
**Reimbursement Revenues**  
Fiscal Year 2009 – Fiscal Year 2013

## **Appendix E**

### **Capital Improvement Program Reimbursement Revenues**

Lead agencies administer and principally review project contracts and right-of-way acquisition transactions. From a cash flow standpoint, they provide the initial cash flow to fund a project.

Depending on the nuances of a given project, the District may either serve as a project's lead agency and receive cash reimbursements from its partners, defer this responsibility to a project partner, or split lead agency responsibilities geographically with its partners.

The provided table on the following page documents projected District revenues from its project partners associated with CIP projects.

It should be noted that projects with no associated revenues are not necessarily unilateral projects; many projects in the District's CIP are administered by other agencies using District cost share contributions.

## Flood Control District Capital Improvement Program Projected Intergovernmental Revenue

**Fiscal Year 2009 - Fiscal Year 2013**

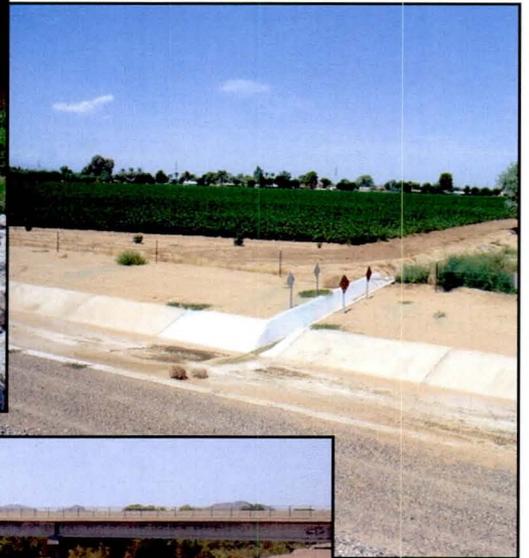
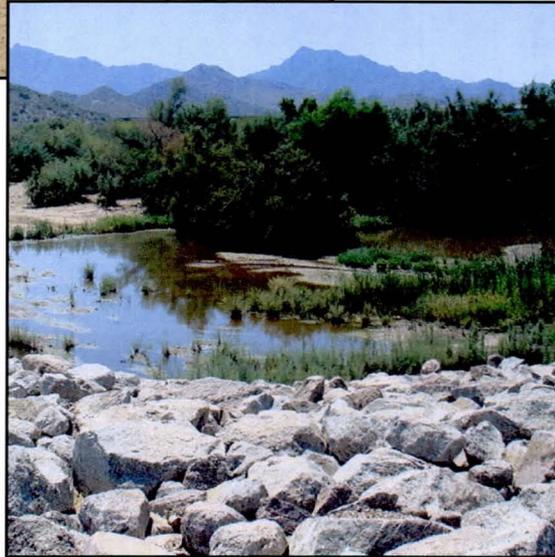
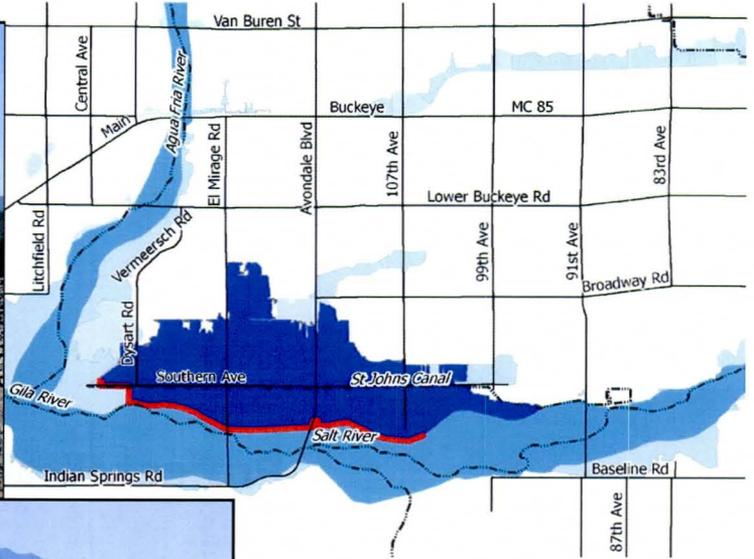
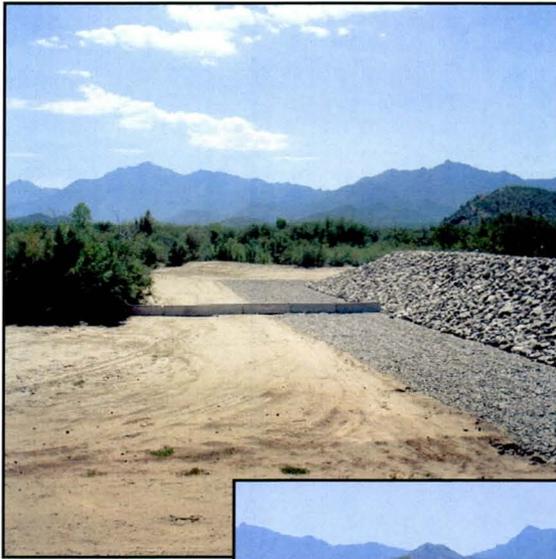
Values are in Thousands of Dollars

Project	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	5-Year
201.01.31 White Tanks FRS No. 4 Outlet Channel	0	0	0	7,000	2,000	9,000
201.02.31 White Tanks FRS No. 4 Rehabilitation	0	4,000	3,000	0	0	7,000
207.01.31 Buckeye FRS No. 1 Rehabilitation	0	0	1,000	4,000	4,000	9,000
343.01.31 Wickenburg Downtown Flooding Hazard Mitigation	25	0	0	0	0	25
420.02.31 Hermosa Vista / Hawes Rd. Storm Drain and Basin	1,900	1,900	0	0	0	3,800
420.03.31 McDowell Rd. Basin and Storm Drain (Hawes to Sossaman)	0	855	1,222	0	0	2,077
420.XX.X1 Oak St. Detention Basin and Storm Drain	0	150	0	1,000	0	1,150
442.11.31 Siphon Draw Drainage Improvements	3,636	3,240	1,350	0	0	8,226
450.02.33 83rd Ave. / Pinnacle Peak Rd. Drainage Improvements	1,950	0	0	0	0	1,950
450.06.31 Pinnacle Peak Rd. Channel (89th Ave. to Agua Fria River)	400	0	4,000	4,000	0	8,400
470.04.30 White Tanks FRS No. 3 Modifications	3,500	0	0	0	0	3,500
470.04.31 White Tanks FRS No. 3 North Inlet Channel	3,619	0	0	0	0	3,619
470.12.31 Reems Road Channel and Basin	0	212	0	0	0	212
470.14.31 Loop 303 Drainage Improvements	224	0	0	0	0	224
480.04.32 Sonoqui Wash Channelization (Chandler Heights to Crismon)	0	0	500	2,000	2,000	4,500
565.04.31 75th Ave. Storm Drain and Durango Regional Conveyance Channel	30	1,160	1,160	0	0	2,350
620.03.32 Bethany Home Outfall Channel	1,446	1,868	1,636	3,113	0	8,063
Reimbursement Revenue Total	16,730	13,385	13,868	14,113	6,000	64,096

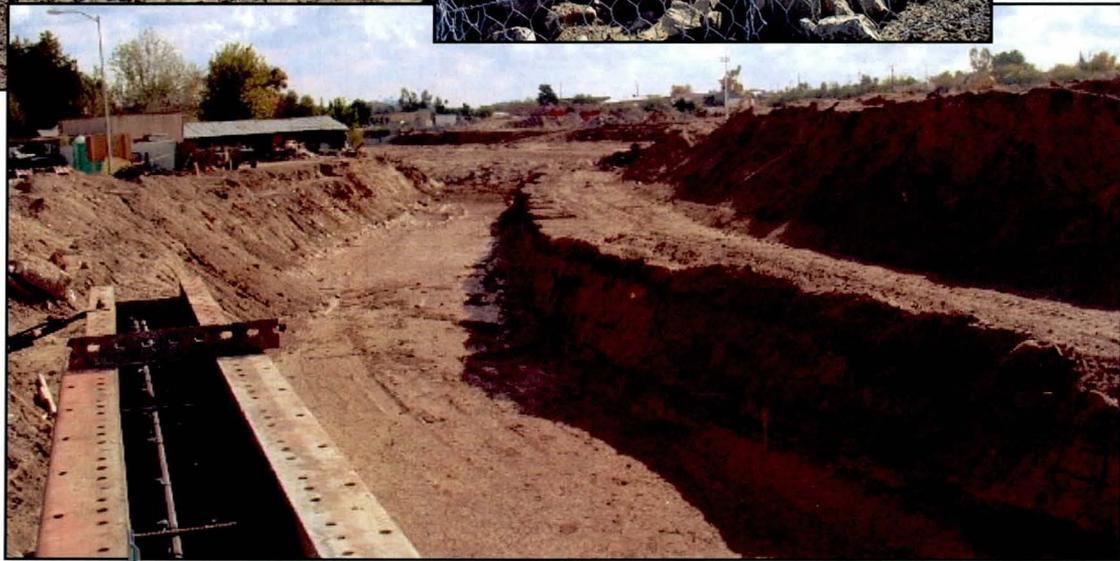
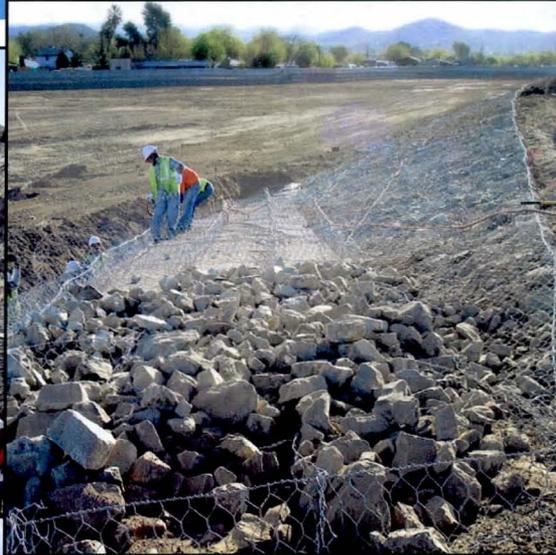
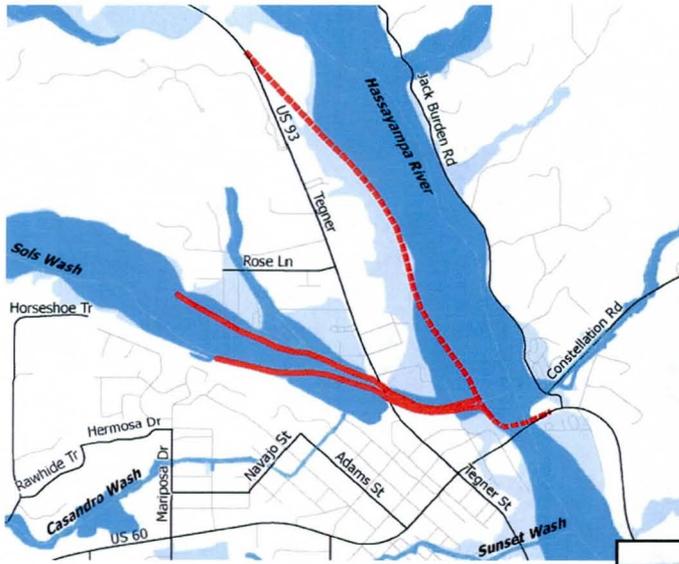


## **Project Photographs**

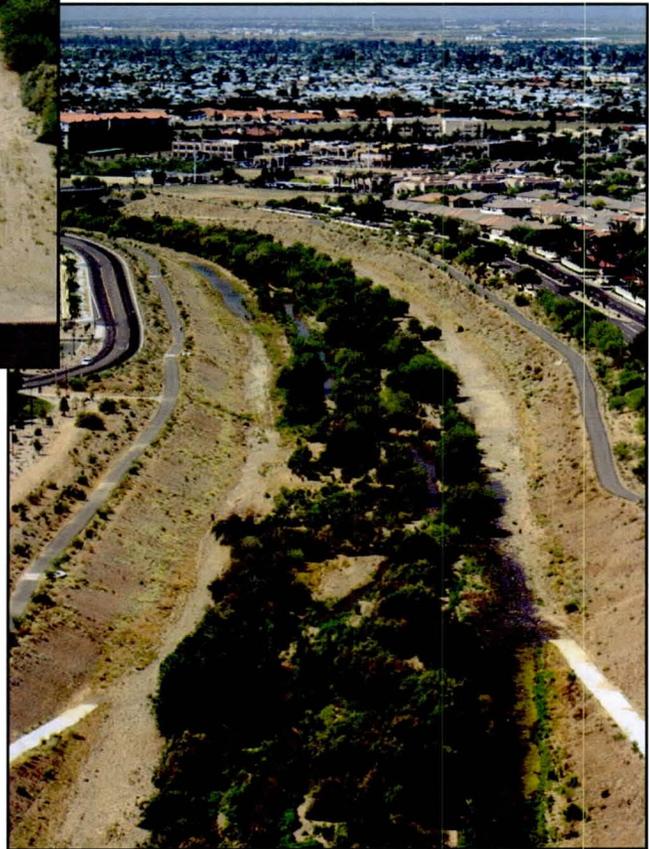
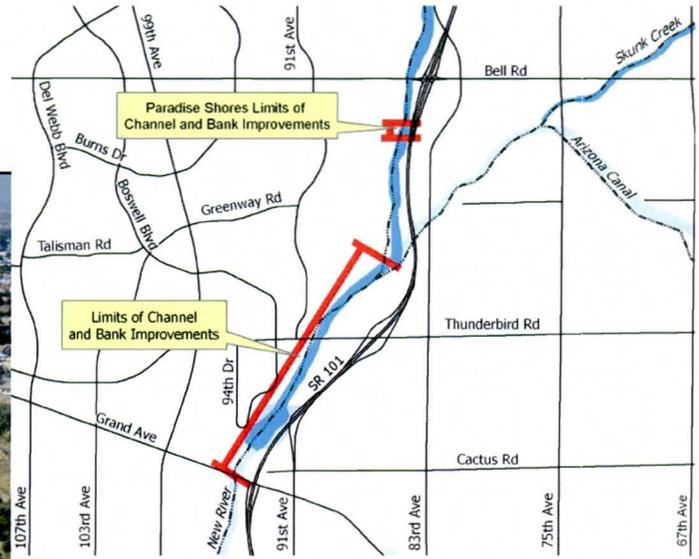
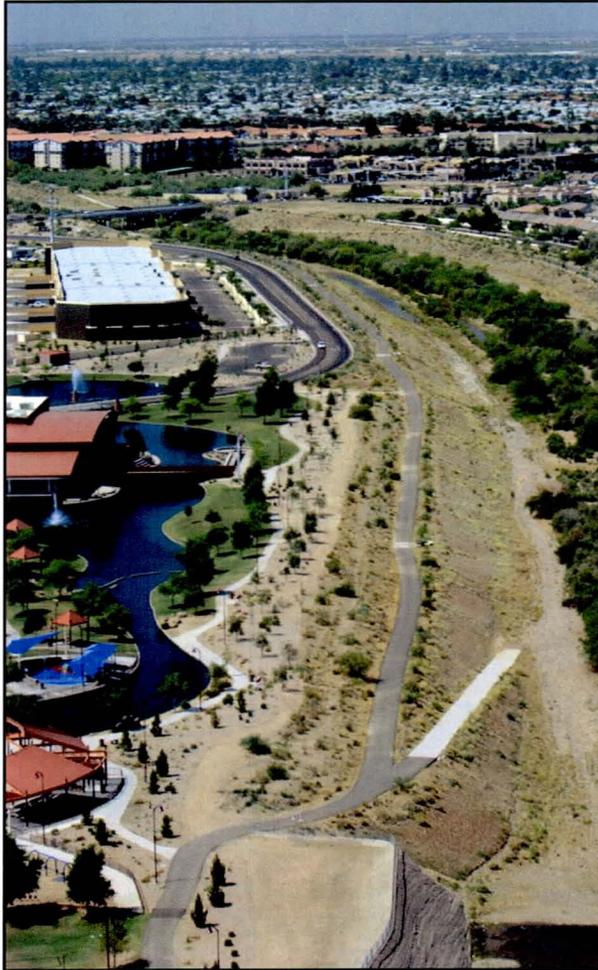
# Tres Rios



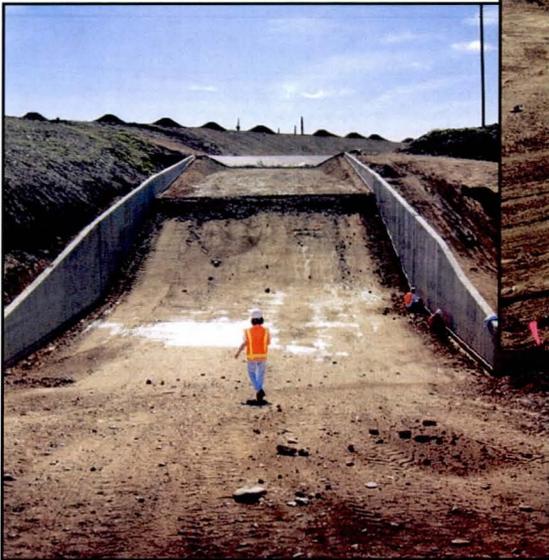
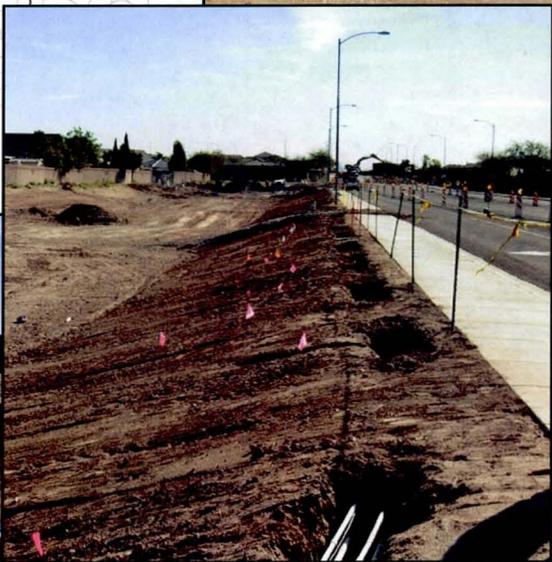
# Downtown Wickenburg Flooding Hazard Mitigation



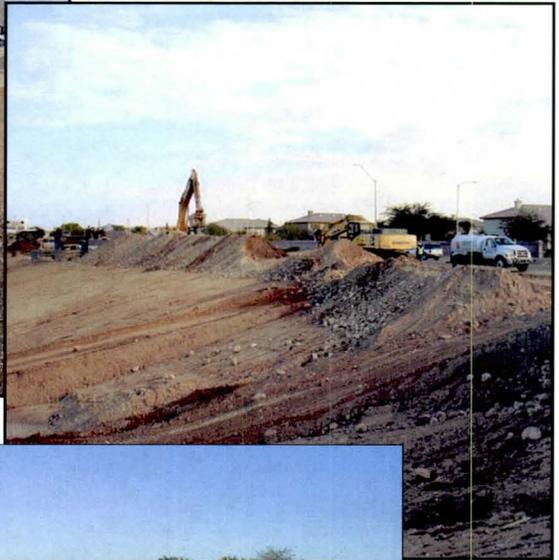
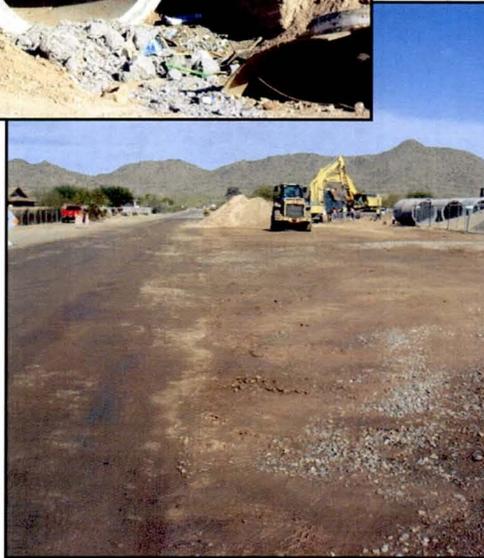
# New River Channelization



# Rose Garden Lane



# 83rd Avenue and Pinnacle Peak Drainage Improvements



# White Tanks FRS No.3 North Inlet Channel

