



# Flood Control Advisory Board

FEBRUARY 24, 2016



# Agenda

- Call to Order
- Pledge of Allegiance
- Approval of the Minutes
- Election of Officers
- Appointment of FCAB Standing Committees
- FY'17 Proposed Operating Budget & Decision Package Review
- FY'17 Proposed Capital Project Budget 5 Yr Capital Improvement Program
- FY'17 Dam Safety Program & Decision Package Elements
- FY'17 Planning Program & Decision Package Elements
- FY'17 Floodplain Delineation Program & Decision Package Elements
- Comments from the Chief Engineer and General Manager
- Summary of Recent Actions by the Board of Directors
- Other Business and Comments from the Public





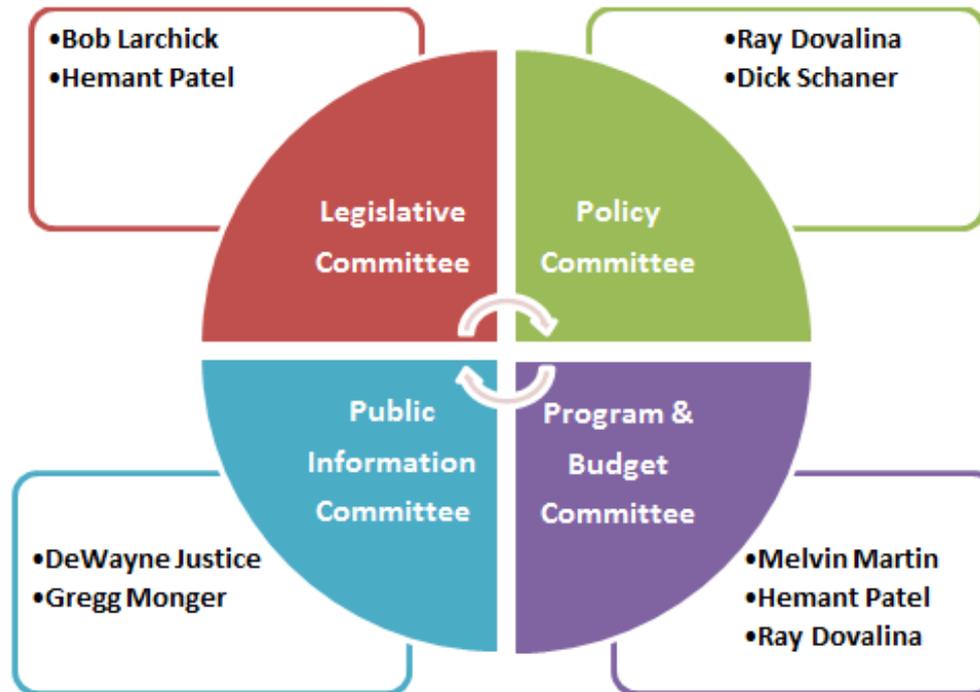
# ELECTION OF OFFICERS

- **Chairman** – *Melvin Martin*
- **Vice Chairman** – *Dick Schaner*
- **Secretary** – *Gregg Monger*





# Appointment of FCAB Standing Committees





Flood Control Advisory Board  
February 24, 2016  
Agenda Item 6

# **Flood Control District FY 2017 Operating Budget**

**Chris Hall**  
*Finance Manager*



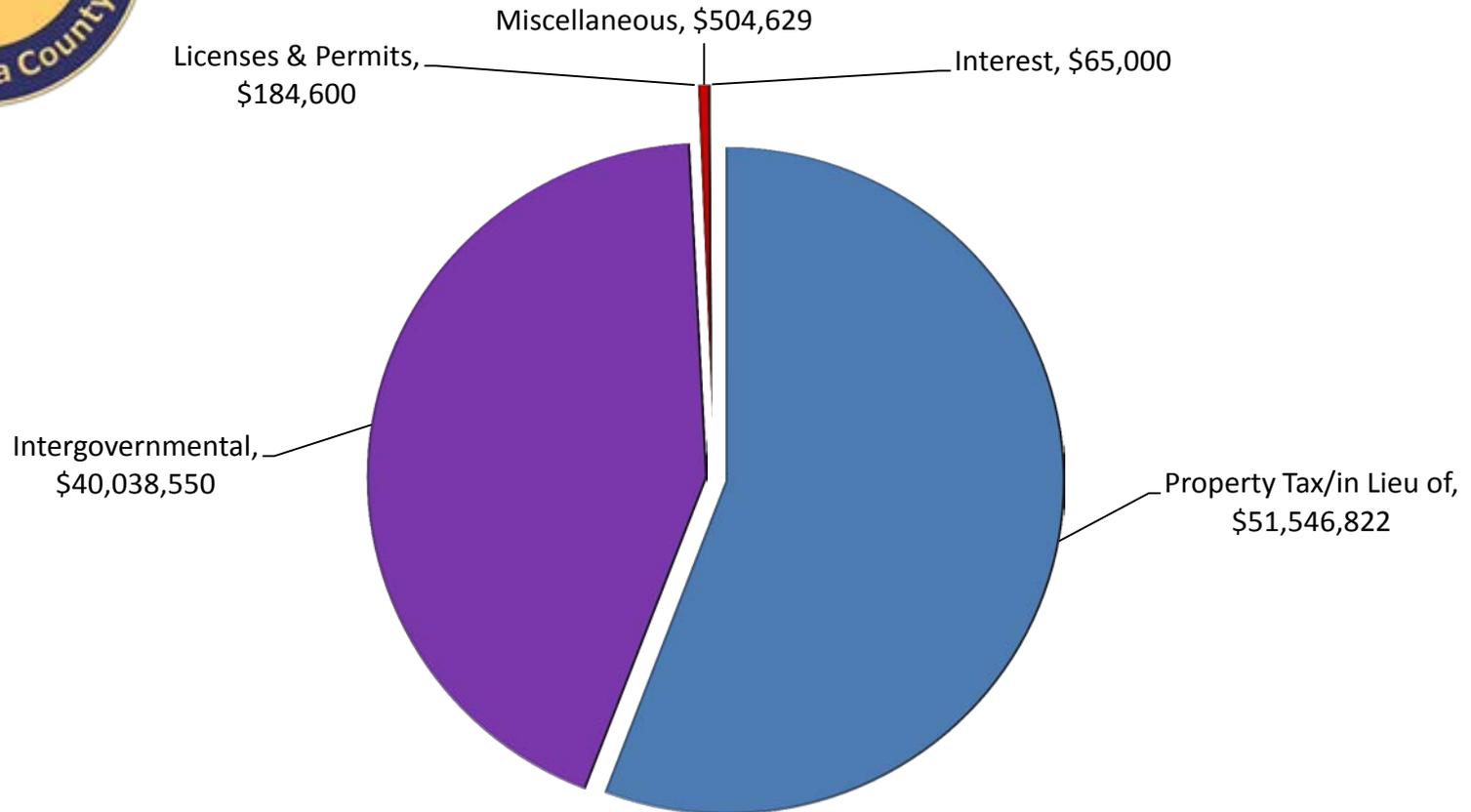
# Action Item

Staff requests that the Flood Control Advisory Board endorse and recommend staff's draft FY 2017 Operating Budget.

*Note: draft budget may be altered prior to adoption to address County Management & Budget requirements.*



# FY 2017 Revenues



Total: \$92,344,601

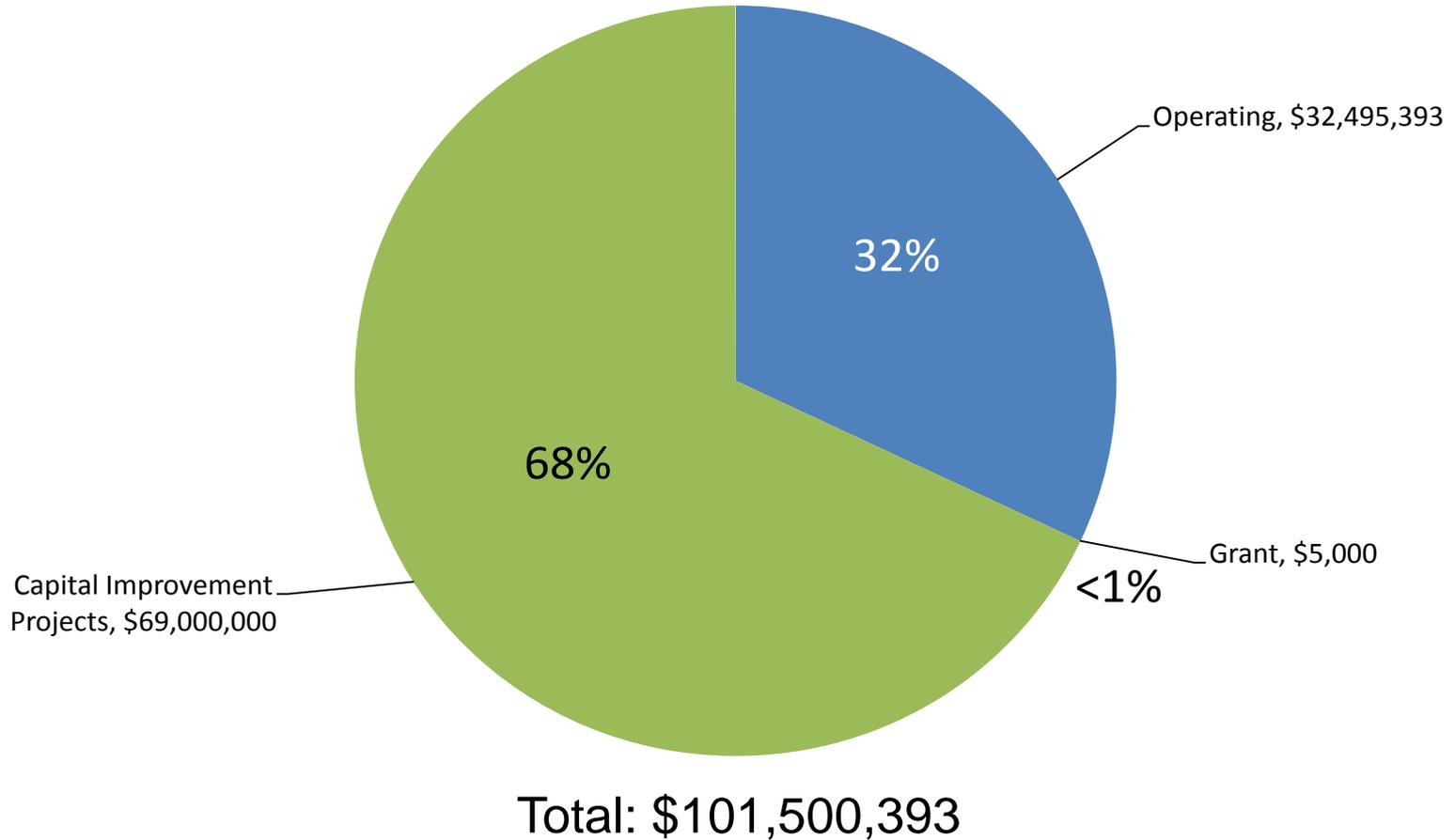


# Revenue Comparison

Revenue Source	FY2016 Adopted Budget	FY2017 Requested Budget	Net Change
Property Tax/in Lieu of	\$49,104,042	\$51,546,822	\$2,442,780
Grants	\$468,774	\$5,000	(\$463,774)
Intergovernmental	\$34,453,000	\$40,038,550	\$5,585,550
Licenses & Permits	\$174,600	\$184,600	\$10,000
Miscellaneous	\$263,612	\$504,629	\$241,017
Interest	\$100,000	\$65,000	(\$35,000)
<b>Total</b>	<b>\$84,564,028</b>	<b>\$92,344,601</b>	<b>\$7,780,573</b>



# FY 2017 Expenditures



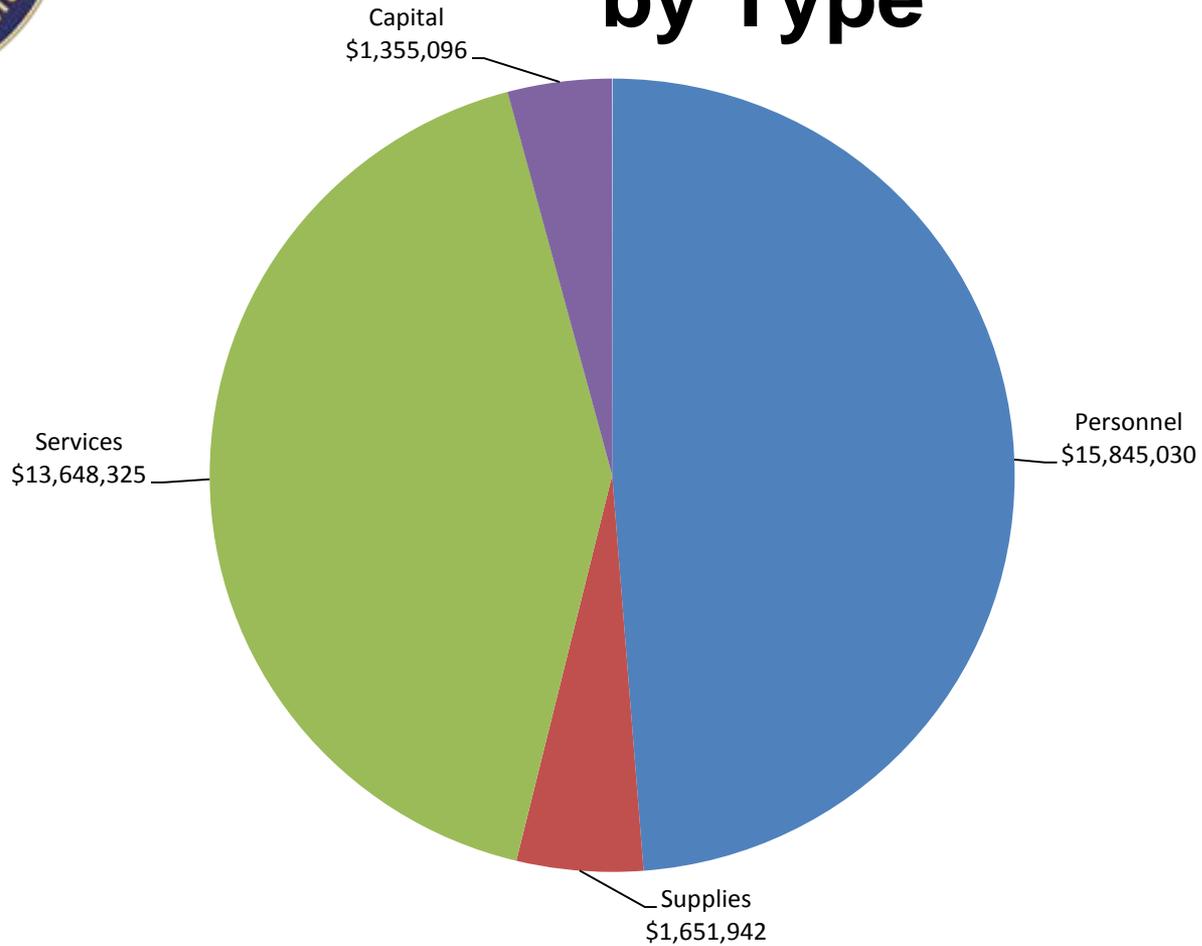


# Expenditure Comparison

Fund	FY16 Adopted Budget	FY17 Requested Budget	Net Change
Operating	\$32,495,393	\$32,495,393	\$0
Grant	\$345,000	\$5,000	(\$340,000)
Capital Improvement Projects	\$59,000,000	\$69,000,000	\$10,000,000
Total	\$91,840,393	\$101,500,393	\$9,660,000



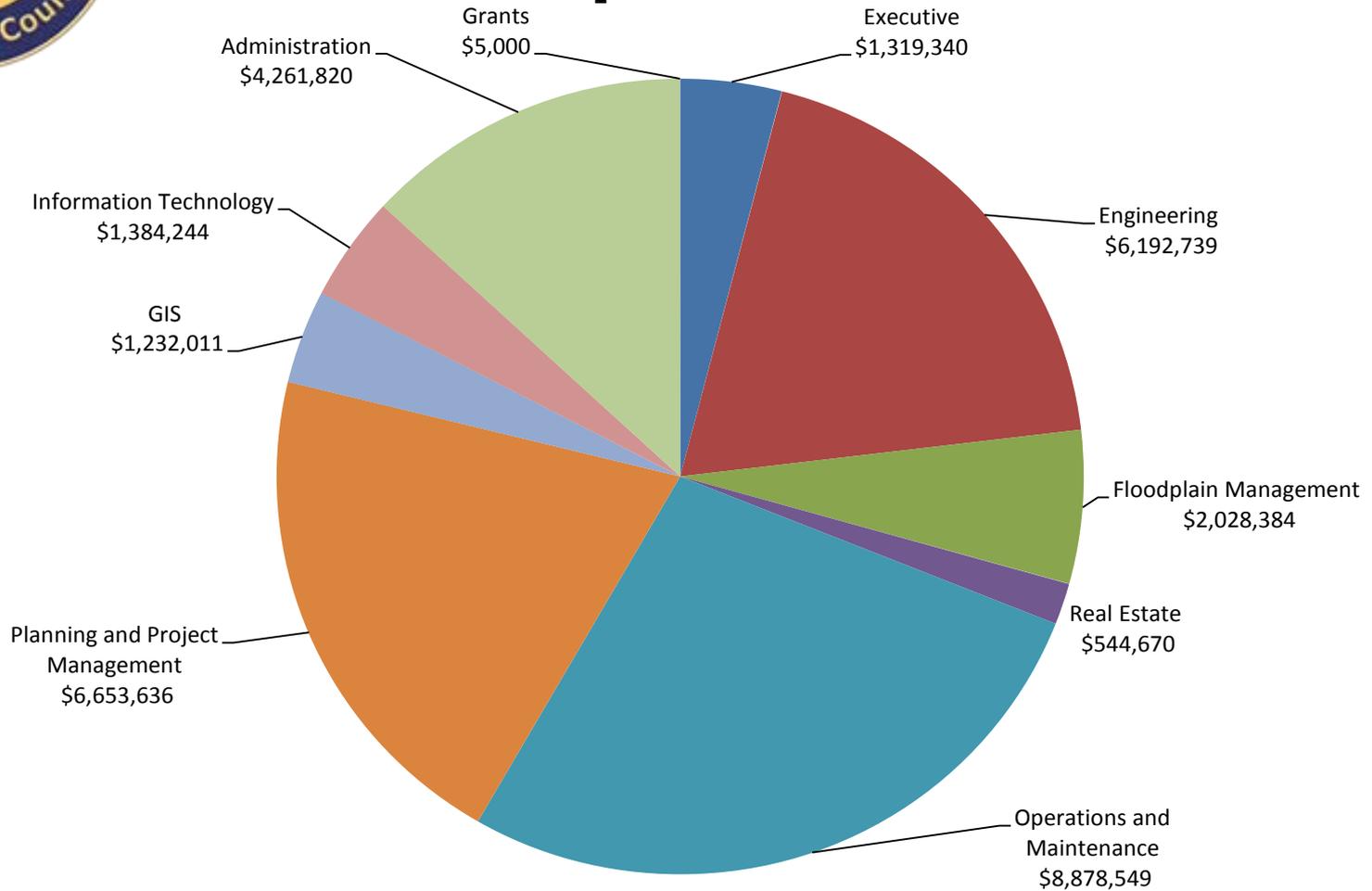
# FY 2017 Operating Expenditures by Type



Total: \$32,500,393



# FY 2017 Division Operating Expenditures



Total: \$32,500,393



# Key Financial Considerations

- Tax Rate
- NRCS Project Costs





# Requested Action

**The Flood Control Advisory Board endorses and recommends staff's draft FY 2017 Operating Budget.**

*Note: draft budget may be altered prior to adoption to address County Management & Budget requirements.*



# Questions



Flood Control Advisory Board  
February 24, 2016  
Agenda Item 7

# **Flood Control District Capital Improvement Program FY 2017 – FY 2021**

**Kim Belt, CPM**  
*CIP Program Supervisor*



# Action Requested

District staff recommends that the Flood Control Advisory Board endorse and recommend that the Board of Directors approve:

- Staff's proposed FY 2017 Capital Project Budget and
- Staff's proposed FY 2017–2021 Capital Improvement Program

*Action requested in accordance with A.R.S. § 48-3616C requirement for chief engineers of flood control districts to seek endorsement of citizens' advisory boards prior to annual submittal of capital improvement programs to board.*



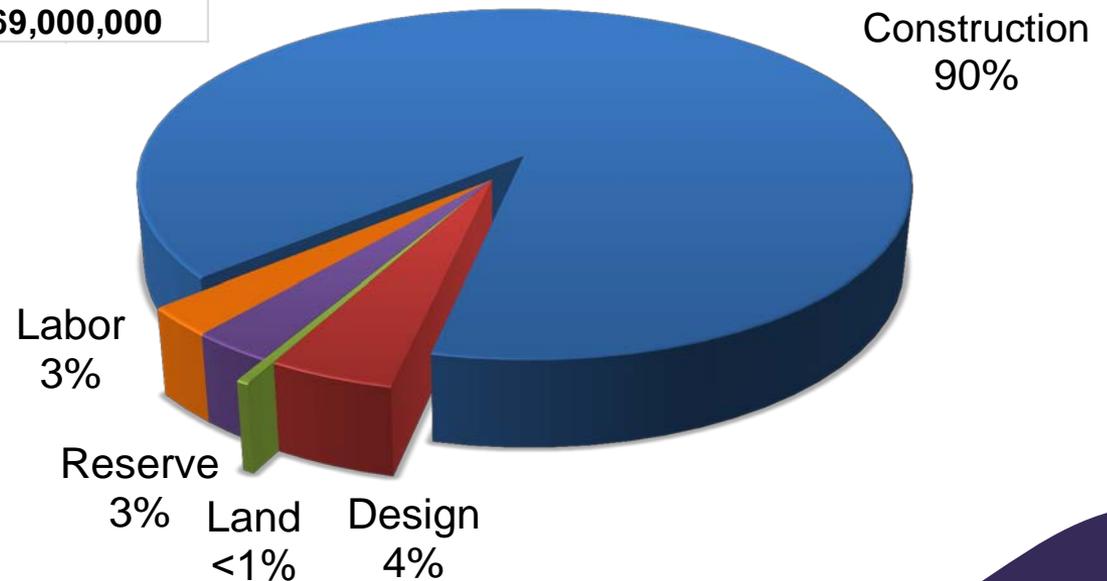
# Proposed FY 2017 CIP Budget

Category	FY 2017
Primary CIP	\$67,233,750
Small Projects Program	\$1,766,250
<b>Total</b>	<b>\$69,000,000</b>



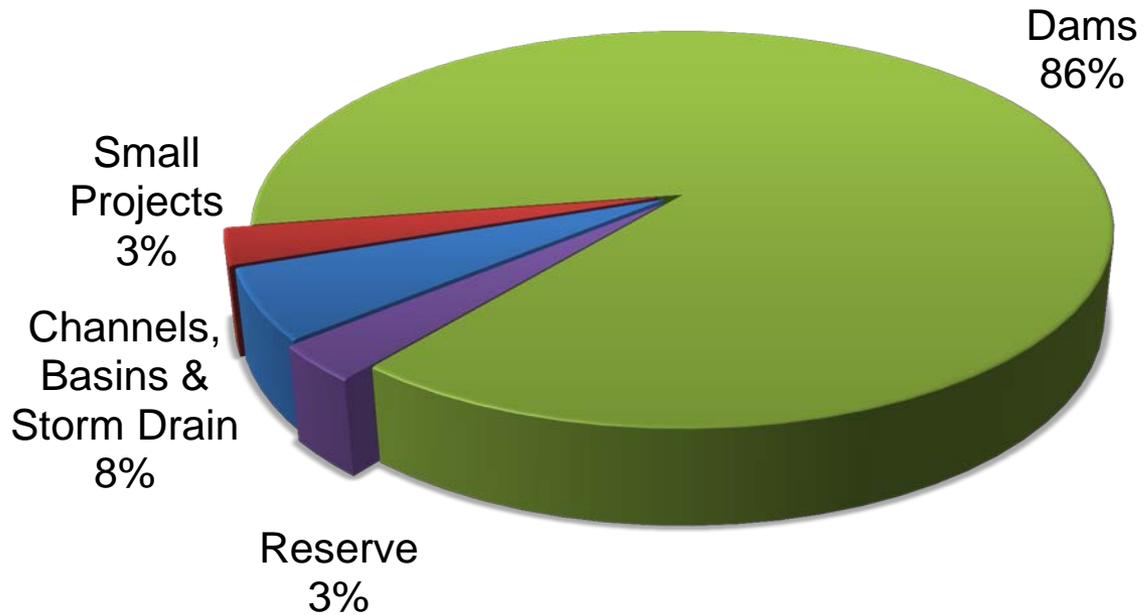
# FY 2017 Capital Budget By Project Phase

Category	FY 2017
CIP - Design	\$3,075,000
CIP - Rights-of-Way	\$300,000
CIP - Construction	\$61,614,250
CIP - Labor	\$1,800,000
CIP - Project Reserve	\$2,210,750
<b>Total</b>	<b>\$69,000,000</b>





# FY 2017 Capital Budget By Project Type





# FY 2017 Project Design

## Design Effort (NRCS Projects)

- Powerline Channel
- Vineyard FRS Rehabilitation



# FY 2017 Project Construction

## Ongoing Construction (NRCS Projects)

- Buckeye FRS No.1 Rehabilitation – Phase 2B
- White Tanks FRS No.4 Rehabilitation – Phase 2
- Vineyard FRS Rehabilitation - Phase 1

## New Construction Starts (NRCS Project)

- Vineyard FRS Rehabilitation - Phase 2



# FY 2017 Small Projects Program

## Project List

- 9054 S. Calle Sahuaro (APN 301-12-051) (Guadalupe)
- 63<sup>rd</sup> Street and Broadway Road (Mesa)
- Extension Road and 2<sup>nd</sup> Avenue (Mesa)
- Solomon and Southern Avenue (Mesa)
- 47<sup>th</sup> Avenue and Paradise Lane Detention Basin (Phoenix)
- Osborn Road Storm Drain between 48<sup>th</sup> St. and 49<sup>th</sup> St. (Phoenix)
- 51<sup>st</sup> Avenue Storm Drain between Olney Avenue & Dobbins (Phoenix)
- Sherwood Heights Detention Basin (Scottsdale)

**Improvements will directly benefit 28 structures prone to frequent flooding.**



# Proposed 5-Year CIP Program

DESCRIPTION	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
Primary Capital Improvement Program	\$66,933,750	\$50,720,000	\$33,720,000	\$32,200,000	\$41,000,000
Small Project Assistance Program	\$1,766,250	\$1,980,000	\$1,980,000	\$2,300,000	\$2,500,000
Floodprone Property Acquisition Program	\$300,000	\$300,000	\$300,000	\$500,000	\$500,000
<b>TOTAL</b>	<b>\$69,000,000</b>	<b>\$53,000,000</b>	<b>\$36,000,000</b>	<b>\$35,000,000</b>	<b>\$44,000,000</b>

## Program Highlights:

- Construction of dam rehabilitations (NRCS)
  - Vineyard FRS Rehabilitation
  - Buckeye FRS No.1 Rehabilitation – Phase 2B
  - White Tanks FRS No.4 Rehabilitation – Phase 2
  
- Final Design
  - Dam Rehabilitation Projects



# Action Requested

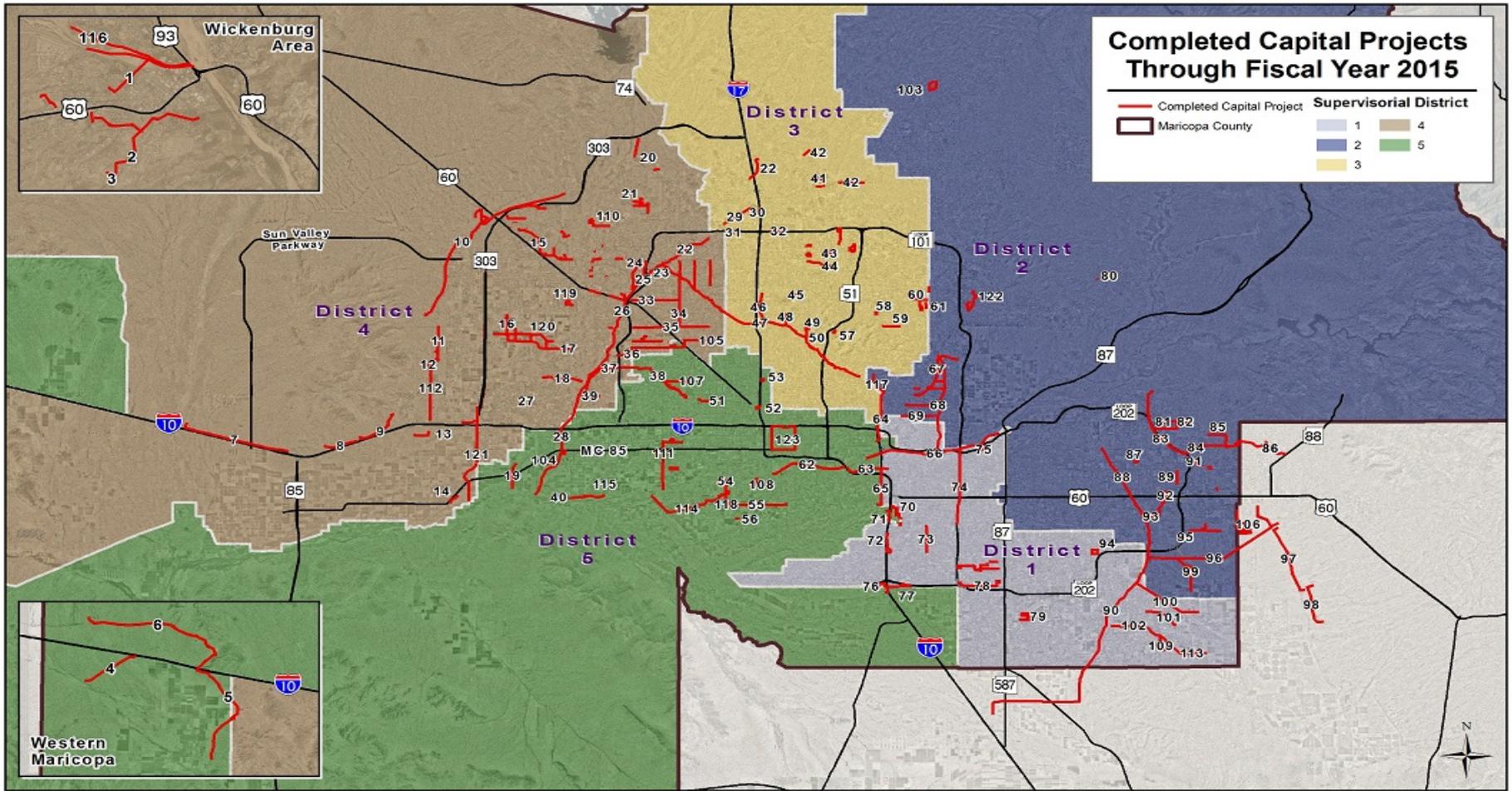
**District staff recommends that the Flood Control Advisory Board endorse and recommend that the Board of Directors approve:**

- Staff's proposed FY 2017 Capital Project Budget and
- Staff's proposed FY 2017–2021 Capital Improvement Program

*Note: Subsequent to adoption of the proposed FY 2017 Capital Project Budget, adjustments to this proposed budget in response to project cost and schedule changes may be proposed by District staff and will be subject to Board of Directors approval.*



# Questions





Flood Control Advisory Board  
February 24, 2016  
Agenda Item 8

# Dam Safety Program Fiscal Year 2017 Budget



**White Tanks FRS No. 3**

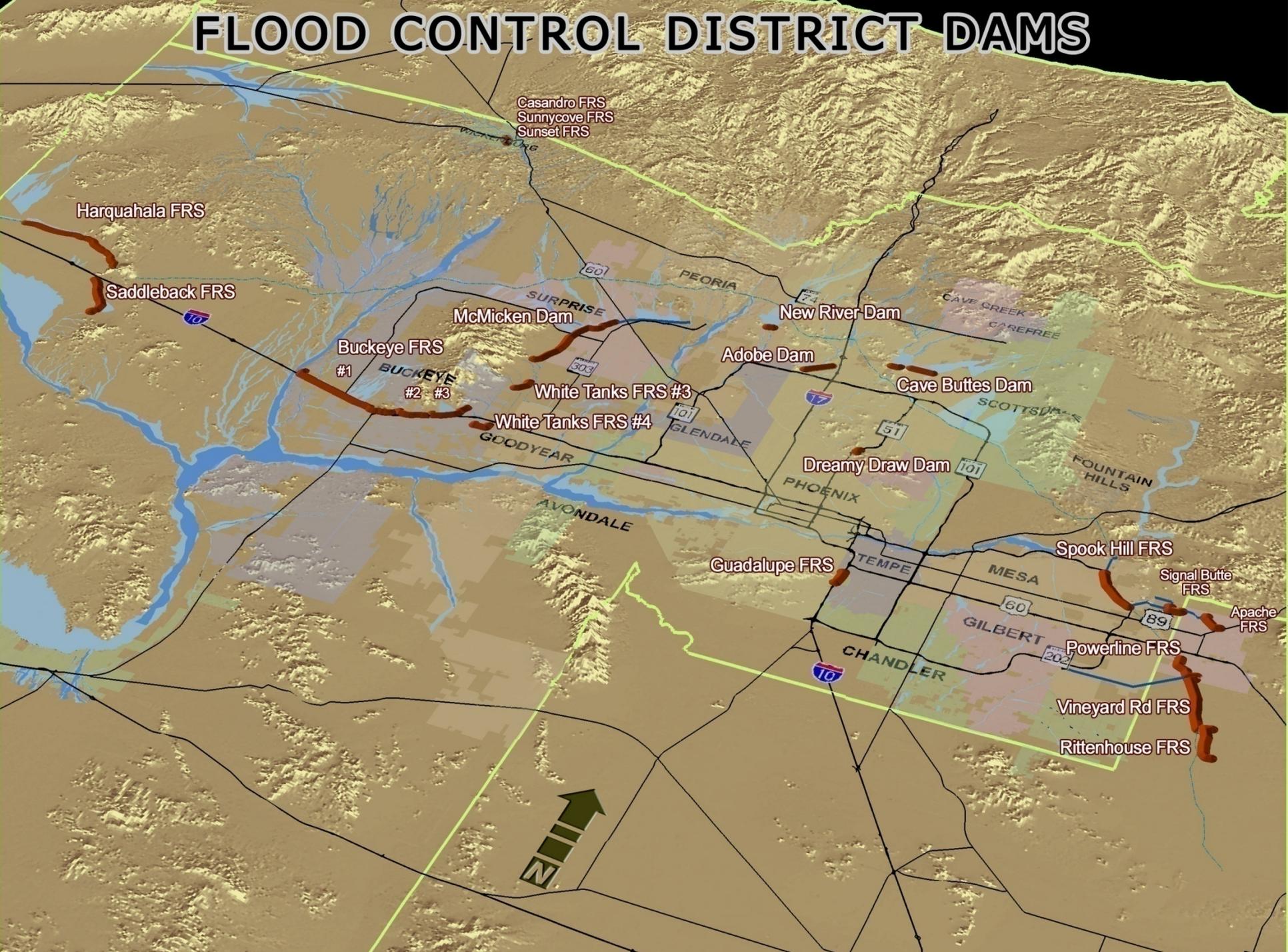
**Tom Renckly, P.E.**  
*Dam Safety Branch Manager*



# Information and Discussion Item

Flood Control District's Fiscal Year 2017  
Dam Safety Program Budget

# FLOOD CONTROL DISTRICT DAMS





# Dam Safety Program Goals

## Risk Reduction and Risk Management

- Stay ahead of issues to assure no imminent threats to public safety
- Reduce dam safety risk through dam rehabilitation and modifications
- Maintain or improve current level of flood protection provided by 22 dams for the long-term
- Manage risk through; inspections, monitoring, surveys, maintenance , repairs, EAPs



# Dam Safety Program Activities

## FY 2017 Dam Safety Budget

- *Recurrent Dam Safety Activities*
- *Structures Assessments and Repairs*

## Briefing

- *Status of Dam Rehabilitation and Modifications (CIP)*



**White Tanks FRS No.4**



**PVR Dams**



# Recurrent Dam Safety Activities

## Dam Surveys

- Powerline FRS
- Vineyard Road FRS
- White Tanks FRS No. 3
- McMicken Dam
- White Tanks FRS No. 4
- Apache Junction FRS
- Signal Buttes FRS
- Sunset FRS
- Sunnycove FRS
- Cassandro Wash Dam

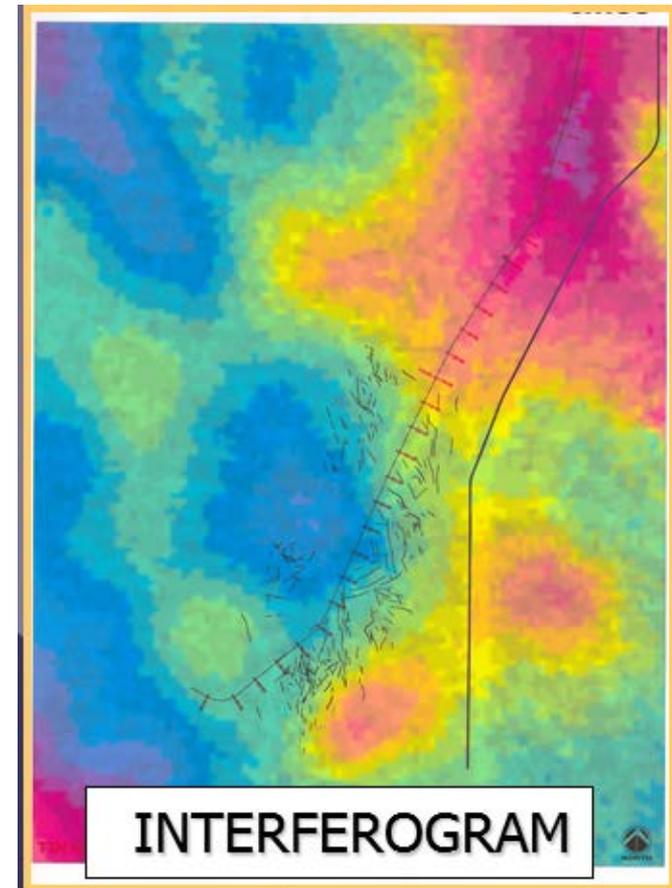




# Recurrent Dam Safety Activities

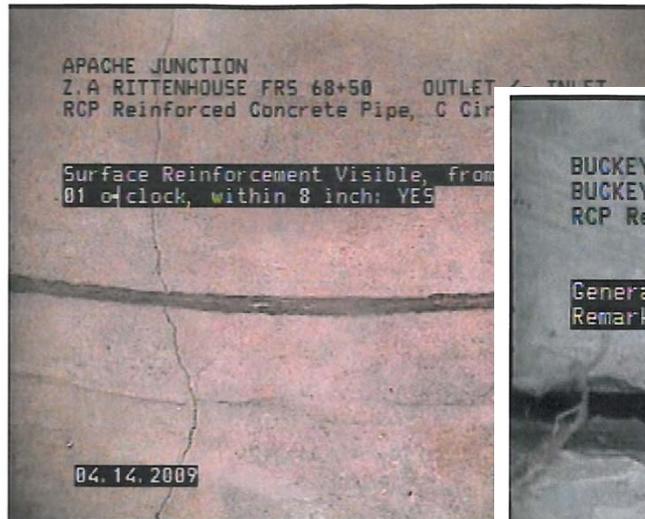
## Earth Fissure & Land Subsidence Monitoring

- McMicken Dam
- White Tanks FRS#3
- Powerline FRS
- Vineyard Road FRS





# Structures Assessments and Repairs



- Outlets Cracking – Alternatives and Repair
- Other Dam Safety Issues by need and priority



# Dam Safety Program Budget FY 2017

## Dam Safety Program

• Recurrent Activities	\$ 629,000
• <u>Assessments and Repairs</u>	<u>\$ 152,000</u>
<b>Total</b>	<b>\$ 781,000</b>



# Dam Rehabilitation & Dam Modifications Status Briefing

- **Overall dams are well maintained**
- Recurrent dam safety activities and structures assessment are keeping the dams safe to operate for the short term and interim term
- **2 Dam Rehabilitation Projects Completed**
- 7 Dams identified for rehabilitation or replacement for dam safety reasons
- **2 Dams indentified for modifications**



# Dam Rehabilitation Projects Status



**Spook Hill FRS Rehab  
Completed 2008**

**White Tanks FRS No.3  
Completed 2011**





# Powerline FRS IDSM Construction Completed 2014





# Dam Rehabilitation Projects Status

- ❖ **White Tanks FRS No.4 Rehab**
  - Phase I Construction completed
  - Phase II Construction in progress
  
- ❖ **Buckeye FRS No. 1 Rehab**
  - Phase I Construction Completed
  - Phase IIA Construction in progress
  - Phase IIB Design in progress
  
- ❖ **Vineyard Road FRS Rehab**
  - Phase I Construction in progress
  - Phase II and III Design in progress



# Dam Modifications Projects Status

## ❖ Powerline Channel

- Design in progress

## ❖ McMicken Dam Rehab

- Phase I & II Design in progress

## ❖ Cave Buttes Dam Modifications: Auxiliary Outlet

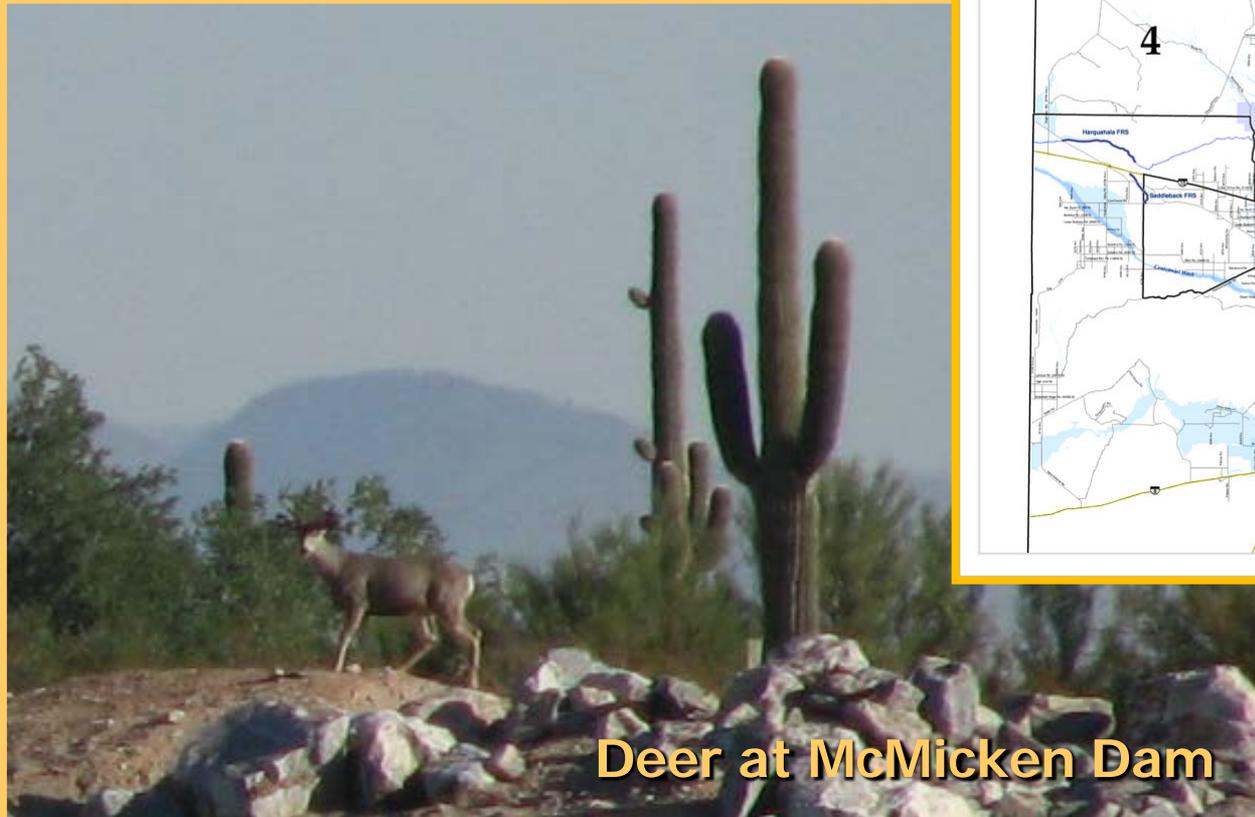
- Design in progress

## ❖ Projects Pending Funding

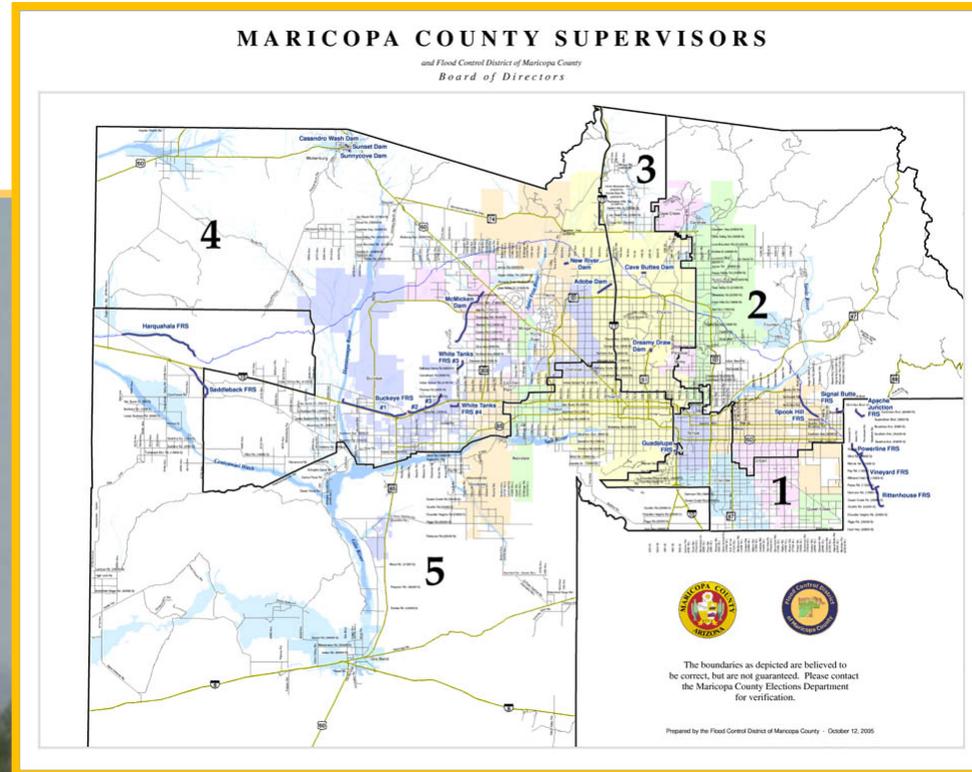
- Rittenhouse FRS Rehab
- Saddleback FRS Rehab
- Guadalupe FRS Modifications



# Questions



Deer at McMicken Dam





Flood Control Advisory Board  
February 24, 2016  
Agenda Item 9

# Fiscal Year 2017 Planning Program

**Douglas Williams, AICP**  
*Planning Branch Manager*



# Informational Item

- Overview of Flood Control District's Fiscal Year 2017 Planning Program
- Information and discussion item only.
- No formal action is required.



# Program Objectives

- Mandate: (ARS 48-3609) - Identify flood hazards & prepare plans to mitigate hazards
- Program Goals:
  - Assess longstanding urban flooding issues
  - Update potentially outdated studies
- Evaluate structural & non-structural alternatives to mitigate flooding
- Advance multiple-use opportunities



# Definitions

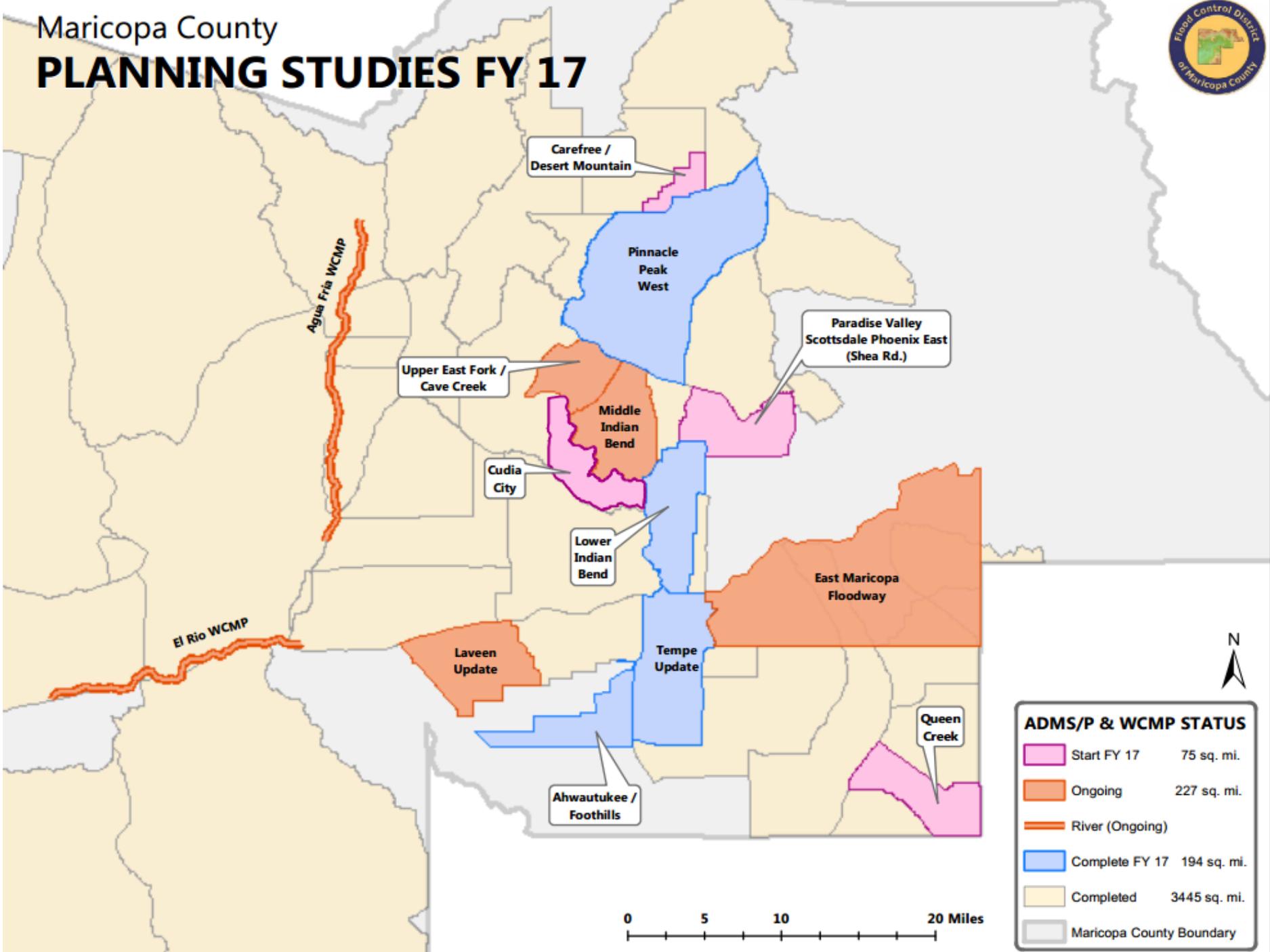
- **ADMS** - Area Drainage Master Study  
Watershed based study that establishes hydrology and identifies flood prone areas
- **ADMP** - Area Drainage Master Plan  
Watershed based study that develops solutions to flooding problems
- **DCR** - Design Concept Report  
Study that refines or modifies ADMP proposed projects leading to design and construction
- **WCMP** - Watercourse Master Plan  
Comprehensive study accessing hydrologic and hydraulic analyses, future development, and environmental considerations



# Benefits from ADMS/P's

- **Cities -**  
Utilize data to strategically plan an appropriately size drainage infrastructure
- **Developers -**  
Provides coordinated drainage plan and saves future public expenditures as developers build projects
- **General Public -**  
Presents flood hazard information and provides flood education and awareness, also builds consensus for mitigation strategies

# Maricopa County PLANNING STUDIES FY 17



ADMS/P & WCMP STATUS	
<span style="display:inline-block; width:15px; height:15px; background-color: #FFC0CB; border: 1px solid black;"></span> Start FY 17	75 sq. mi.
<span style="display:inline-block; width:15px; height:15px; background-color: #FFA07A; border: 1px solid black;"></span> Ongoing	227 sq. mi.
<span style="display:inline-block; width:15px; height:15px; background-color: #FFD700; border: 1px solid black;"></span> River (Ongoing)	
<span style="display:inline-block; width:15px; height:15px; background-color: #ADD8E6; border: 1px solid black;"></span> Complete FY 17	194 sq. mi.
<span style="display:inline-block; width:15px; height:15px; background-color: #FFD700; border: 1px solid black;"></span> Completed	3445 sq. mi.
<span style="display:inline-block; width:15px; height:15px; background-color: #D3D3D3; border: 1px solid black;"></span> Maricopa County Boundary	



# External Services Budget for FY 17

## FY 17 Planning Elements

## FY 17 Budget

### ADMS

Ahwatukee/Foothills ADMS	\$350,000
Lower Indian Bend ADMS	\$325,000
Upper East Fork Cave Creek ADMS	\$250,000
Middle Indian Bend ADMS (PVSP West)	\$220,000
Cudia City Wash (ACDC) ADMS	\$200,000
Pinnacle Peak West ADMS	\$200,000
PVSP East ADMS (Shea Rd. Corridor)*	\$200,000
Carefree/Desert Mountain ADMS*	\$150,000
Laveen ADMS Update	\$150,000
Tempe ADMS Update	\$100,000
North Mesa ADMS	\$ 50,000

\* New ADMS

**ADMS Total**

**\$2,195,000**



# External Services Budget for FY 17

## FY 17 Planning Elements

## FY 17 Budget

### WCMP's

El Rio Levee DCR	\$400,000
Gila/Agua Fria Confluence Lake	\$125,000
El Rio Implementation Permit (404)	\$125,000
El Rio Vegetation Management Plan	\$100,000
Agua Fria WCMP Update	\$75,000
<b>WCMP Total</b>	<b><u>\$825,000</u></b>
<u><i>On-going Mapping</i></u>	
PVSP East ADMS Mapping	\$129,466
Carefree/Desert Mountain ADMS Mapping	\$100,000
<b>Mapping Total</b>	<b><u>\$229,466</u></b>
<u><i>Other</i></u>	
Bob Fox Wild at Heart Owl Relocation	\$5,000
<b>Other Total</b>	<b><u>\$5,000</u></b>
<b>FY 17 Total</b>	<b><u>\$3,254,466</u></b>



## FY 16 & FY 17 Comparison

	<u>FY 16</u>	<u>FY 17</u>
On-going ADMS/P's	\$1,775,000 (49%)	\$1,795,000 (56%)
New ADMS/P's	\$125,000 (3%)	\$400,000 (13%)
New Mapping	\$579,000 (16%)	\$229,000 (5%)
WCMP's	\$200,000 (6 %)	\$425,000 (14%)
DCR's	\$925,000 (26%)	\$400,000 (13%)
<i>Total</i>	<i>\$3,604,456</i>	<i>\$3,254,466</i>



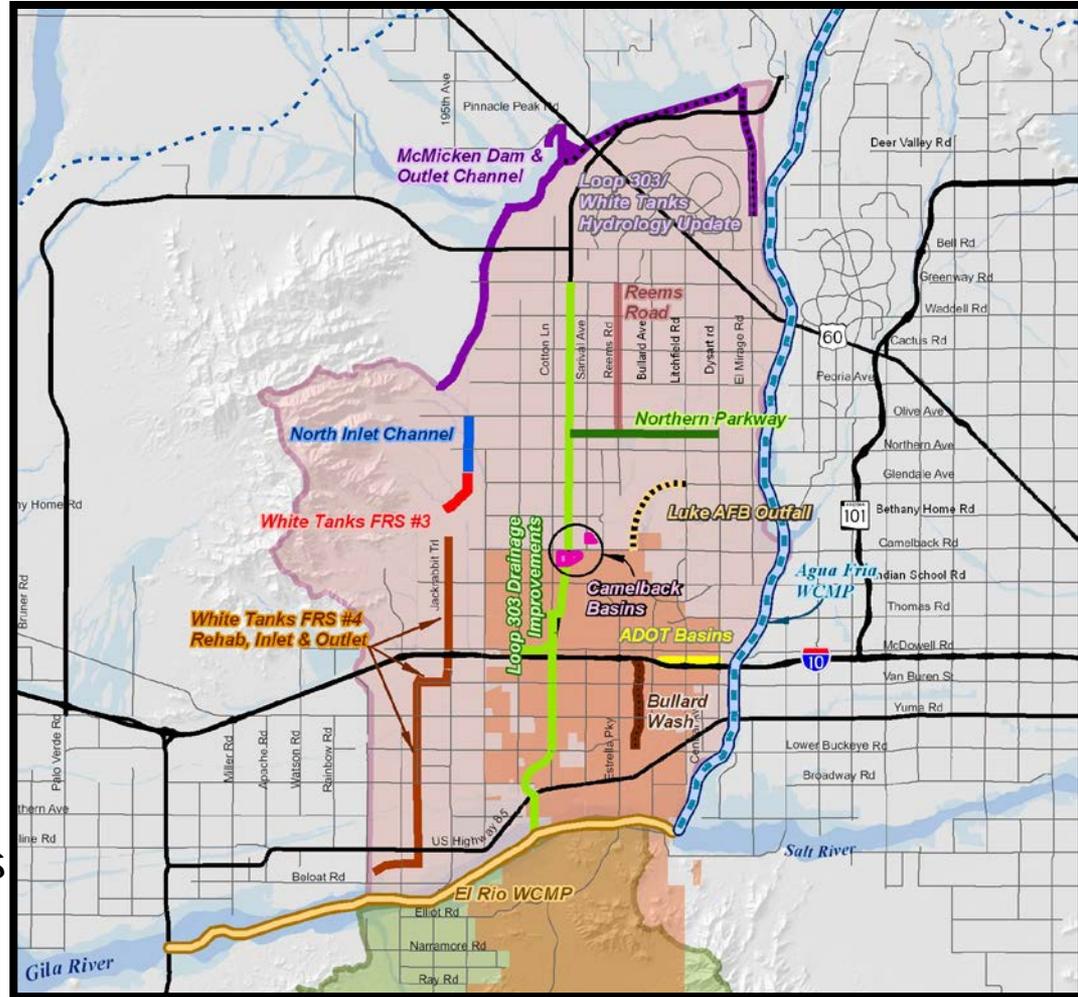
# Questions



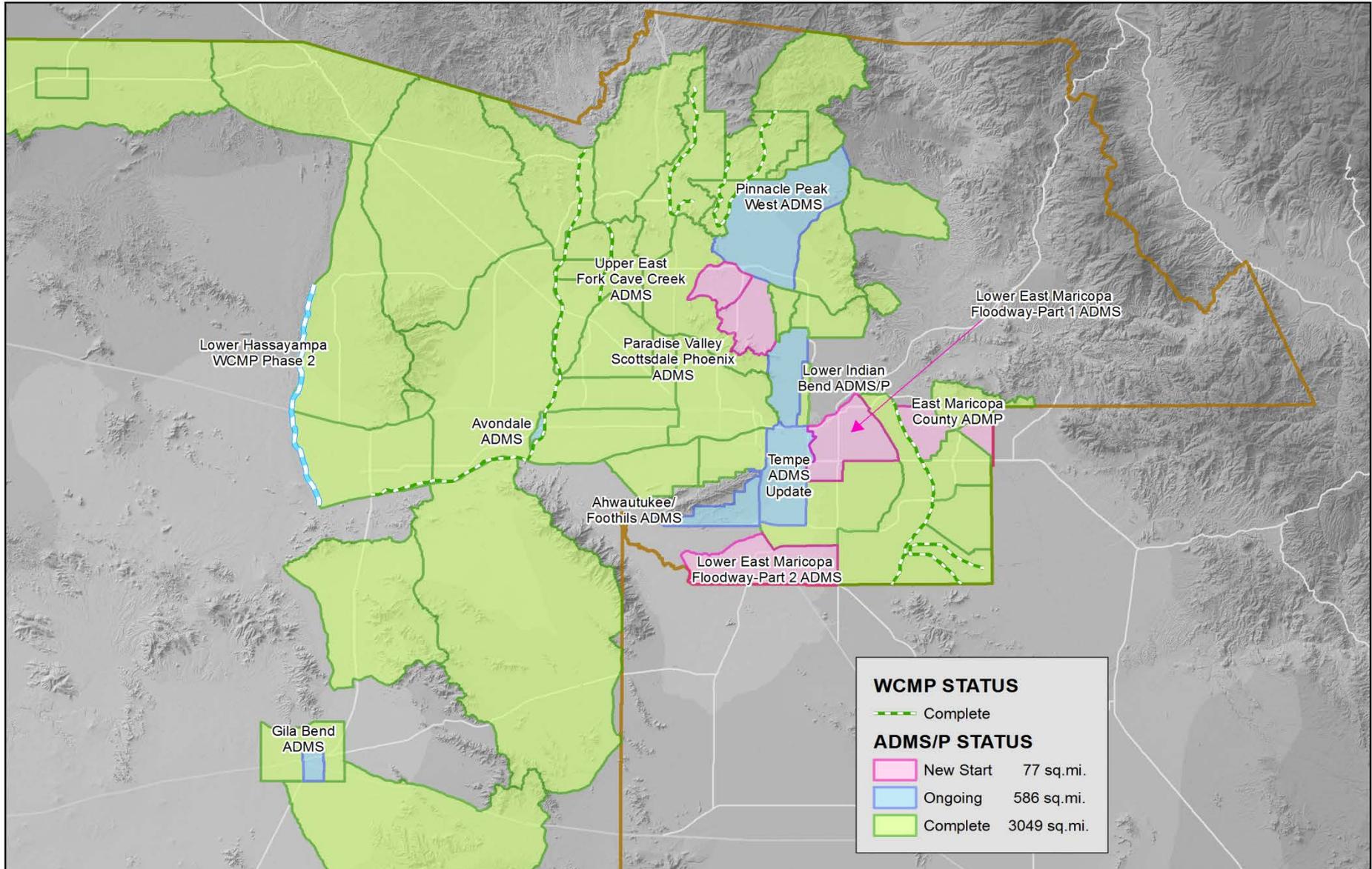


# • White Tanks/ Loop 303 ADMP

- White Tanks FRS #3
- North Inlet Channel
- White Tanks FRS #4
- McMicken Dam Improvements
- Reems Road Channel
- Northern Drainage Improvements
- Loop 303 Drainage Improvements
- ADOT Basins/Litchfield Drains
- Bullard Wash Phase II
- Luke AFB Outfall



# PLANNING STUDIES FY 2014/2015





Flood Control Advisory Board  
February 24, 2016  
Agenda Item 10

# **Floodplain Delineation Program**

## **Fiscal Year 2017**

**Catherine Regester, P.E.**  
*Hydrology and Hydraulics Branch Manager*



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# No Action Required

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- Information and discussion item only

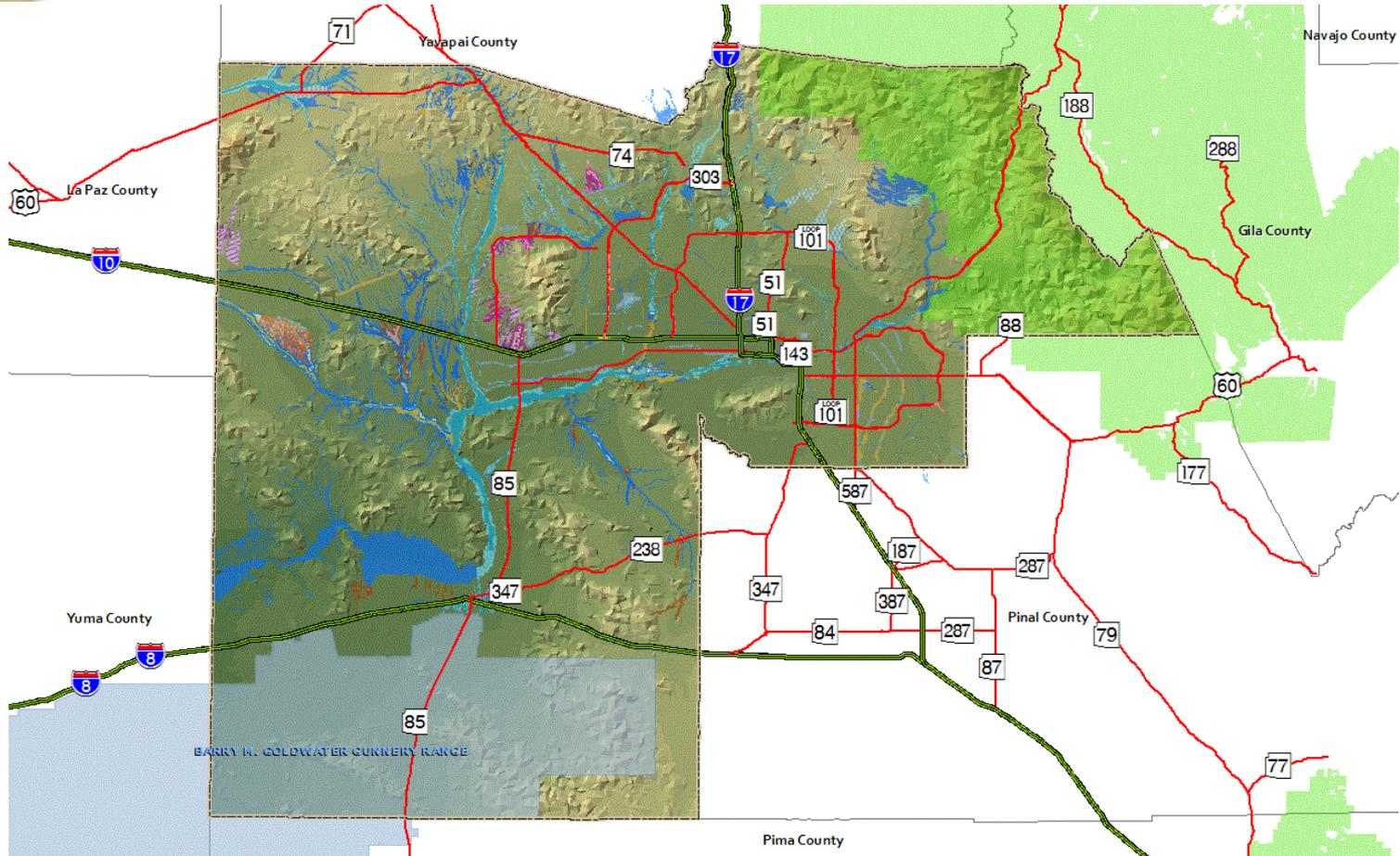


# Purpose

- Comply with ARS § 48-3609
- Comply with the National Flood Insurance Program
- Minimize the loss of life and property
- Minimize the need and necessity to mitigate or remediate flood problems
- Be used for development review, planning purposes, and future ADMS/ADMPs



# Floodplains Delineated within Maricopa County



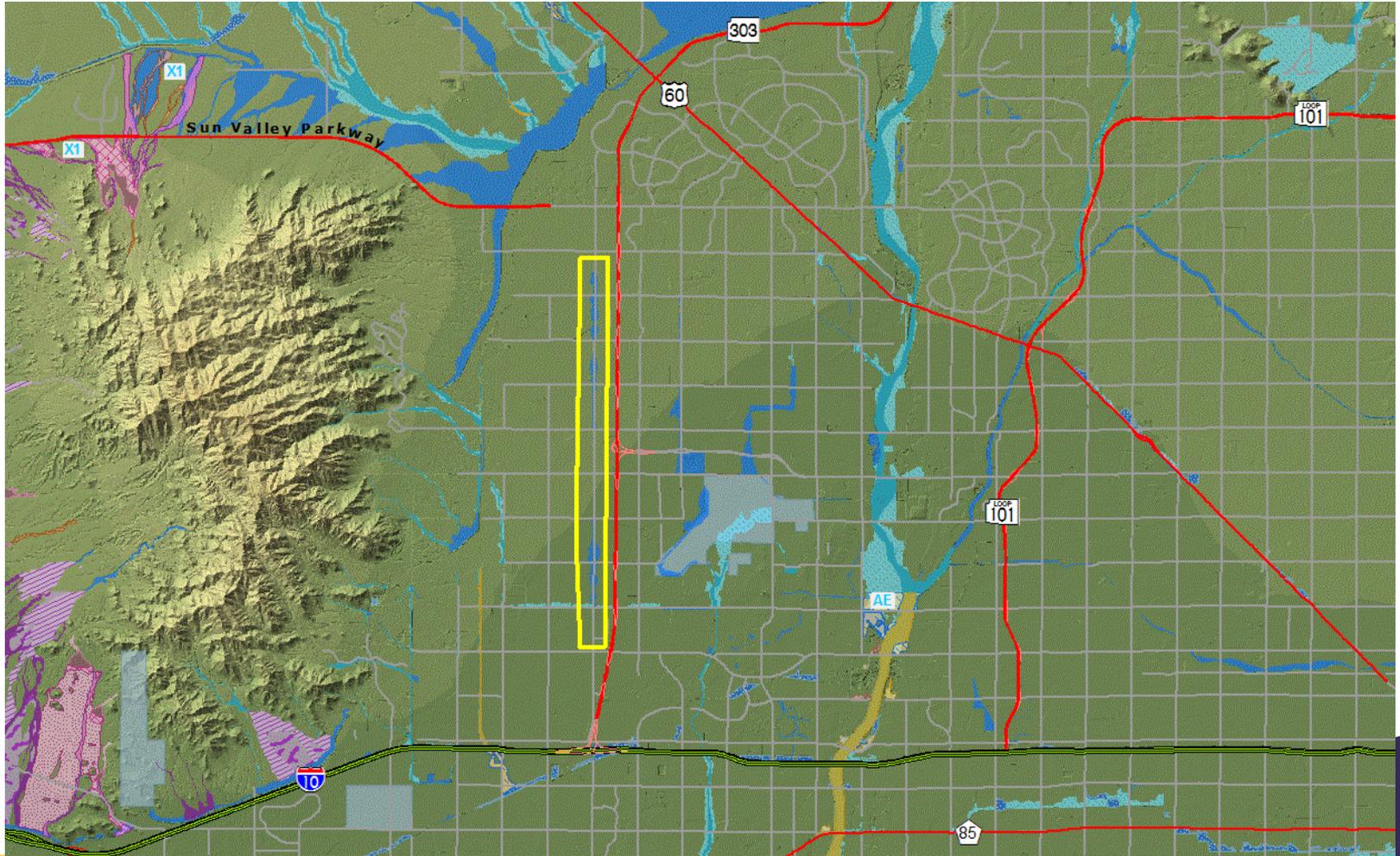


# PROGRESS LAST 5 YEARS

<u>Year</u>	<u>Miles</u>
FY 17 (anticipated)	37
FY 16 (anticipated)	197
FY 15	20
FY 14	101
FY 13	116
FY 12	195

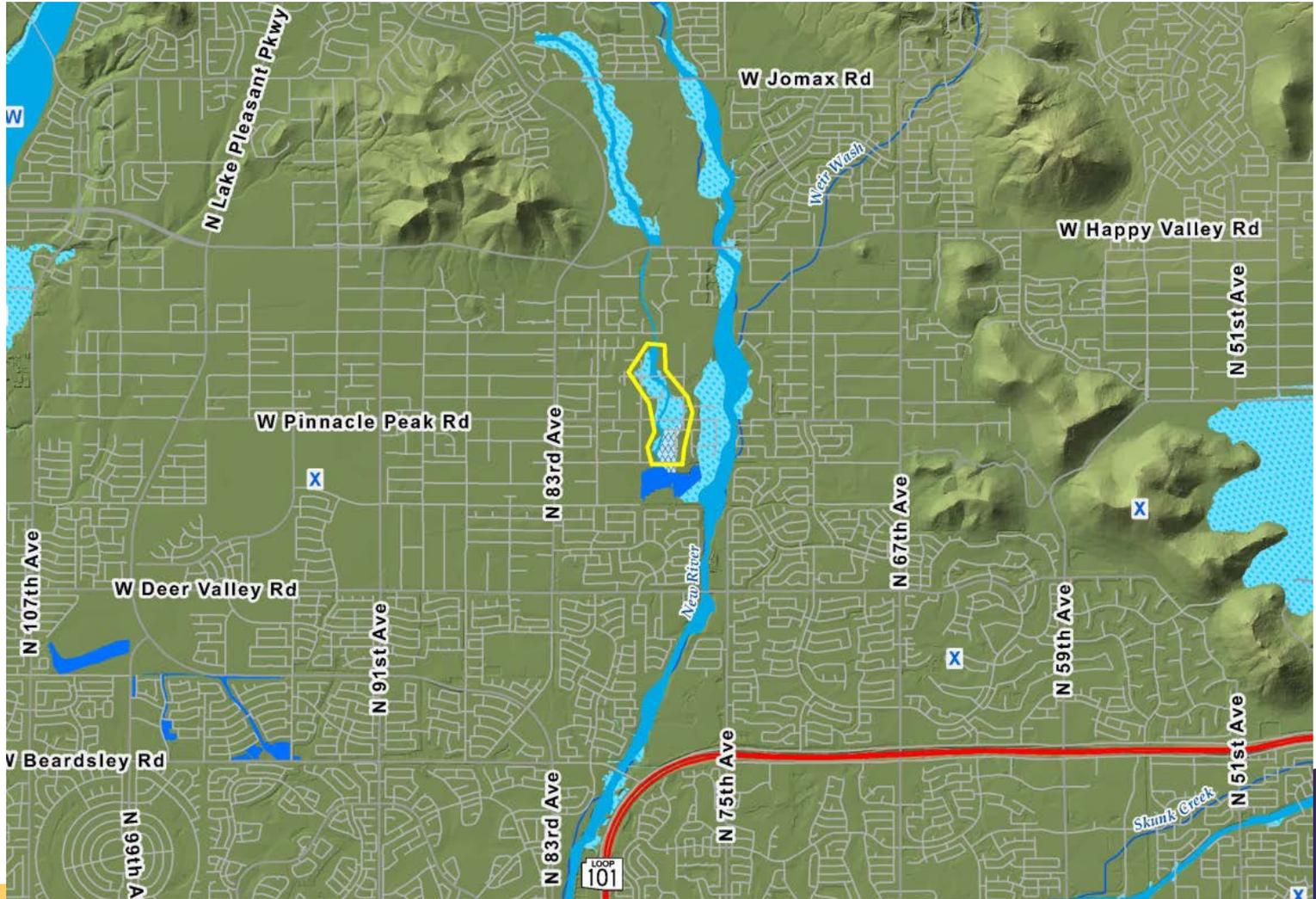


# Cotton Lane Area



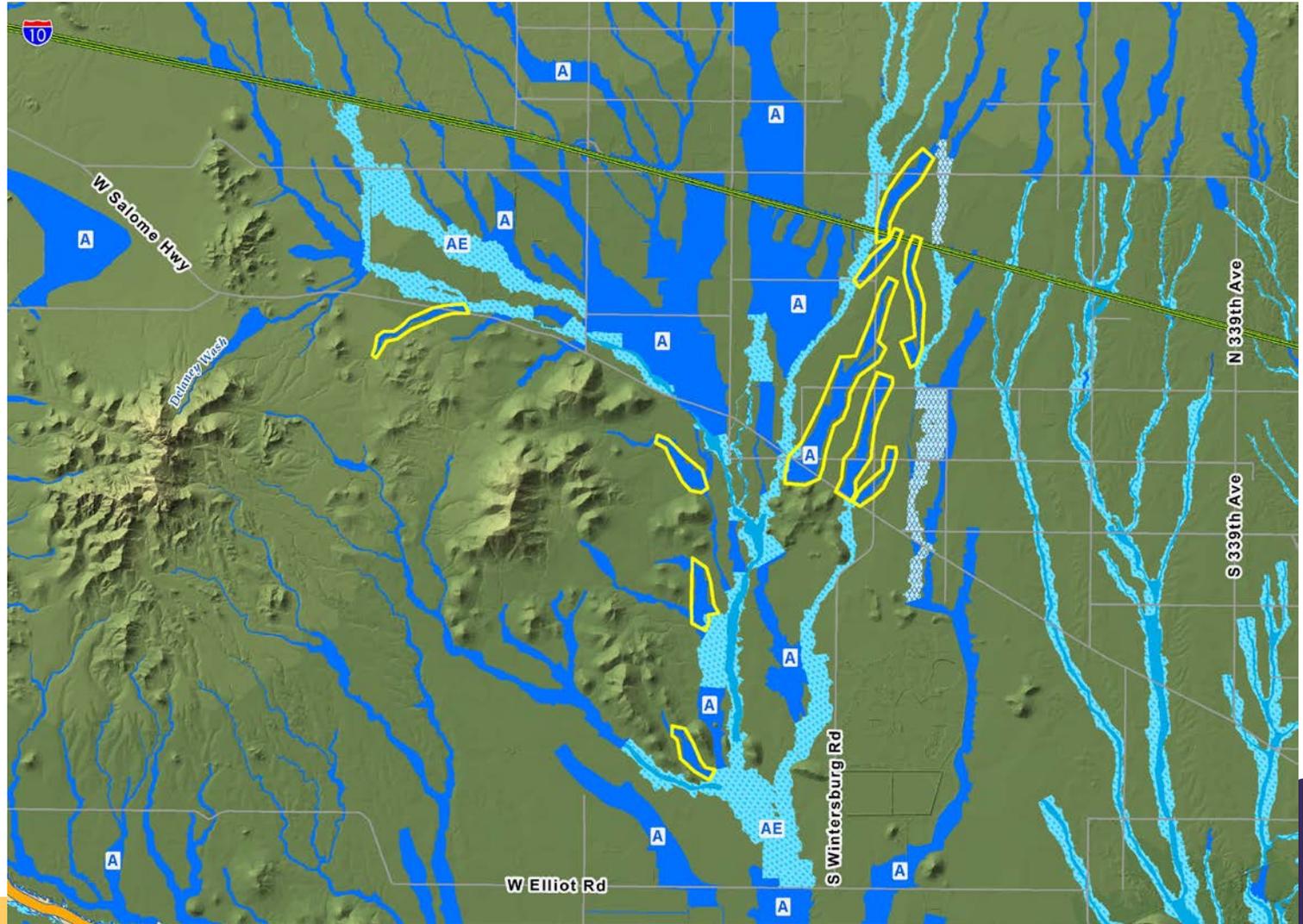


# Rock Springs Creek



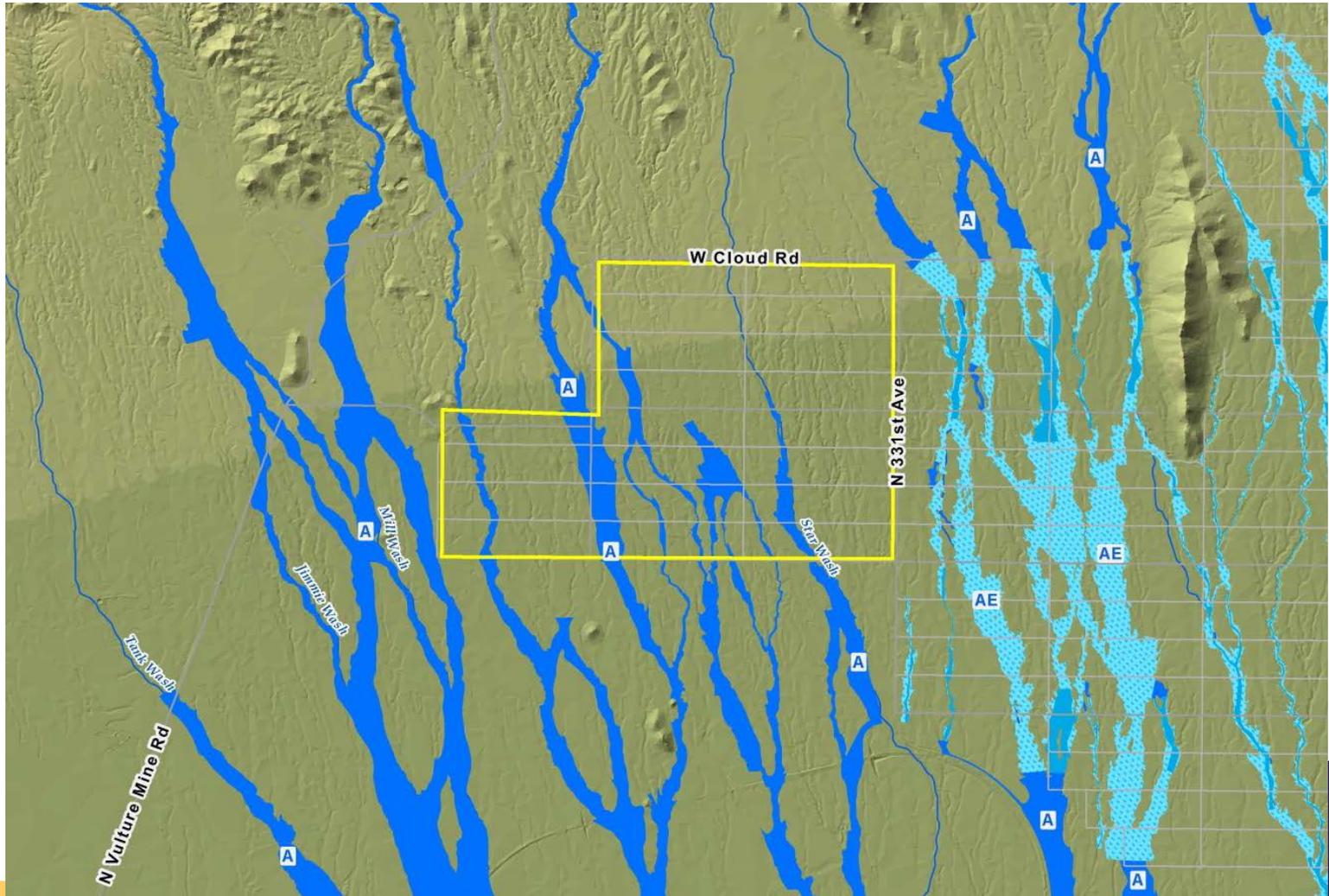


# Palo Verde Area Detailed





# Jack Rabbit Wash Area





# FY 2017 External Services Operating Budget

## Floodplain Delineation Program

White Tanks Cotton Lane (Continued)	\$25,000
Rock Springs Creek	\$31,500
Palo Verde Area	\$180,000
Jackrabbit Wash Watershed	\$234,000
Completion of FY16 Contracts & Misc. Delineations (Lower Gila River, Grand Avenue, Happy Valley Wash, Wickenburg, Luke Wash Phase II, White Tanks Area )	\$110,000
Elevation Certificate Program for PMR Studies Effective Spring 2017	\$75,000
FEMA Fees, Miscellaneous	\$54,300
<b>TOTAL</b>	<u>\$709,800</u>



**QUESTIONS?**



# Comments from the Chief Engineer and General Manager





# Summary of Recent Actions By the Board of Directors



**Denny Barney**  
District 1



**Steve Chucri**  
District 2



**Andy Kunasek**  
District 3



**Clint L. Hickman**  
District 4  
**- Chairman -**



**Steve Gallardo**  
District 5

