Flood Stakeholders Group

February 11, 2016

2:00 – 3:30 p.m.

WELCOME

Agenda

1. **Welcome and Updates** (Bill Wiley)
2. **Floodplain Use Permits 101** (Kelli Sertich)
3. **Ahwatukee Area Drainage Master Study** (Valerie Swick)
4. **Project Updates** (Kim Belt)
5. **Round Table**

WELCOME

- **Jacob Franzmeier**
  General Maintenance Worker *(O&M)*

- **Carlos Moreno**
  General Maintenance Worker *(O&M)*

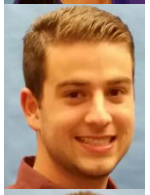
- **William Townsend –**
  General Maintenance Worker *(O&M)*

INTERNS

- **Spencer Bolen**– Planning Intern (FMS)

- **Lynndsay O'Neill** – Planning Intern (FMS)

- **Vivian Ortiz** – MCLEAPS Intern



- **Jason Rosenblum** – MCLEAPS Intern

- **Ben Irwin** – Volunteer Intern (PPM)

Farewell

- **Christine Button** –
  Accounting Specialist *(Admin)*

- **Ken Anderssohn** –
  Property Management Specialist *(RED)*

- **Burke Lokey Jr.** –
  Project Manager *(PPM)*

NEW FCD Website

As of Spring 2015

http://www.fcd.maricopa.gov/default.aspx

AZ Legislature

(bills of interest)

- **HB 2474 –** County Floodplain Regulations; Mobile Homes
- **HB 2549 –** Public Construction Piping Materials; Prohibition
- **HB 2651 –** Floodplain Regulation; Aggregate Extraction

- **SB 1248 –** Body of Water; Aggregate Mining
- **SB 1372 –** Water Resources; Salt Cedar Appropriation
- **SB 1399 –** Dams; Affidavit; Recording

Floodplain Use Permits 101

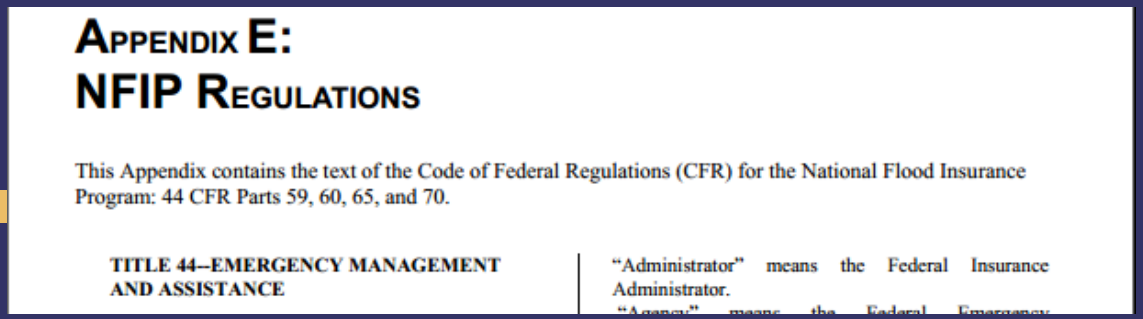
Kelli A Sertich, AICP, CFM
Division Manager
Floodplain Management & Services

FEMA & the NFIP

- Congress created the **NFIP** due to mounting flood losses & escalating costs of disaster relief to taxpayers
- Intent - reduce future flood damage through **community floodplain management ordinances** & mitigate future flood losses nationwide through **sound, community-enforced building & zoning ordinances**
- Provide protection for property owners against potential losses with access to affordable, federally backed flood insurance

FEMA & the NFIP

- Code of Federal Regulations (CFR) sets minimum standards for development in the floodplains – 44 CFR
- State of Arizona through ADWR has a Floodplain Management Model Ordinance based on the CFR
- Communities then adopt Floodplain Regulations based on the CFR and Model Ordinance



APPENDIX E:
NFIP REGULATIONS

This Appendix contains the text of the Code of Federal Regulations (CFR) for the National Flood Insurance Program: 44 CFR Parts 59, 60, 65, and 70.

TITLE 44--EMERGENCY MANAGEMENT AND ASSISTANCE

"Administrator" means the Federal Insurance Administrator.

Arizona State Statutes

- Floodplain Regulations intended to carry out the requirements of the NFIP
- Assumption of powers & duties by cities and towns
- Floodplain Use Permit required for any development within the floodplain

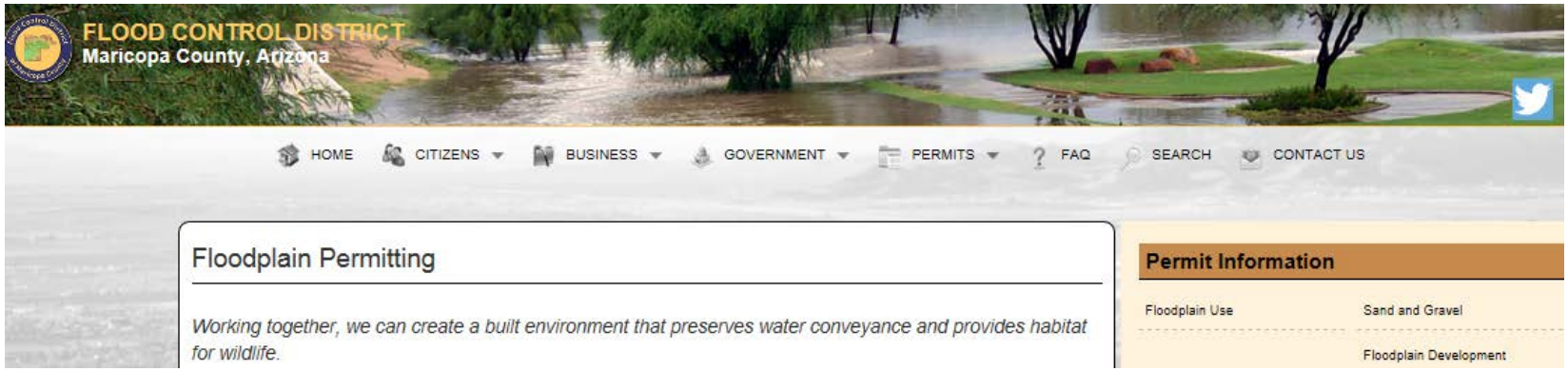
When do I need a Floodplain Use Permit?

- A.R.S. - Divert, retard, obstruct the flow of water in a watercourse (regulated floodplain)
- Development in a floodplain – development is any man made changes
- General maintenance type work does not require a floodplain use permit
- Each jurisdiction might have a different threshold

How and Where?

- Steps to obtain a permit
- References and documents
- Clarify where to start process

http://www.fcd.maricopa.gov/default.aspx



Questions?

Kelli A Sertich, AICP, CFM
Division Manager
Floodplain Management & Services

AHWATUKEE FOOTHILLS AREA DRAINAGE MASTER STUDY

Flood Stakeholder Group

February 11, 2016

Valerie Swick, Project Manager, EIT, PH, CFM
Flood Control District of Maricopa County

City of Phoenix

Study Overview

City of Phoenix

Study Area

- ~30 square miles
- All within City of Phoenix
- Includes South Mountain Park
- Master-planned community
- Significant existing drainage infrastructure

City of Phoenix

Flood Control District of Maricopa County

Study Purpose & Goals

- City of Phoenix is a partner
- Identify flood hazards
  - Model various storms with existing conditions
- Identify problems
  - Quantify the risks
- Develop possible solutions
  - Identify & prioritize potential solutions
  - Seek funding sources

City of Phoenix

Flood Control District of Maricopa County

Major Study Tasks

- Public/Stakeholder Involvement
- Completed
  - Data Collection, Flooding Inventory & Analysis
  - Hydrologic & Hydraulic Analysis – Modeling
- Current
  - Hazard/Risk Assessment
- Future
  - Develop Potential Alternatives (Mandan St in process)
  - Prepare a Plan

City of Phoenix

Flood Control District of Maricopa County

FLOOD HAZARD ANALYSIS

Key Findings

- Overall, stormwater drainage system in Ahwatukee is working well
- No widespread flooding during Sept. 2014 storm event
  - 3-5” rain in 8 hours, ½ annual rainfall
  - >100 year event
- A few clusters of localized flooding

City of Phoenix

Flood Control District of Maricopa County

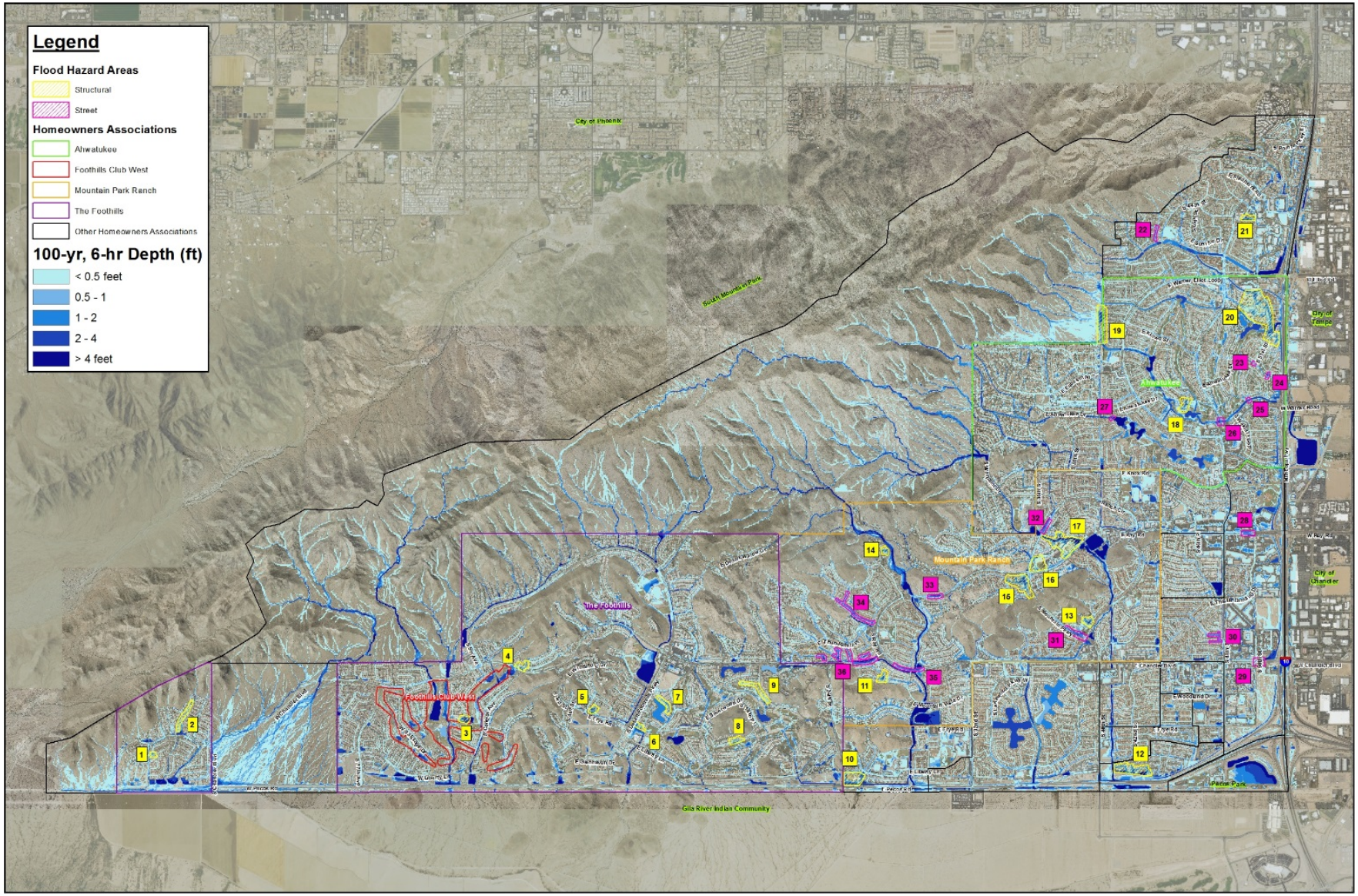
Structural & Street Flooding

- Streets: Locations with >1’ depth
- Structures: Locations with >6” depth

City of Phoenix

Flood Control District of Maricopa County

Structural and Street Hazards



Primary Causes of Flooding

- Undersized channels/structures
- Undersized stormwater outlets for parcels
- Homes built below grade
- Trapped flow

City of Phoenix

Flood Control District of Maricopa County

IDENTIFY PROBLEM AREAS

City of Phoenix

Focus Areas

- Study team to develop flood mitigation alternatives for several problems areas
  - Mandan Street – already identified
  - Additional areas

City of Phoenix

Flood Control District of Maricopa County

Area Drainage Master Plan

- Potential mitigation strategies identified in Area Drainage Master Plan
  - Structural and roadway flooding
  - Structural or non-structural
  - Mitigation a collaborative effort (e.g., District, City, HOAs, property owners)

City of Phoenix

Flood Control District of Maricopa County

Next Steps

- Flood risk assessment – quantify risks
  - Will include projected flooding damages
- Public meeting – Spring 2016
  - Present flood hazard/risk results
  - Seek input to help prioritize flooding problems for mitigation
- ID potential mitigation measures

City of Phoenix

Flood Control District of Maricopa County

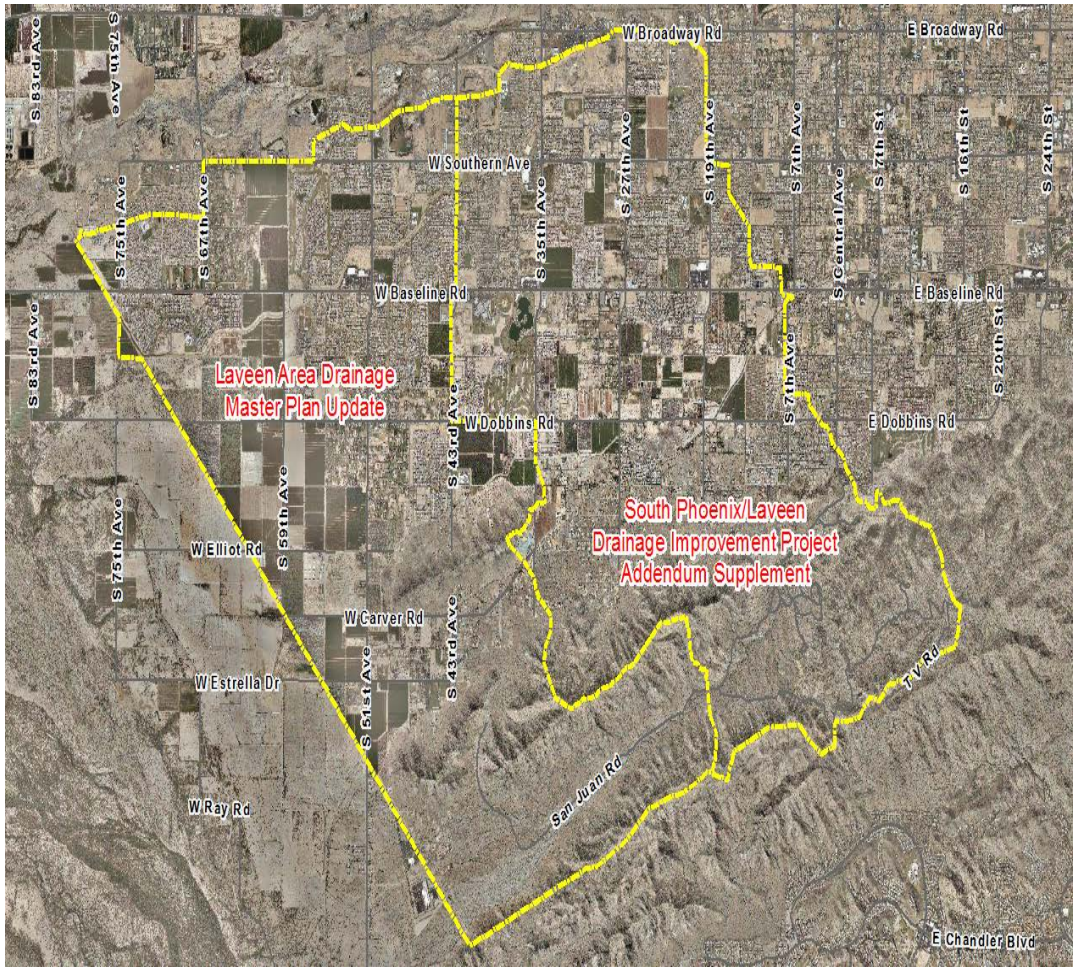
Questions

Projects Update

Kim Belt
CIP Program Supervisor

Planning Study

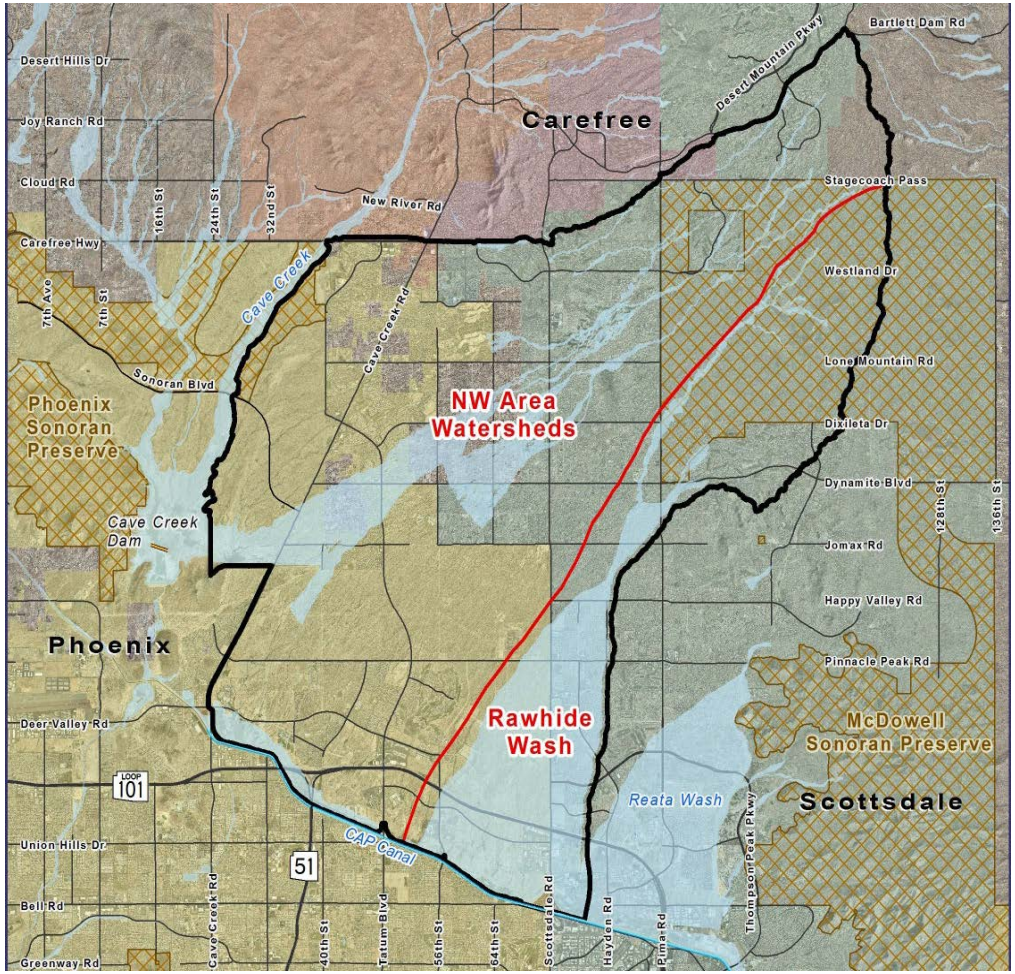
South Phx/Laveen ADMP Update



- Study efforts continue:
  - New mapping complete.
  - Data collection complete.
  - Flo-2D underway for area south of Baseline Rd.
  - Identify flooding hazards.
- Extensive coordination with Phoenix.
- Finalize report evaluating problem areas, due late spring.

Planning Study

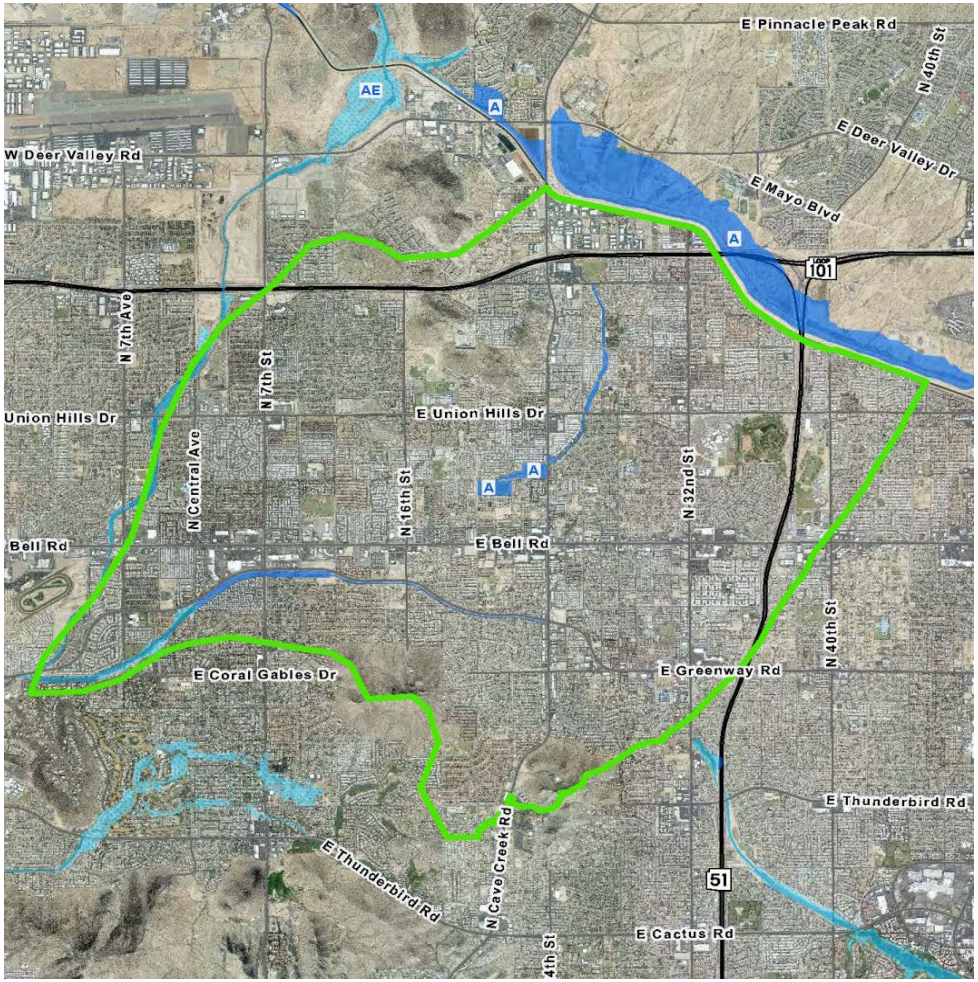
Pinnacle Peak West ADMS



- Development of Rawhide Wash mitigation alternatives continues.
  - Field surveys of floodwalls and levees underway.
  - Costs and benefits being evaluated.
- Redelineation of Fans 5 & 6 floodplains continues.
  - Draft floodplain maps submitted.
  - Finished flood elevation surveys to be done.
- Public and HOA meetings:
  - Community Stakeholder Group field visit held in January.

Planning Study

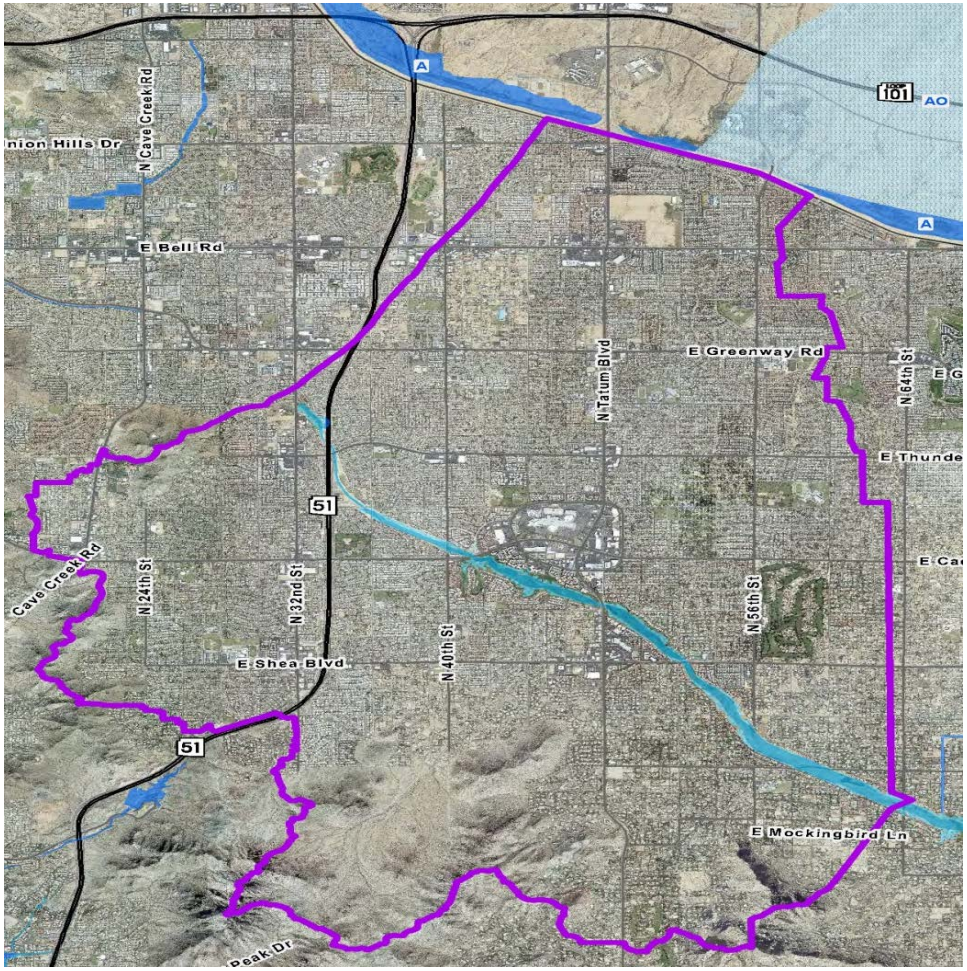
Upper East Fork Cave Creek Area Drainage Master Study Update



- Study efforts continue:
  - Data collection report complete.
  - FLO-2D analysis continues.
  - Flood hazard assessments underway.
- Public outreach efforts continue:
  - Coordination on-going with Phoenix.
  - Public involvement activities will continue this spring.

Planning Study

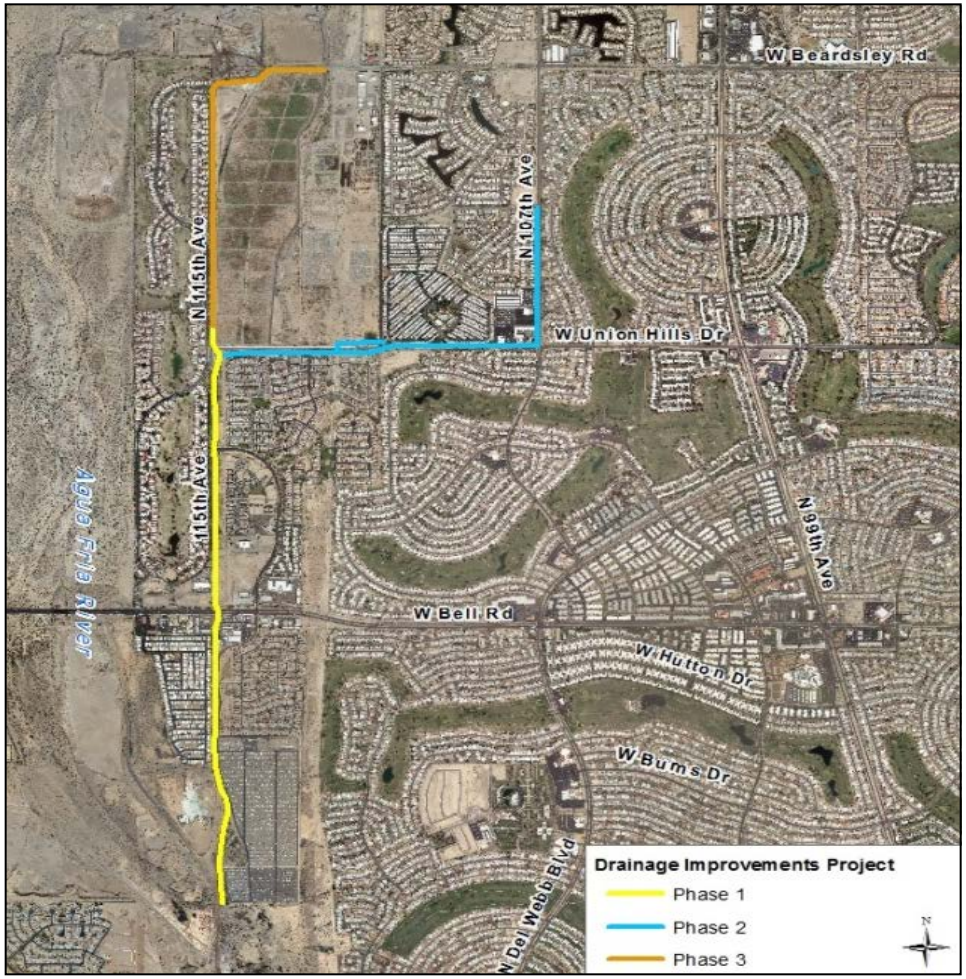
Middle Indian Bend Wash Area Drainage Master Study



- Work Assignment #1 activities continue:
  - Data collection being finalized.
  - Mapping is completed.
  - Preliminary FLO-2D analysis.
- Coordination with Phoenix and Paradise Valley staff is on-going.

Design

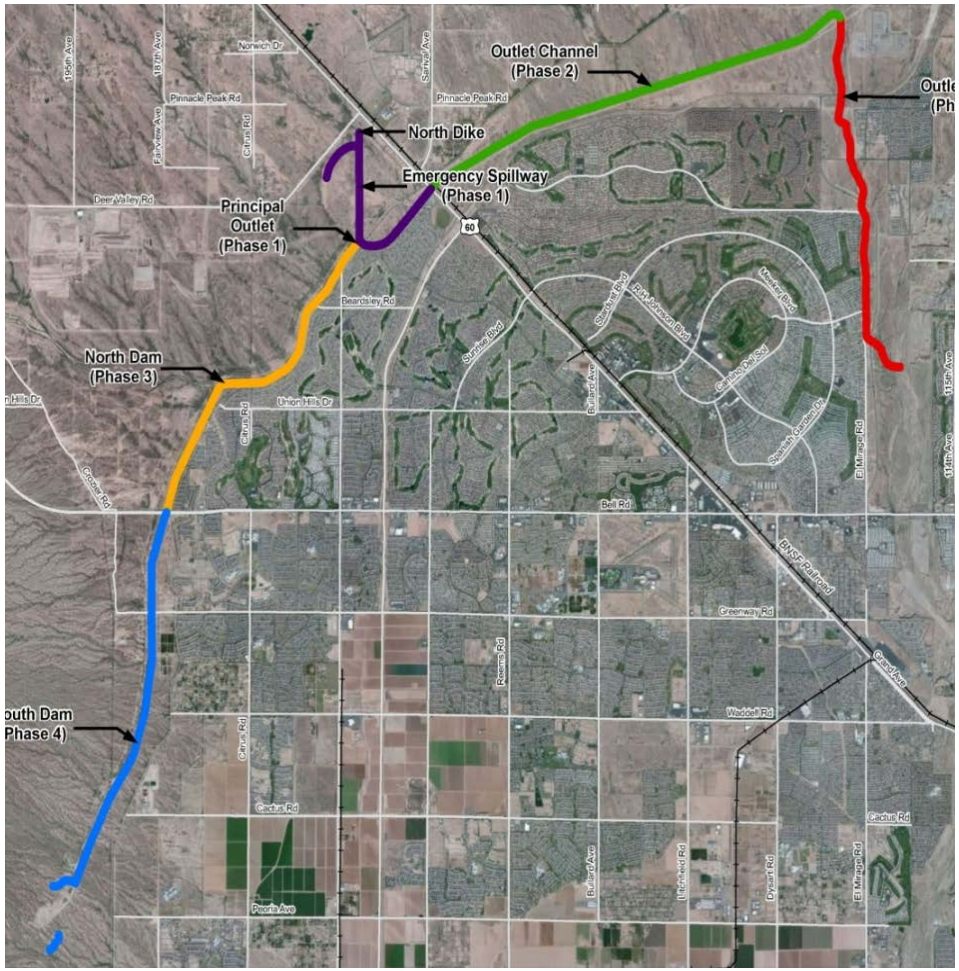
115th Avenue & Union Hills Drive Drainage Improvements



- Phase 1 P&S complete, construction on hold due to budget constraints.
- Utility relocations for Phase 1 continue.
- Phase 2 100% design submittal is under review.
- Phase 3 design at 30%.
- Project consists of:
  - Channels and storm drains; and
  - Providing 100-yr protection.

Design

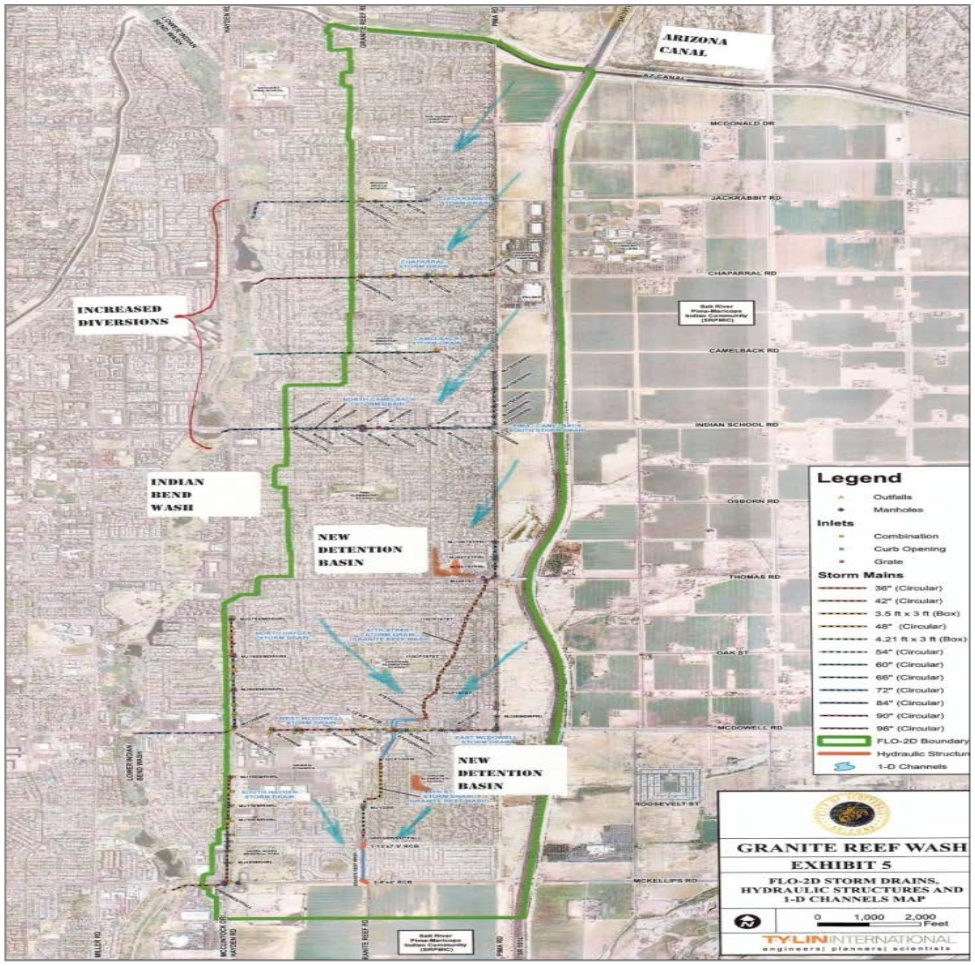
McMicken Dam Rehabilitation – Phase 1



- Design being done in phases.
- Alternatives analysis for Phases 1 & 2 complete and alternative selected.
- Scope of Work for final design of Phases 1 & 2 being developed.
- Outlet Channel 30% design nearing completion.
- Remainder of Outlet Channel design to be done in-house.
- ADOT Loop 303 contractor has removed about 350,000 cu. yds. of dirt from channel.

Design

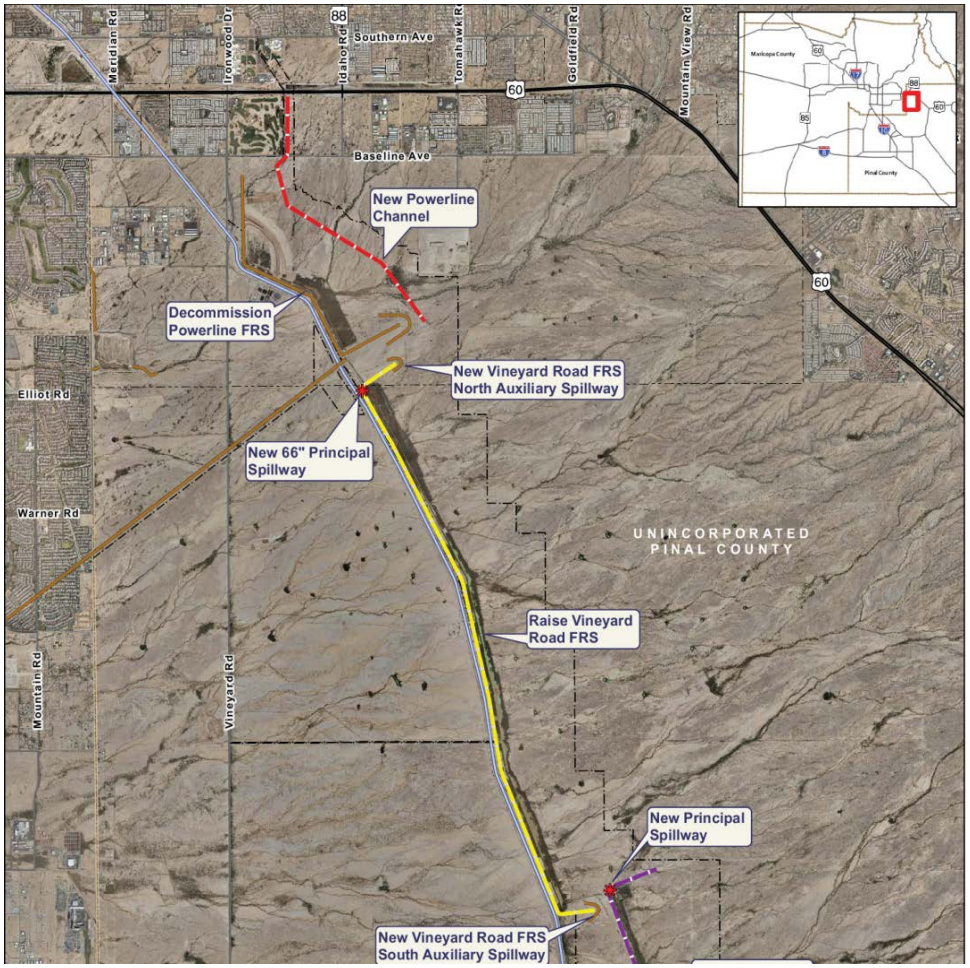
Granite Reef Watershed Project – Phase 1



- Lead Agency – City of Scottsdale
- Design Phase 1 continues:
  - H/H modeling for upstream watershed complete.
  - H/H modeling continues for remainder of watershed.
  - 60% design for new lateral storm drains submitted.
  - Phase 1 design complete in summer 2016.
- ROW Acquisition
  - ROW for both basin sites has been acquired.

Construction Manager at Risk (CMAR)

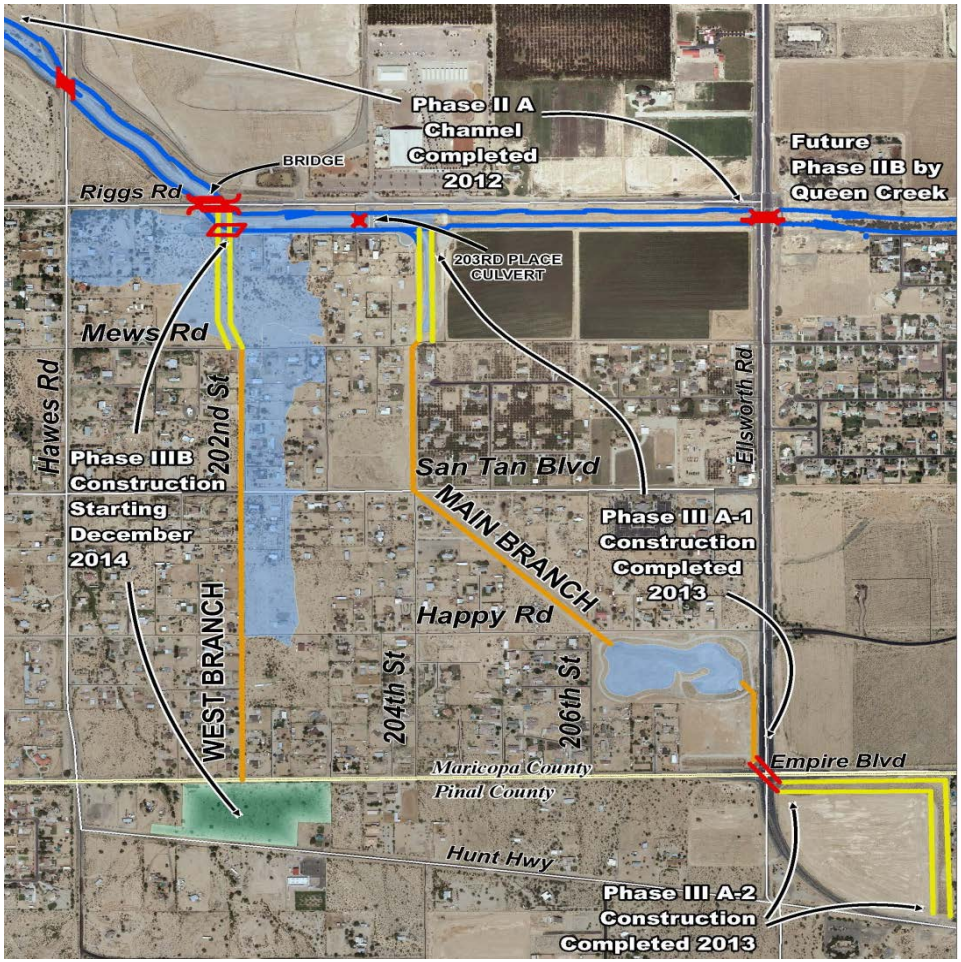
Vineyard Road & Powerline FRS Rehabilitation



- Vineyard:
  - Phase 1 design complete.
  - Phase 2 90% design submitted.
  - Phase 3 design being scoped.
- Powerline:
  - 30% design submittal received and reviewed.
  - Scoping work for final design
  - Continuing to resolve multiple utility conflict issues.
- Major archaeological mitigation work completed.
- Vineyard Phase 1 construction underway by CMAR.

Construction

Sonoqui Wash Channelization Phase IIIB
West Branch - Riggs Rd. to Hunt Hwy.



- Construction complete
  - Minor punch list items to be worked
  - Contract to be closed.
- FCDMC to own and operate/maintain the completed project.

Construction

Ashbrook Wash Improvements

- Construction is on-going
  - Removal of palm trees in the wash.
  - Construction of box culverts.
- Construction completion summer 2016.
- Project partnership with Town of Fountain Hills.

Questions?

Sonoqui Wash Phase III-

View looking south toward San Tan Mountains during construction with cast in place storm drain pipe in foreground and basin in background.

ROUND TABLE