Flood
Stakeholder
Group

WELCOME

June 9, 2016

Agenda

- **Welcome and Updates**
  (Bill Wiley)
- **2016 Monsoon Outlook**
  (Daniel Henz)
- **Laveen Area Drainage Master Study Update**
  (Afshin Ahouraiyan)
- **Project Updates**
  (Don Rerick)
- **Round Table**
  (All)

Maricopa County Organizational Chart

Elected Position | Key | Appointed Position

Citizens

- **Sheriff** — Joe Arpaio
- **County Attorney** — William Montgomery
- **Superior Court** — Janet Barton, Presiding Judge
  - Justices of the Peace
  - Superior Court Judges & Commissioners
  - Adult Probation – Juvenile Probation & Detention
  - Court Administration – Municipal Court Judges
- **Assessor** — Paul Petersen
- **Recorder** — Helen Purcell
  - Elections – Karen Osborne
  - Star Call Center – David Sobieski
- **Superintendent of Schools** — Don Covey
- **Constables**
- **Treasurer** — Charles Hoskins
- **Clerk of the Court** — Michael Jeanes

Board of Supervisors

Denny Barney	Steve Chucri	Andy Kunasek	Clint Hickman	Steve Gallardo
District 1	District 2	District 3	Chairman, District 4	District 5

- **Internal Audit** — Ross Tate
- **Clerk of the Board** — Fran McCarroll

Citizens Serving Citizens

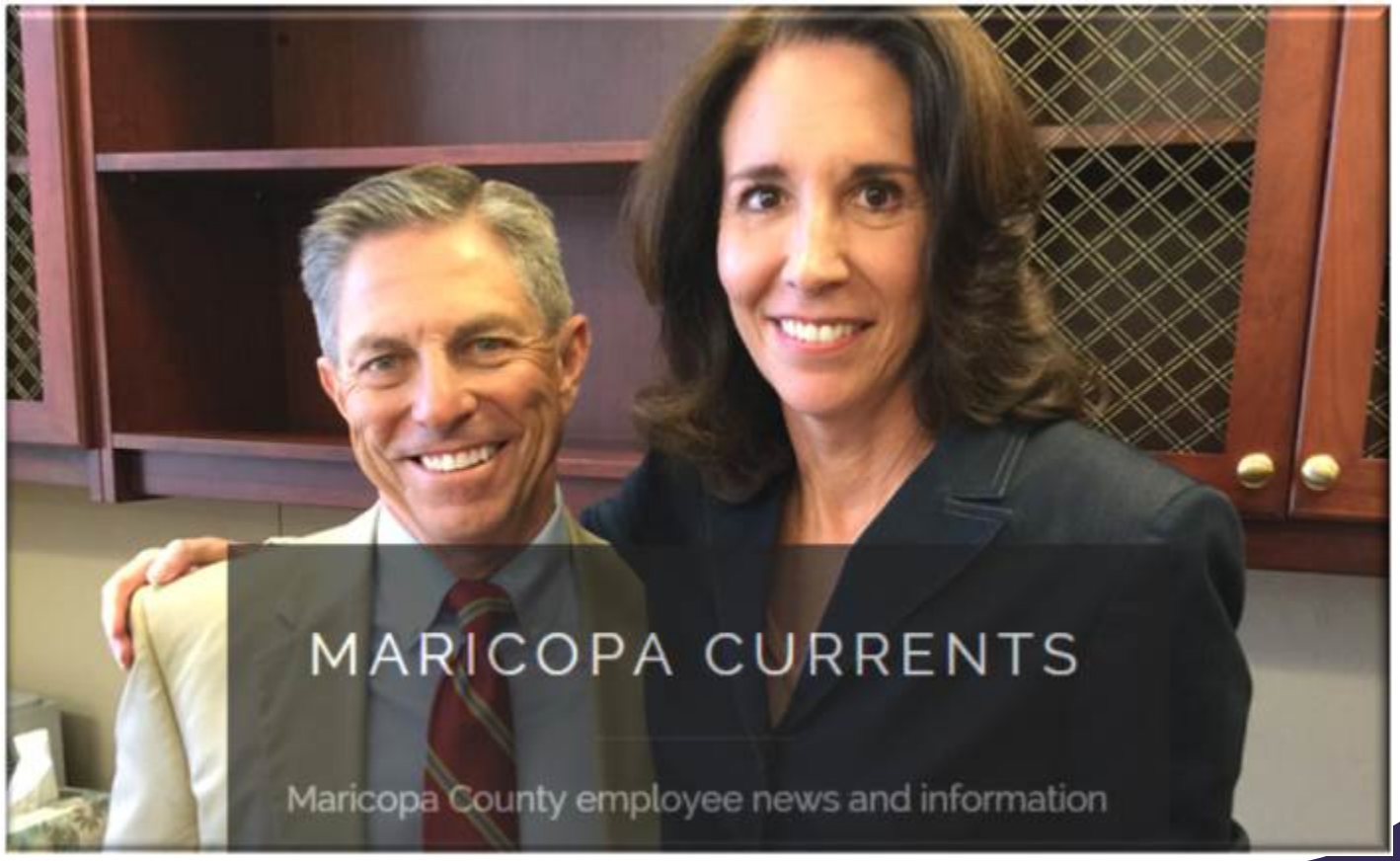
Tom Manos, County Manager

Citizens Serving Citizens

- **Sandi Wilson, Deputy County Manager**
  - Correctional Health
  - Management & Budget — Policy & Compliance
  - Medical Examiner
  - Public Defense Services — Contract Counsel; Legal Advocate; Legal Defender; Public Advocate; Public Defender
  - Public Fiduciary
  - Public Health
- **Joy Rich, Deputy County Manager**
  - Air Quality
  - Emergency Management
  - Environmental Services
  - Equipment Services
  - Facilities Management
  - Flood Control District
  - McDOT
  - Planning & Development
  - Protective Services
  - Real Estate
  - Waste Resources
- **Shelby Scharbach, Assistant County Manager**
  - Enterprise Technology
  - Finance — Industrial Development Authority
  - Parks & Recreation
  - Stadium District
- **MaryEllen Sheppard, Assistant County Manager**
  - Employee Benefits and Health
  - Human Resources — Compensation; Employee Development; Employee Relations; Employee Services and Diversity; Payroll and Records
  - Human Services
  - Justice System Planning
- **County Administration** — Constables Administration
  - Animal Care & Control Services
  - Chief Procurement Officer — Office of Procurement Services
  - Government Relations
  - Library District
  - Office of Communications
  - Risk Management

Tom Manos, County Manager
Effective 2/22/2016

County Manager Joy Rich



Deputy County Manager
Reid Spaulding

WELCOME

- **Pat Mertz**
  Right of Way Agent *(Real Estate)*

- **Rafael De La Paz**
  Construction Project Mgr. *(O&M)*

NO IMAGE AVAILABLE

- **Aaron Judy**
  Software Architect *(GIS)*

WELCOME

- **Kim-Melody Romo**
  Property Management Specialist *(Real Estate)*

- **JR Williams**
  Right of Way Agent *(Real Estate)*

- **Torry Taylor**
  General Maintenance Worker *(O&M)*

Farewell

- **Kevin Leahy**
  CAD Technician *(Engineering)*

- **Brian Cummings**
  Real Property Technician *(Real Estate)*

- **Frank Ulloa**
  Right of Way Agent *(Real Estate)*

Farewell

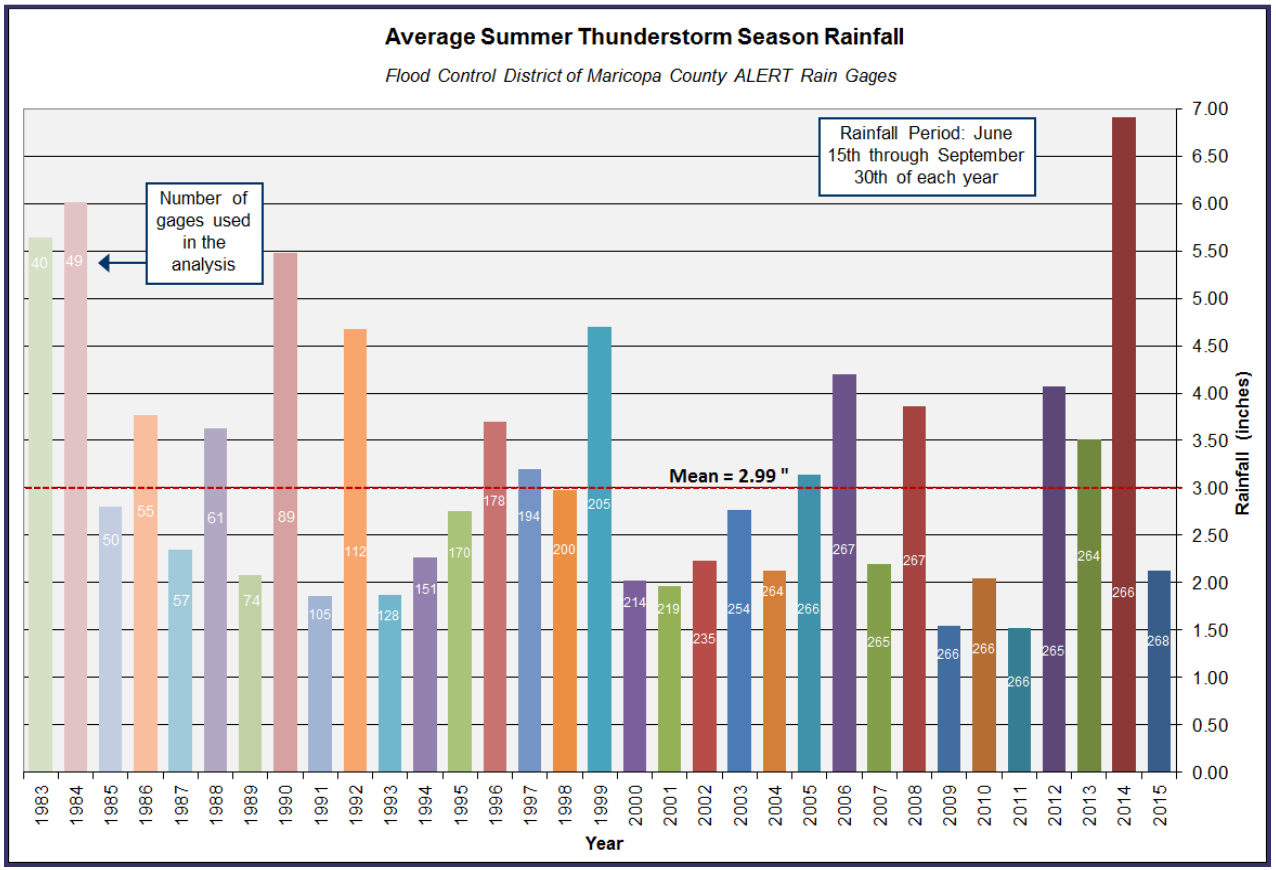
- **Kenneth Rakeshaw**
  Hydrologist *(Engineering)*

- **Sanjin Mrzljak**
  Intern *(Engineering)*

OTHER ITEMS

- Monsoon officially begins June 15th
- Flood Awareness Week June 13 – 17th
- Available fill dirt - on FCD web page
- I-10 basins - transfer to Goodyear
- Tempe Town Lake re-opened
- SCOTUS JD ruling

2016 Monsoon Outlook



Daniel Henz
Meteorologist

When is the Monsoon…?

- Season “officially” runs from June 15th – September 30th
- Typical *onset* for PHX: July 7th (3 days Td > 55F) *
- Typical *end* for PHX: Sept 9th *
- ***Local Knowledge**: On any given year, onset and end dates can be earlier or later by a couple of weeks for different parts of the state.*

Rainfall Stats…

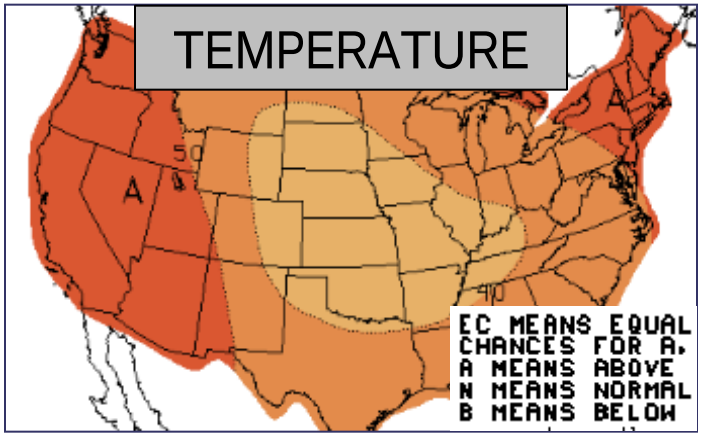
- Avg. Season Rainfall: 2.71” (30%-40% of yearly total)
- Wettest Season: 9.56”/1984, Driest Season: 0.35”/1924
- Avg. days with Rain: 11 (max 17, min 5, since 2000)
- 2015 season rainfall: 3.29” – Widely reported as a Wet Season. This can be very deceiving…

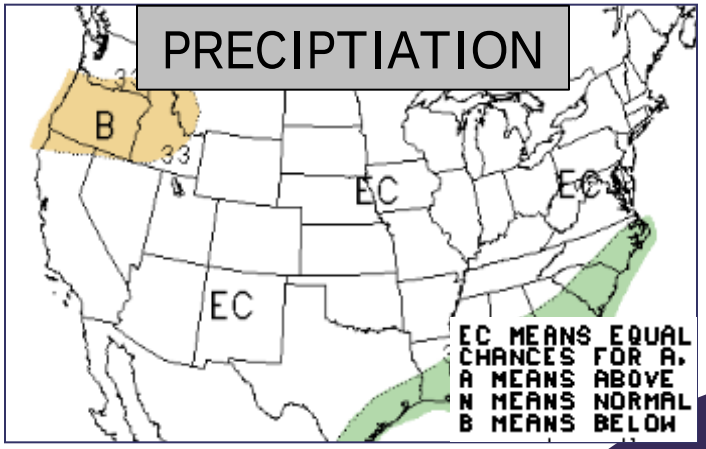
All information above is taken from Phoenix Sky Harbor Airport. Official reporting location for the Valley

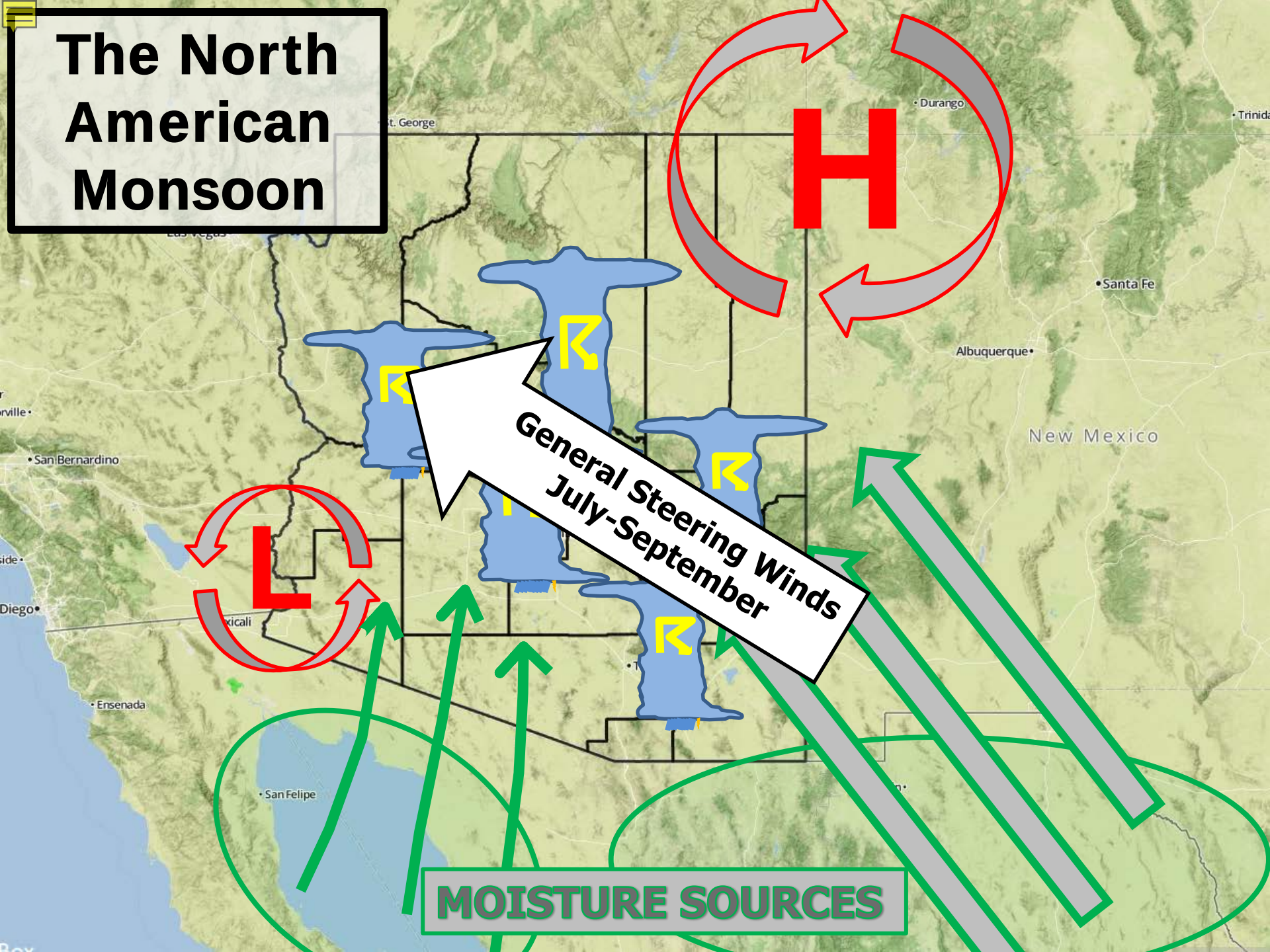
NOAA/CPC 3-Month Outlook
(Summer 2016)

Early 3-Class Forecast Calls For:

- 57% for Above, 31% Normal, 12% Below temperatures during the Monsoon.
- Equal 33.3% chances for Above, Below, or Normal rainfall during the Monsoon.
- Unfortunately, forecasts tell us little about what to expect each month, week, etc.



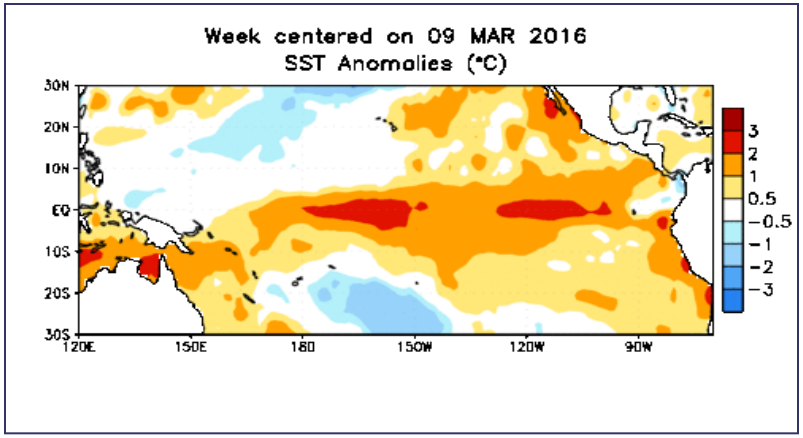


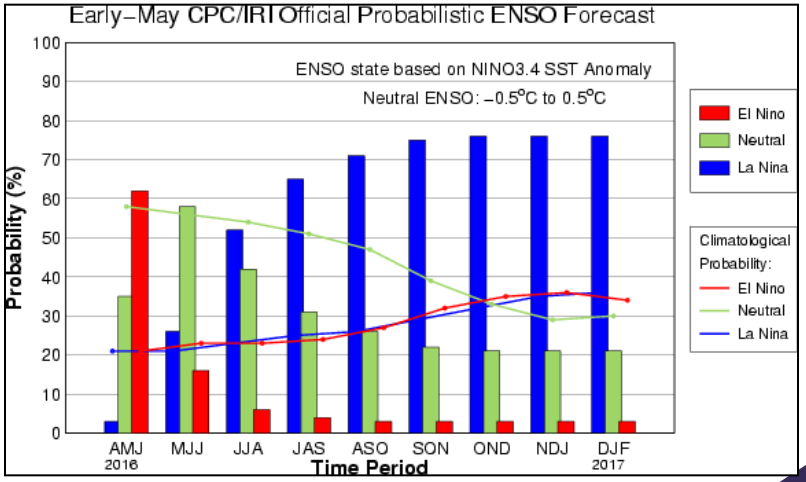

The North American Monsoon
H
L
General Steering Winds
July-September
MOISTURE SOURCES
Durango
Santa Fe
Albuquerque
New Mexico
San Bernardino
Ensenada
San Felipe

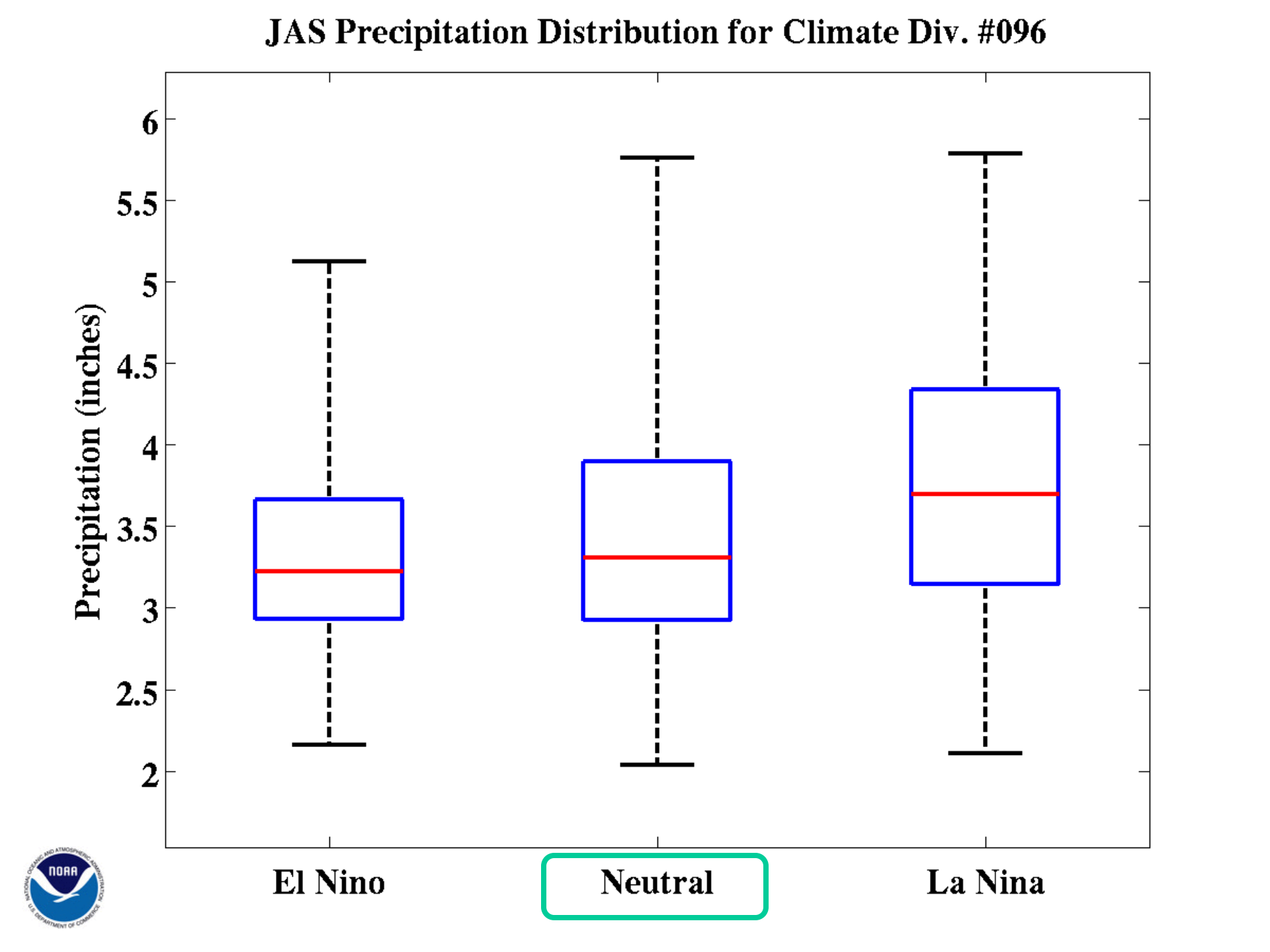
What's Going on with El Niño?

- Significant weakening during Spring. Transition to Neutral by Summer. La Niña possible by Fall/Winter.

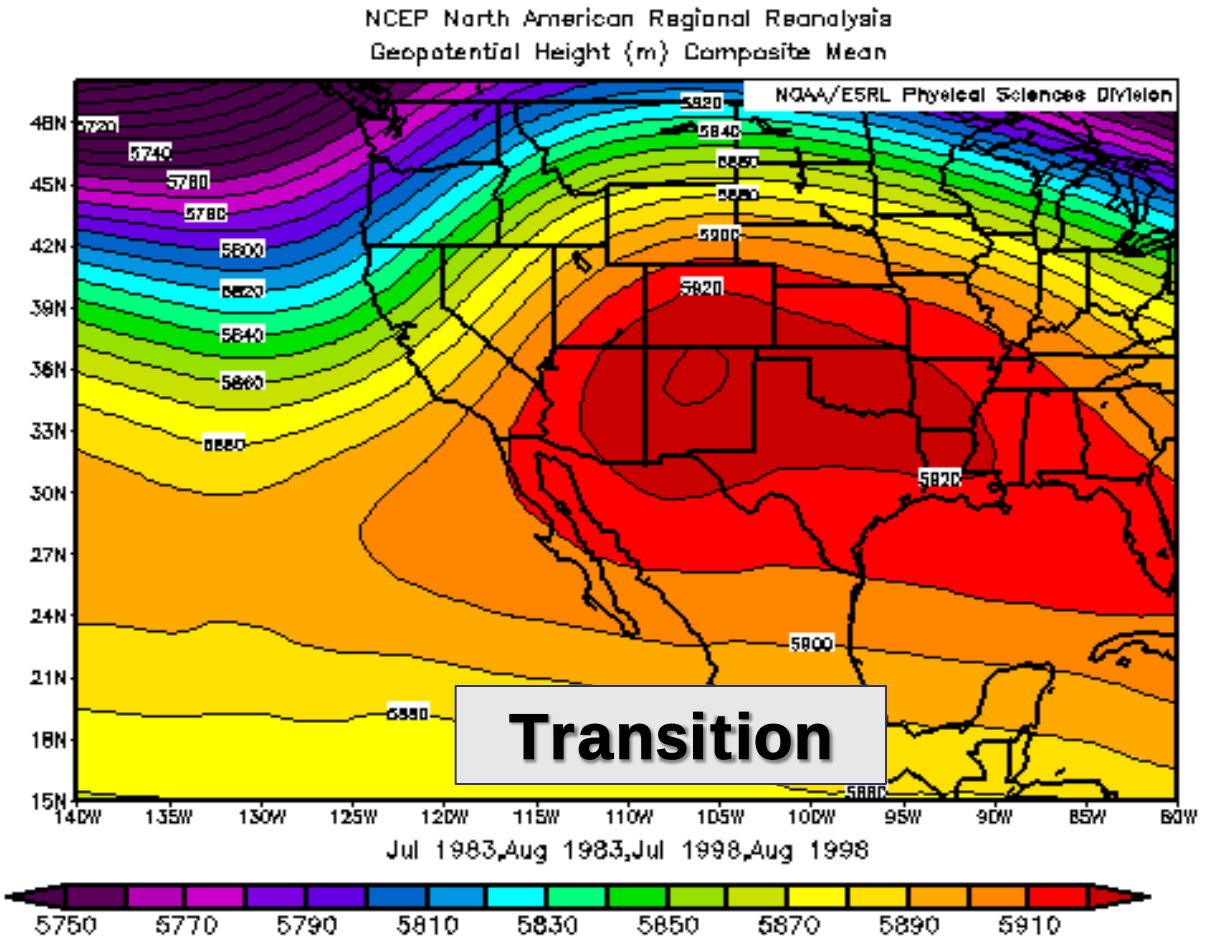
- ENSO climate signal much weaker in summer, meaning other weather drivers more important across AZ.

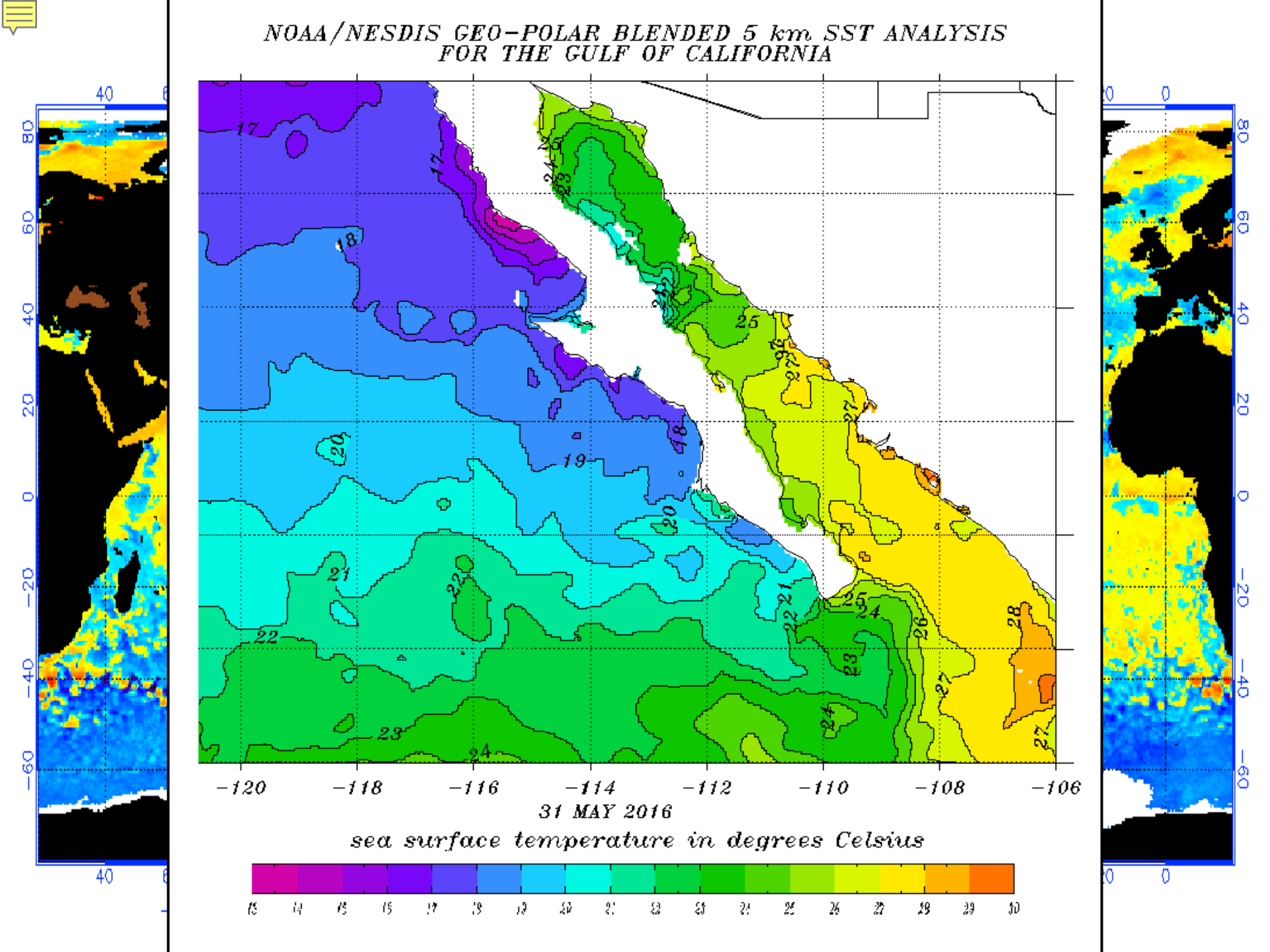


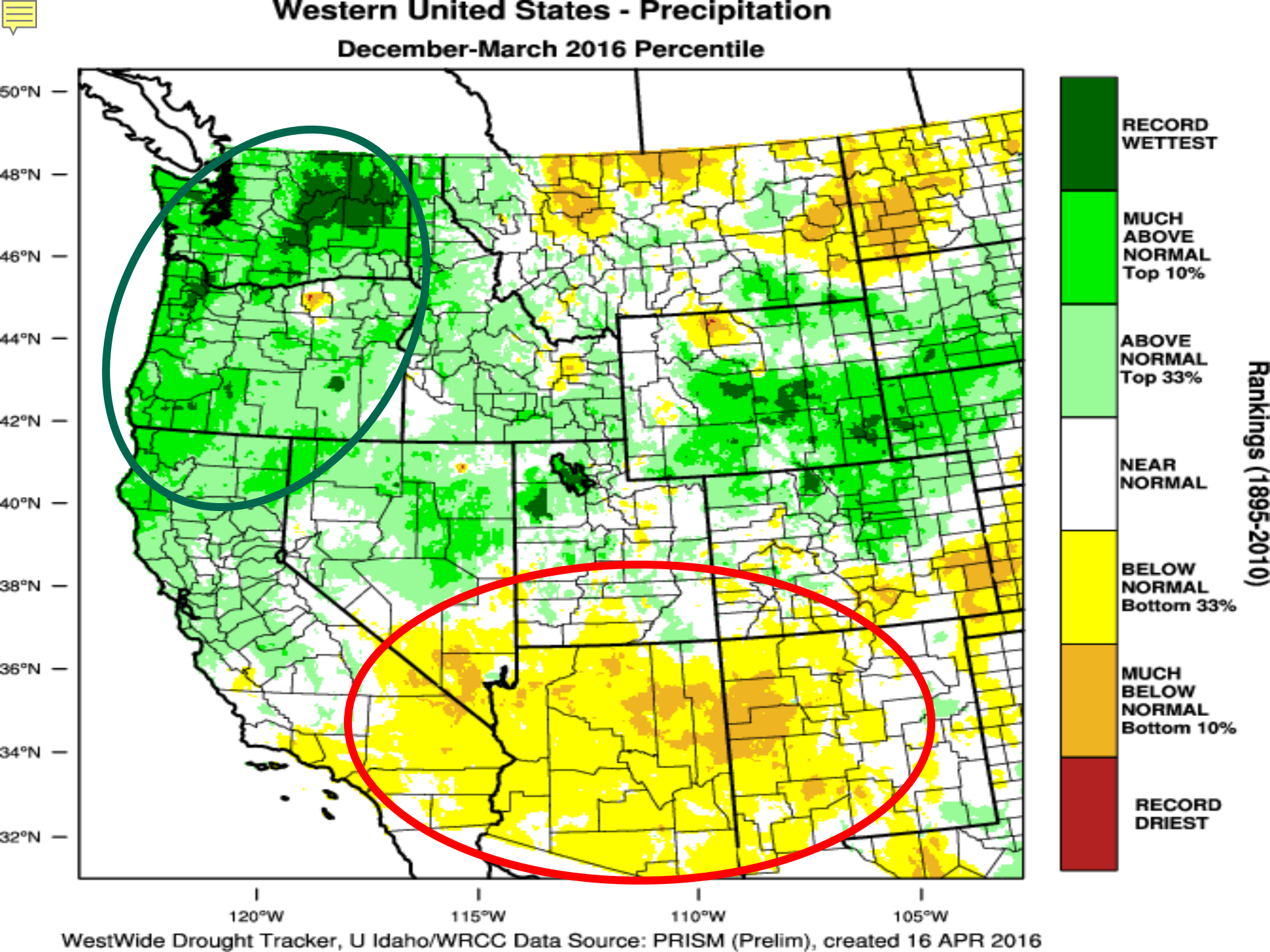



JAS Precipitation Distribution for Climate Div. #096
Precipitation (inches)
6
5.5
5
4.5
4
3.5
3
2.5
2
El Nino
Neutral
La Nina

Monsoon Ridge Variability




NOAA/NESDIS GEO-POLAR BLENDED 5 km SST ANALYSIS
FOR THE GULF OF CALIFORNIA
−120
−118
−116
−114
−112
−110
−108
−106
31 MAY 2016
sea surface temperature in degrees Celsius


Western United States - Precipitation
December-March 2016 Percentile
50°N
48°N
46°N
44°N
42°N
40°N
38°N
36°N
34°N
32°N
120°W
115°W
110°W
105°W
RECORD WETTEST
MUCH ABOVE NORMAL Top 10%
ABOVE NORMAL Top 33%
NEAR NORMAL
BELOW NORMAL Bottom 33%
MUCH BELOW NORMAL Bottom 10%
RECORD DRIEST
Rankings (1895-2010)
WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 16 APR 2016

East Pacific Hurricane Outlook

Courtesy of NOAA's National Hurricane Center

2016: Expecting a Near Normal Season

13-20 Named Storms
Average Year: 15

6-11 Hurricanes
Average Year: 8

3-6 Major Hurricanes
Average Year: 4

2015: 2nd most Active with 26 NS, 16 H, 11 MH

Final Thoughts

- NOAA/CPC forecast: above normal temperatures; equal chances for above, below, normal precipitation.
- Very complex forecast; predictive factors lend toward seeing a normal to wet Monsoon...cautious optimism
- It only takes one or two heavy rain events to reach historical Monsoon rainfall quota...*and they have to be over the airport* ☺
- Any location in the Phoenix Valley is subject to flooding/flash flooding problems if enough rain falls in the proper duration.
- Now is the time to prepare! Lots of information available.

Thank You!

Questions…?

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www.fcd.maricopa.gov

@FCDFloodInfo

www.facebook.com/FCDMaricopa

Laveen Area Drainage Master Study Update

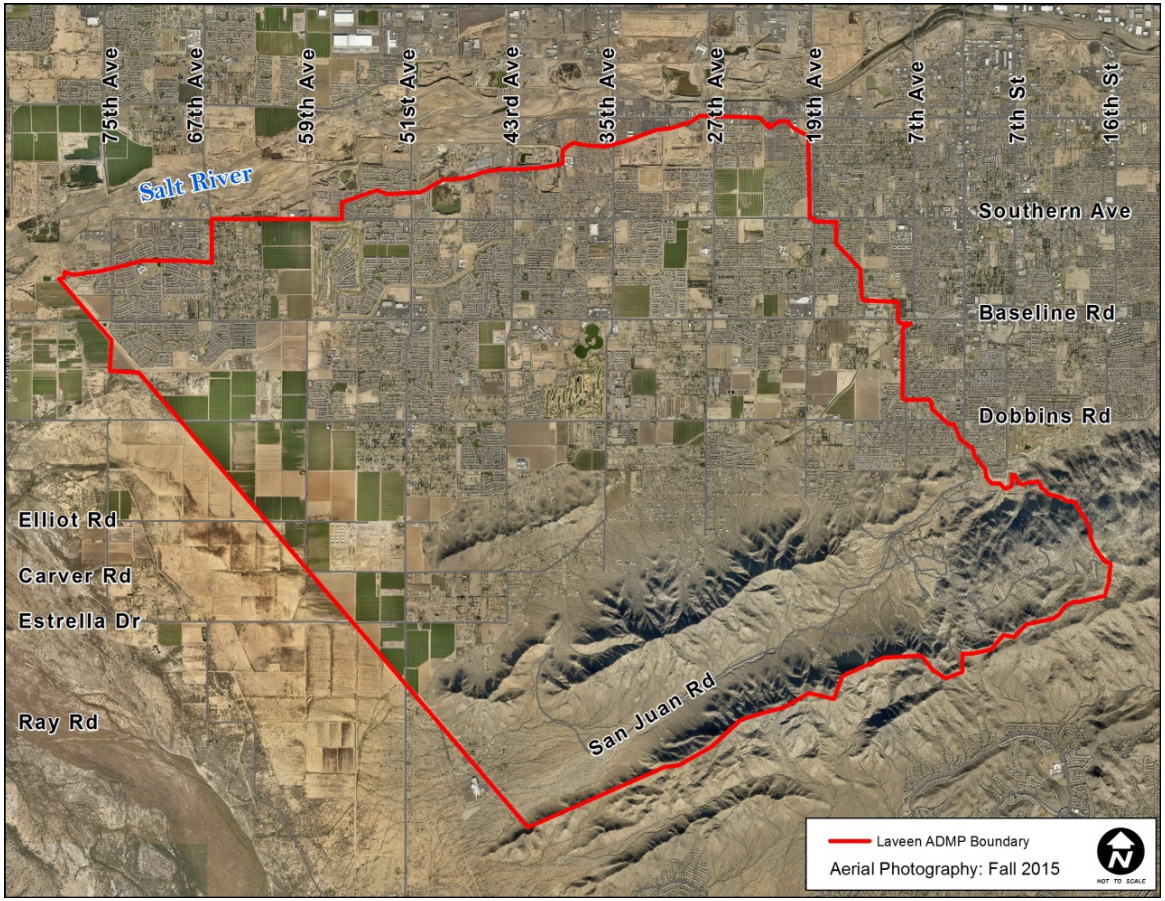
Afshin Ahouraiyan

Project Manager

Agenda

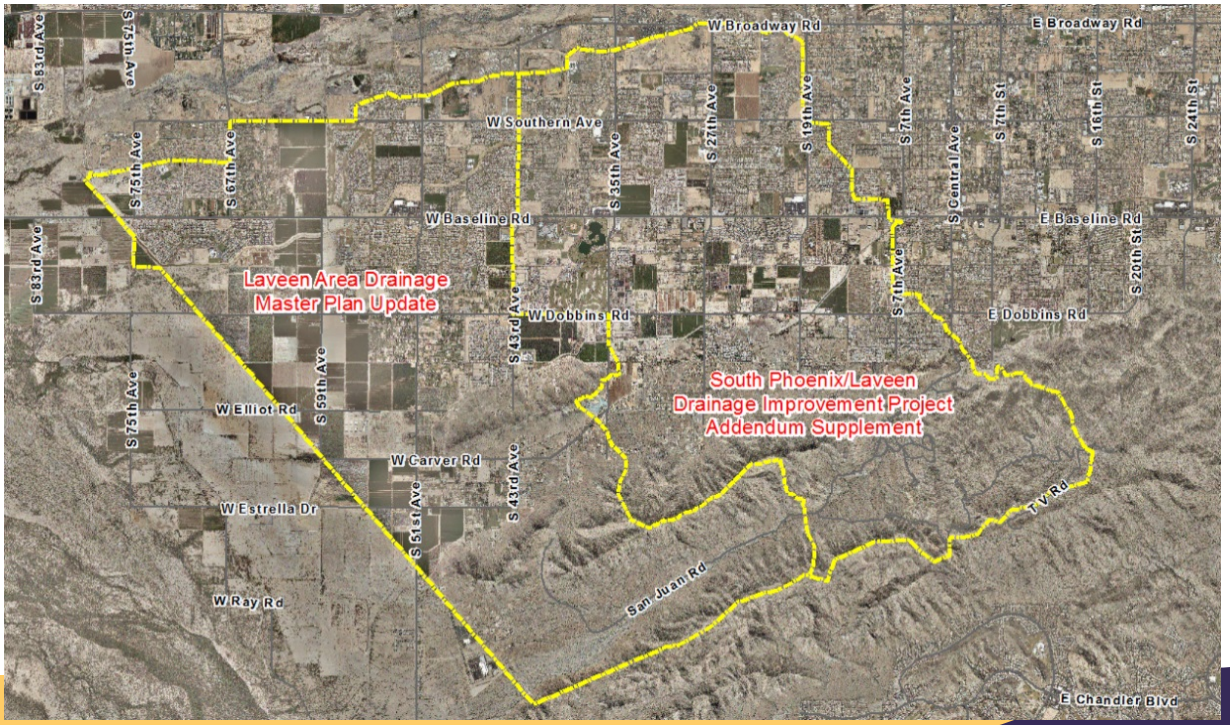
- Study Area
- Background
- 2014 Storms
- Need for the Update
- Status Update
- Next Steps

Study Area


75th Ave
67th Ave
59th Ave
51st Ave
43rd Ave
35th Ave
27th Ave
19th Ave
7th Ave
7th St
16th St
Salt River
Southern Ave
Baseline Rd
Dobbins Rd
Elliot Rd
Carver Rd
Estrella Dr
Ray Rd
San Juan Rd
Laveen ADMP Boundary
Aerial Photography: Fall 2015
NOT TO SCALE

Background

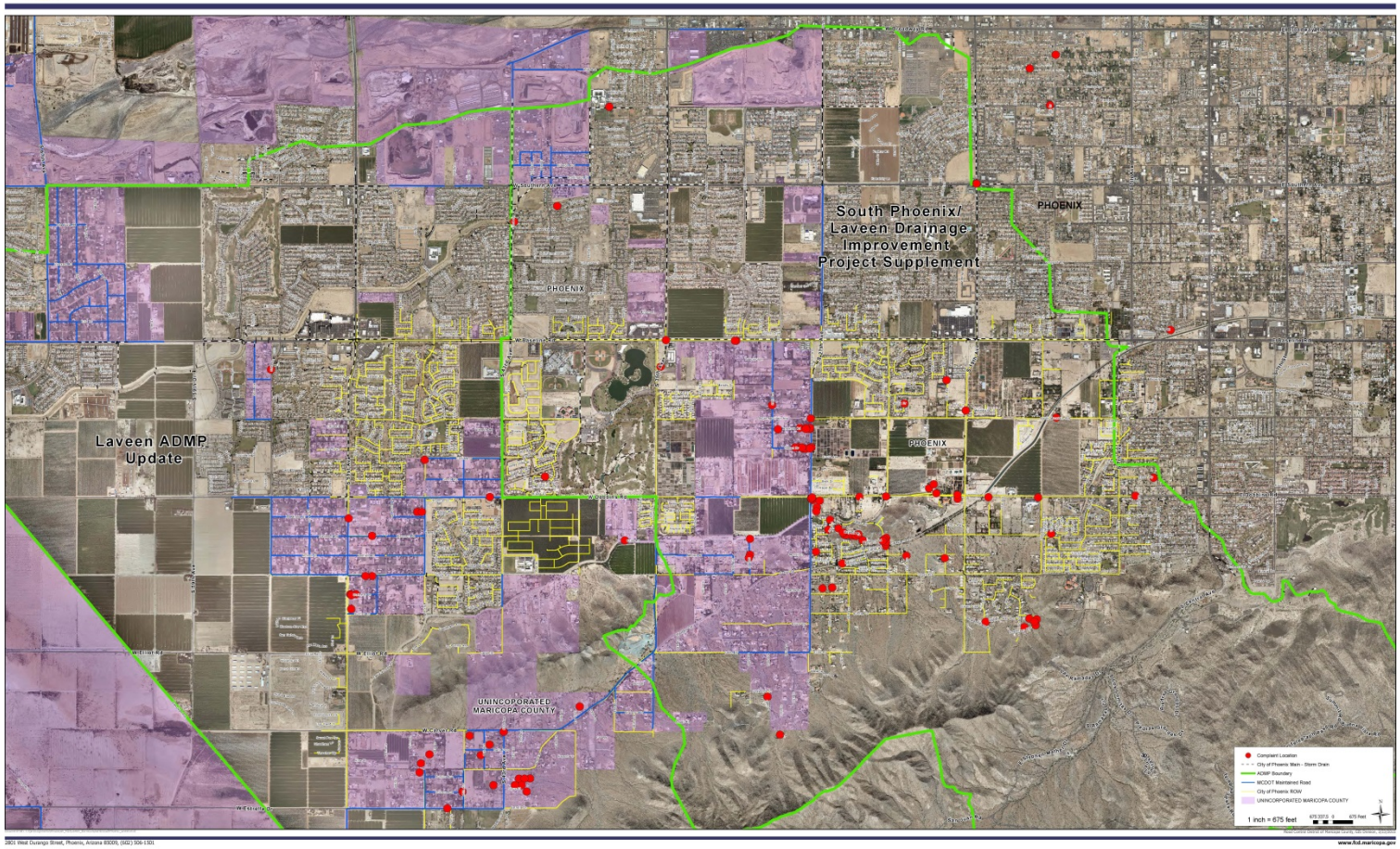
- Original Laveen ADMS completed in 1991
- Drainage structures proposed
- Laveen ADMP completed in 2001
- Design of Baseline and 43rd Avenue and 27th Avenue and South Mountain Basins completed in 2012



2014 Storms

Laveen/South Phoenix

Summer 2014 Storm Complaints

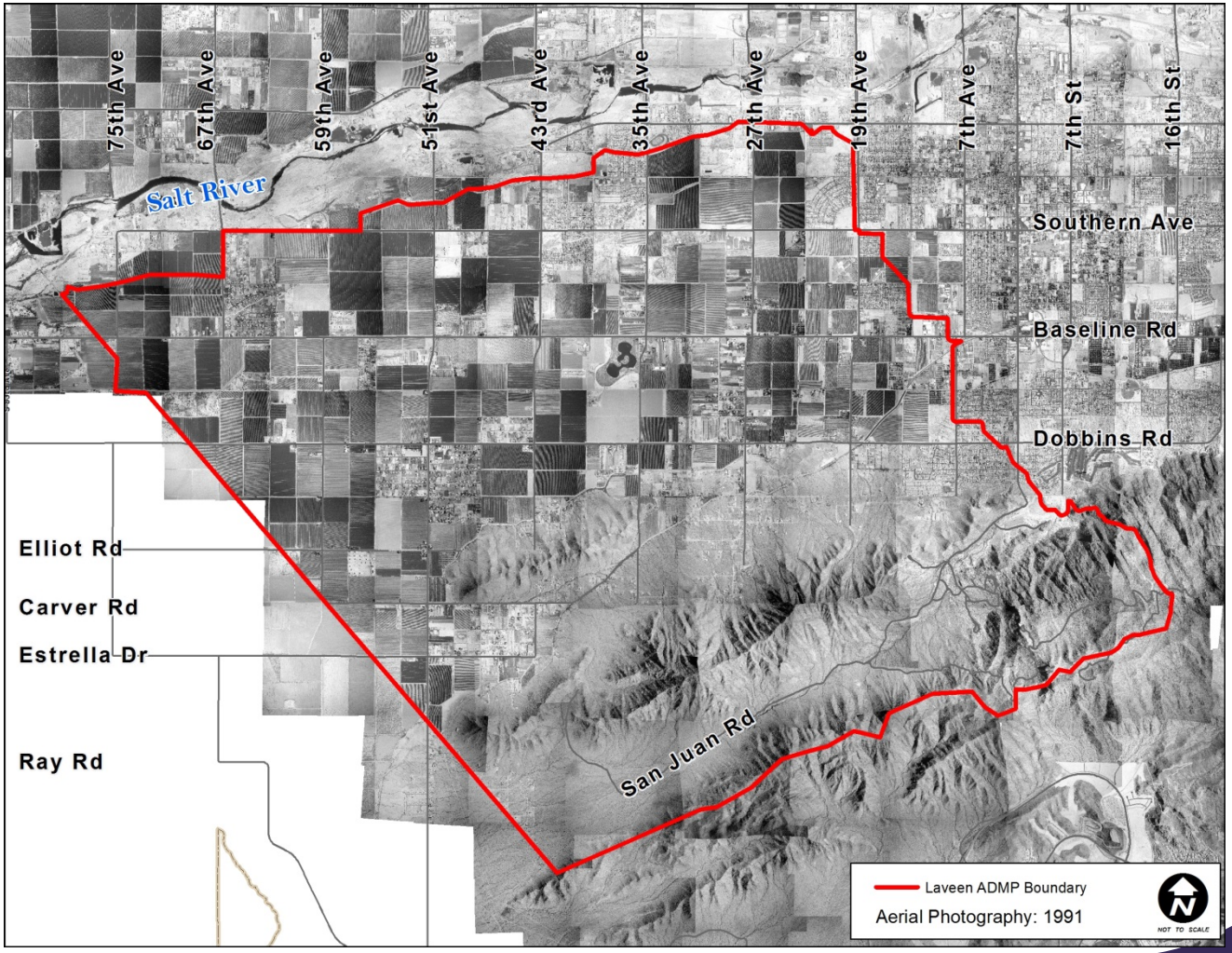


2014 Storms

2014 Storm

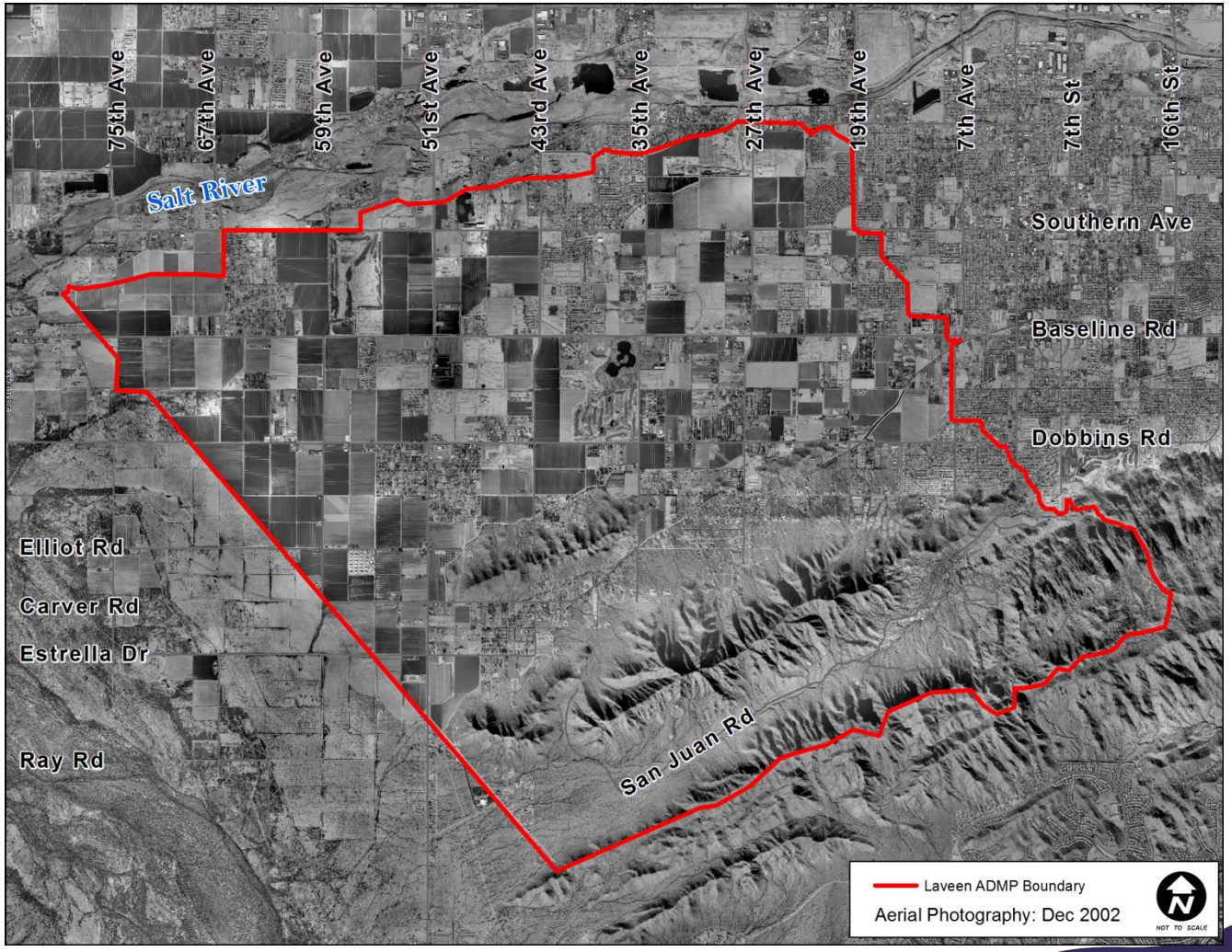
Need for Update

1991 Aerial



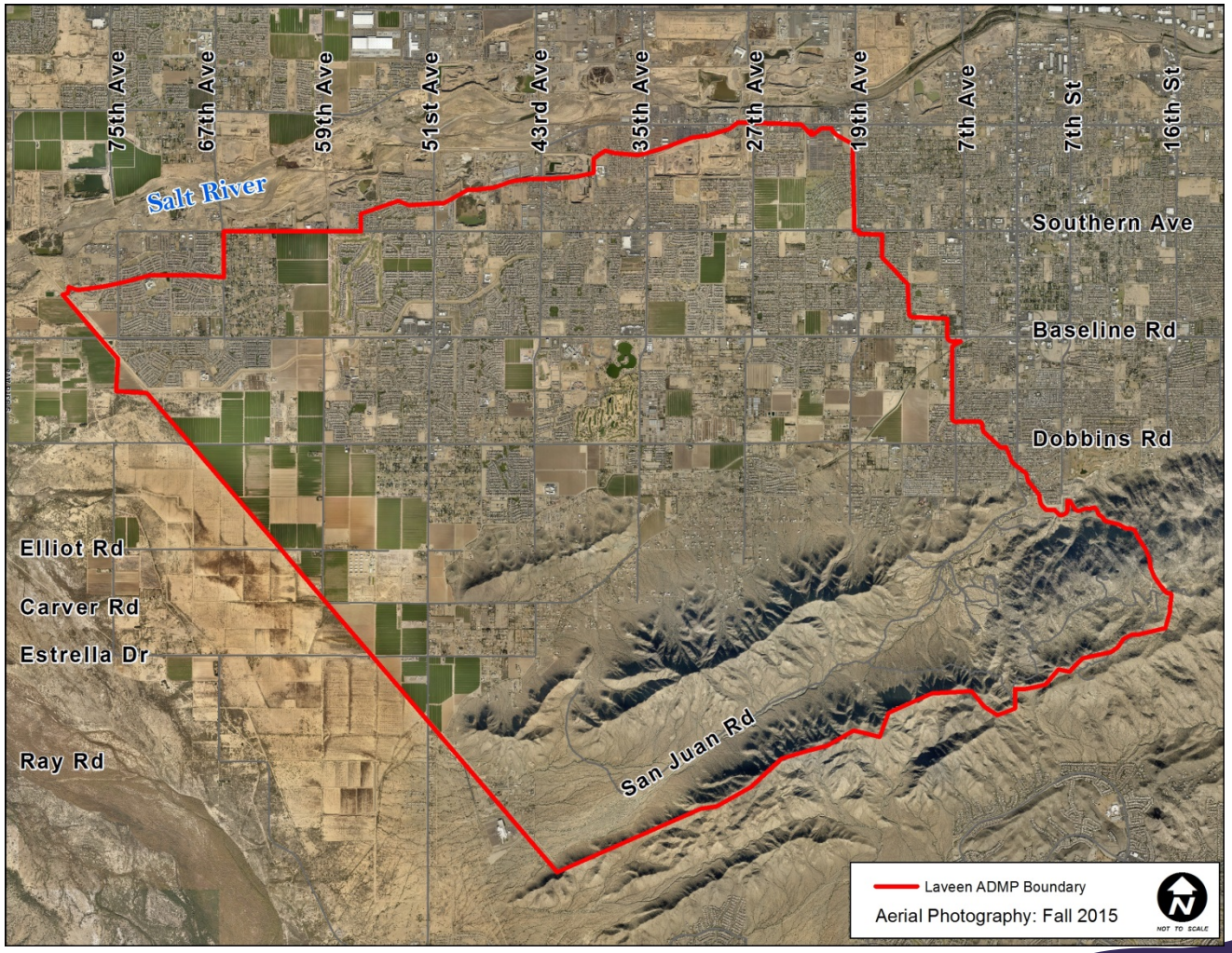
Need for Update

2002 Aerial



Need for Update

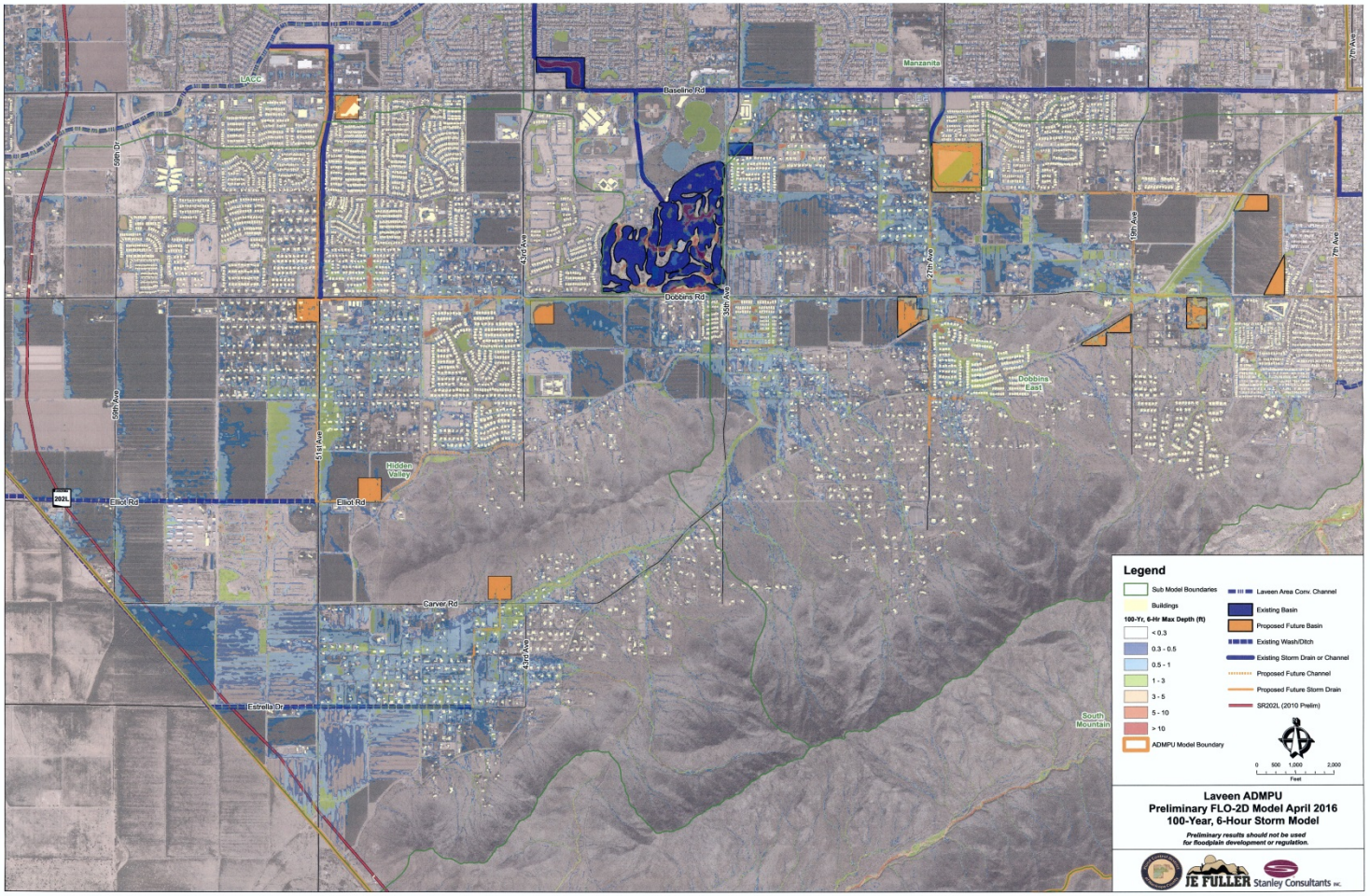
2015 Aerial



Status Update

- New 2’ mapping- Completed
- Consultants working on new models
- Partial Preliminary Results

Status Update



Next Steps

- Finalize models
- Public Meetings
- Assess past alternatives
- Propose any new alternatives

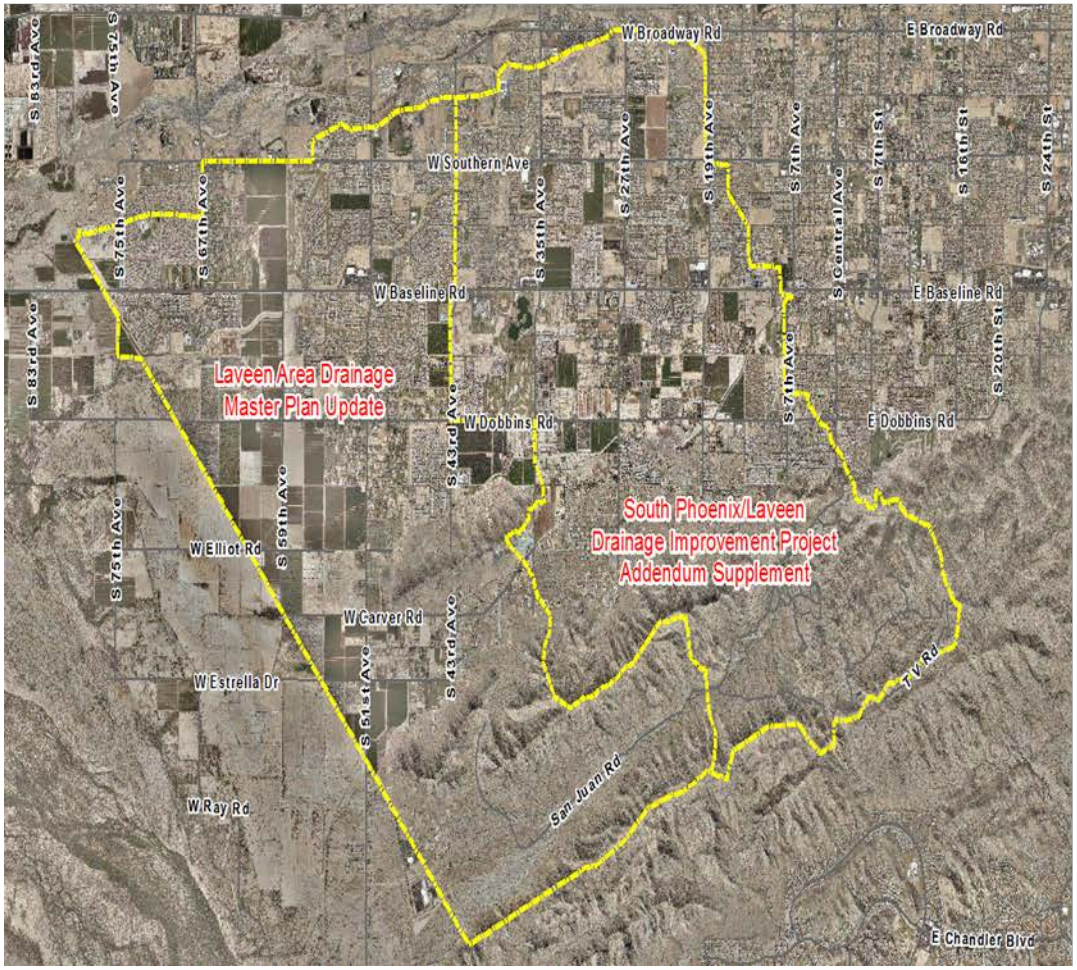
Questions

Projects Updates

Don Rerick
PPM Division Manager

Planning Study

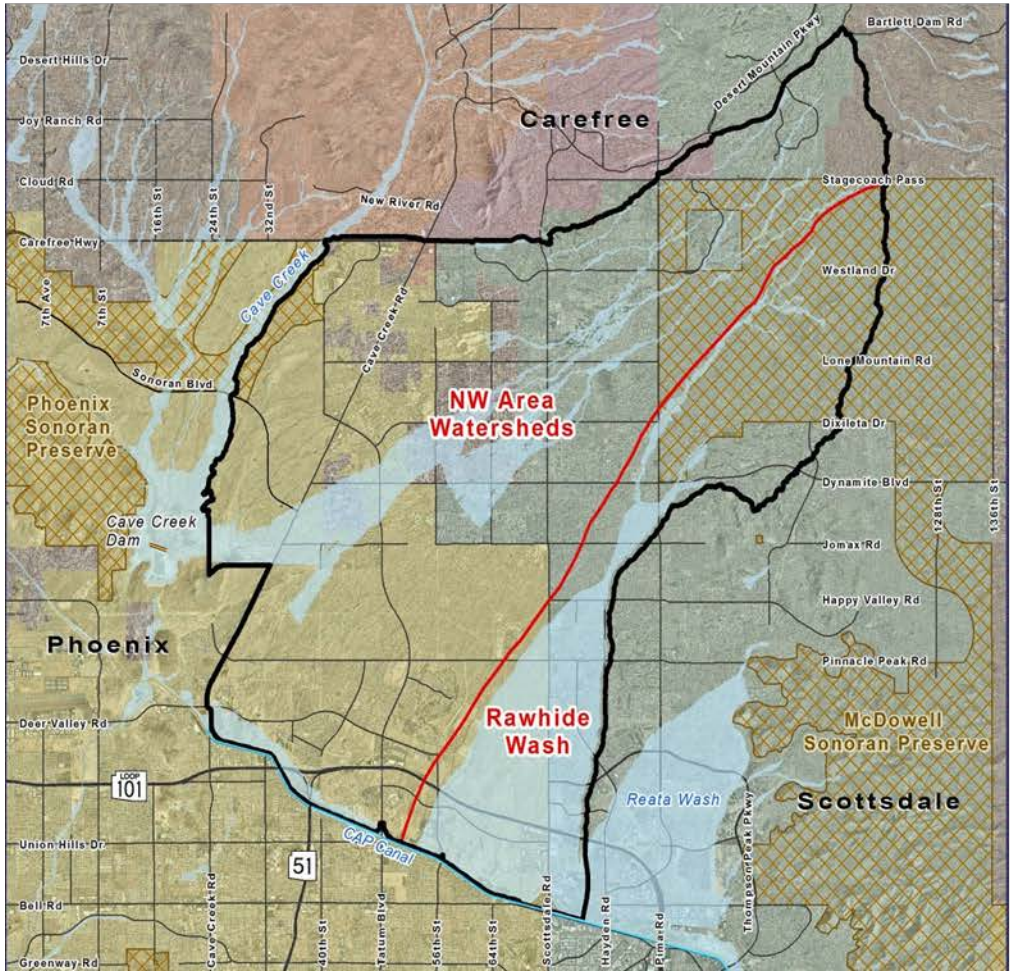
South Phx/Laveen ADMP Update



- Study efforts continue:
  - Preliminary FLO-2D analysis and maps submitted for review for area south of Baseline Rd.
  - Next step to complete FLO-2D modeling for the remaining study area; gathering needed data.
  - Identify flooding hazards.
- Extensive coordination continues with Phoenix.
- Final study report with recommendations by early fall.

Planning Study

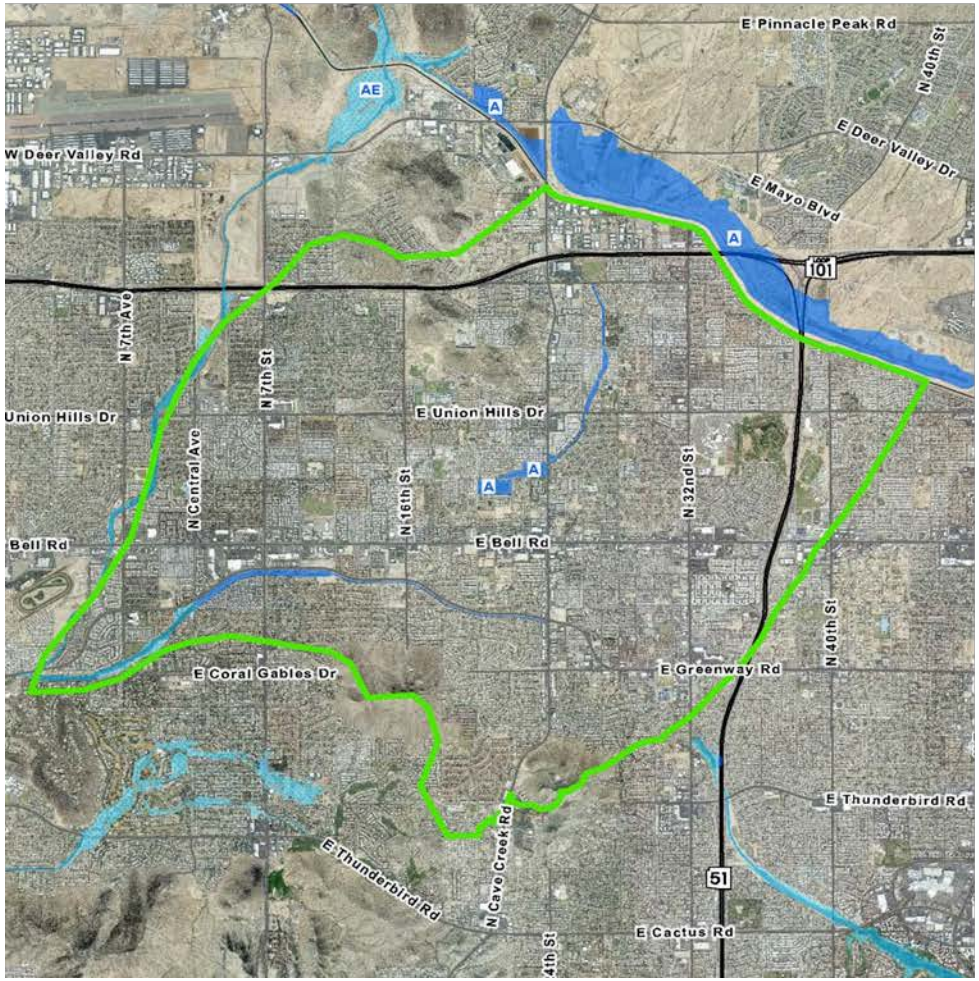
Pinnacle Peak West ADMS



- Study to be complete by mid-summer.
- Rawhide Wash mitigation alternatives;
  - Alternatives and costs under review.
  - Selection of preferred alternative.
  - Initiate DCR for preferred alternative.
- Redelineation of Fans 5 & 6 floodplains continues.
  - TDN under review by the District and will be sent to FEMA mid-summer.
- Public, HOA and Community Stakeholder Group meetings to continue into the fall.

Planning Study

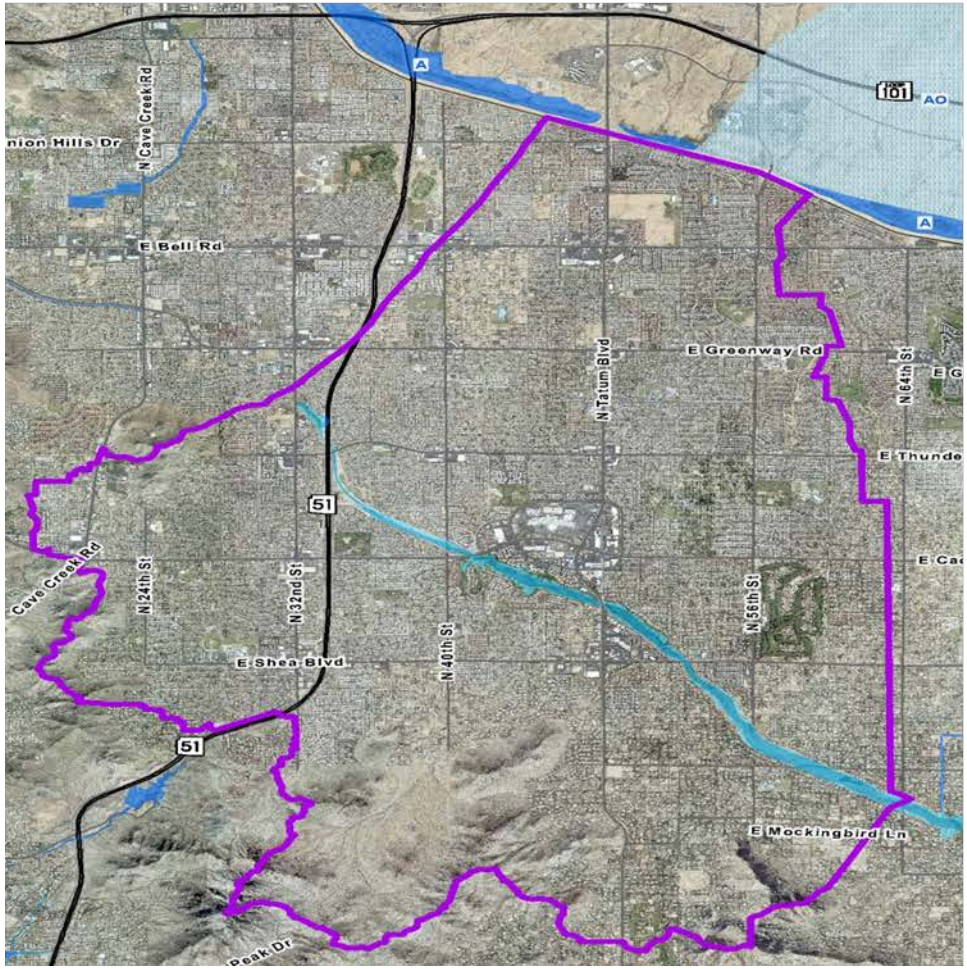
Upper East Fork Cave Creek Area Drainage Master Study Update



- Study efforts continue:
  - Detailed H/H modeling will soon be under review by outside consultant.
  - DCRs for flood hazard assessments anticipated to begin in July.
- Public outreach efforts continue:
  - Coordination on-going with Phoenix.
  - Public involvement activities will continue into September.

Planning Study

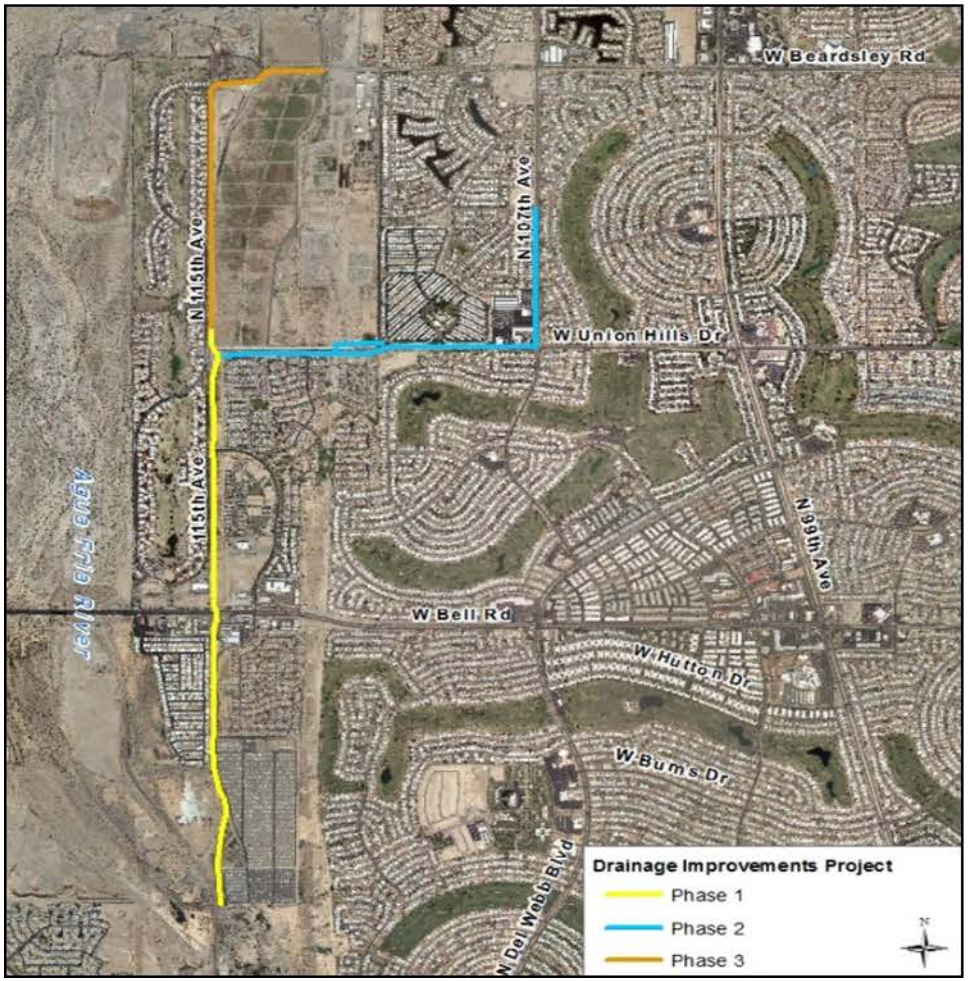
Middle Indian Bend Wash Area Drainage Master Study



- Work Assignment #2 activities continue:
  - FLO-2D analysis incorporating storm drain system continues.
  - Additional data collection.
- Coordination with Phoenix and Paradise Valley is on-going.
- First of the public meetings is scheduled for mid-July.

Design

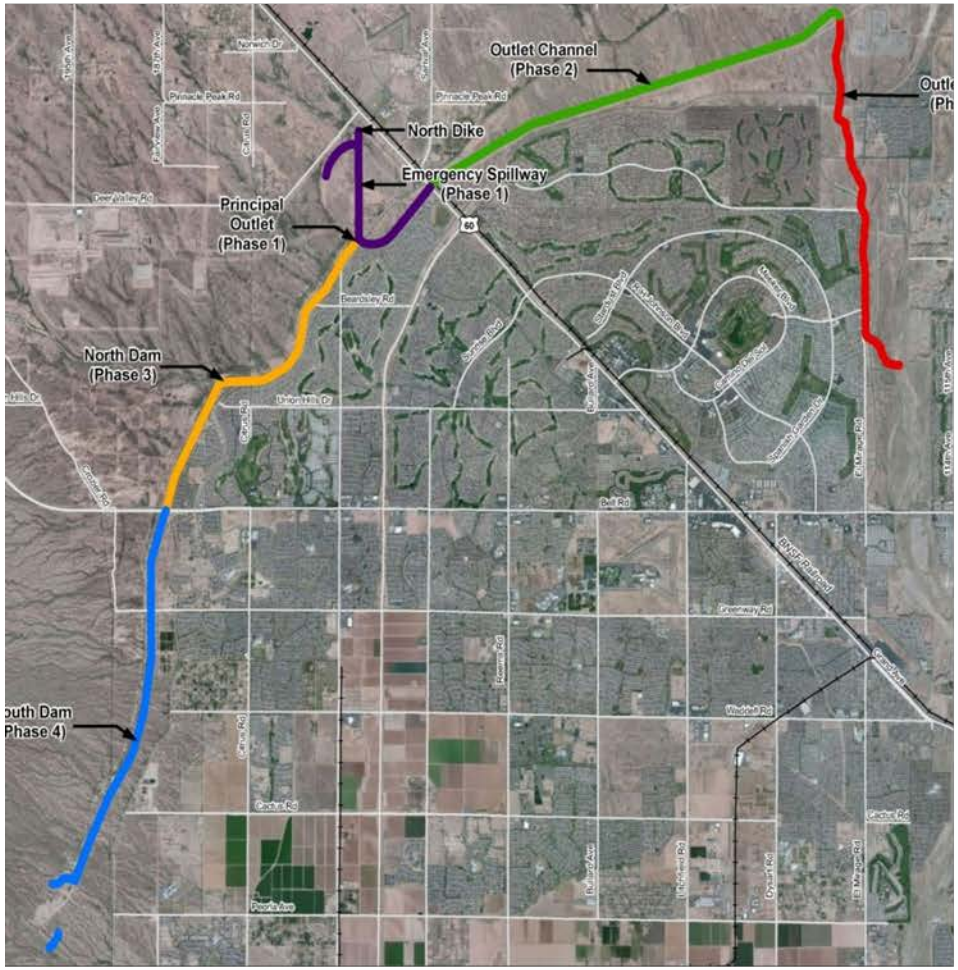
115th Avenue & Union Hills Drive Drainage Improvements



- Phase 1 and Phase 2 P&S complete.
- Utility relocations for Phase 1 are complete.
- Phase 3 design at 30%; completion to 100% is on hold.
- Construction is on hold due to budget constraints.
- Project consists of:
  - Channels and storm drains; and
  - Provides 100-yr protection.

Design

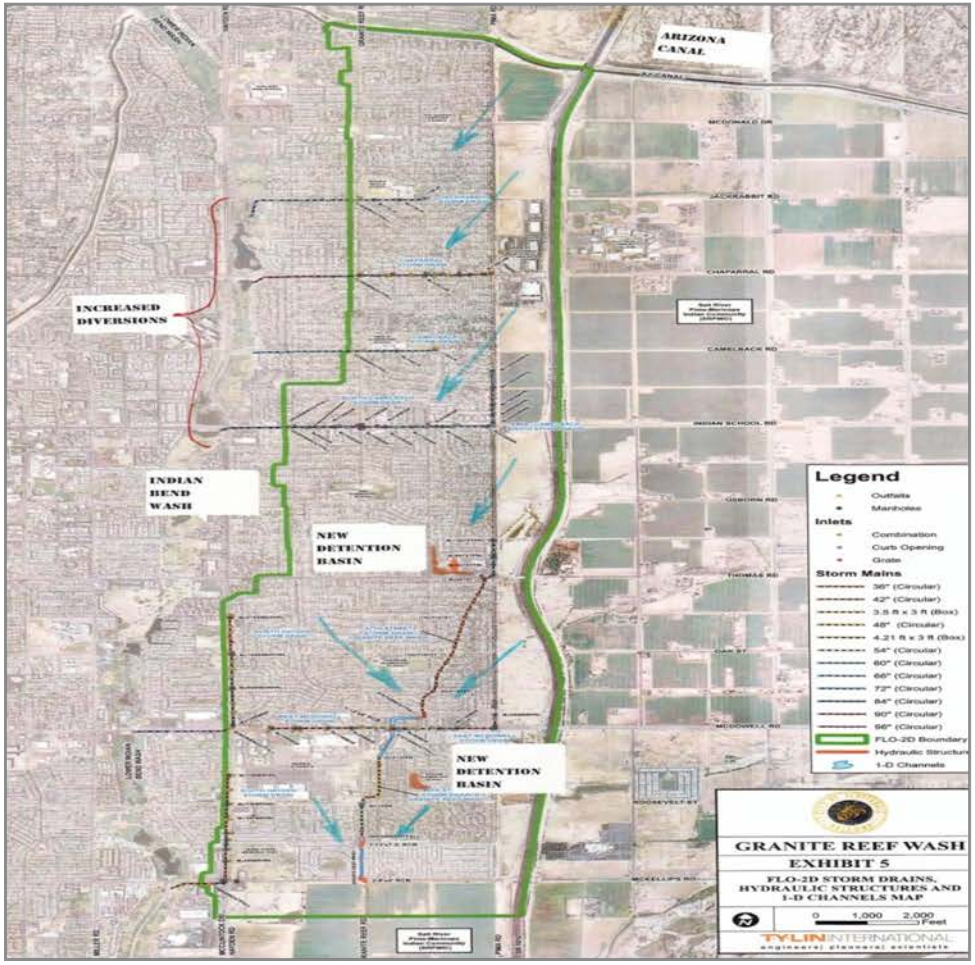
McMicken Dam Rehabilitation



- Design being done in phases.
- Phases 1 & 2 60% design continues.
- Geotechnical investigations underway.
- Outlet Channel 30% design is complete.
- Remainder of Outlet Channel design to be done in-house.
- ADOT Loop 303 contractor removed about 400,000 cu. yds. of dirt from channel.

Design

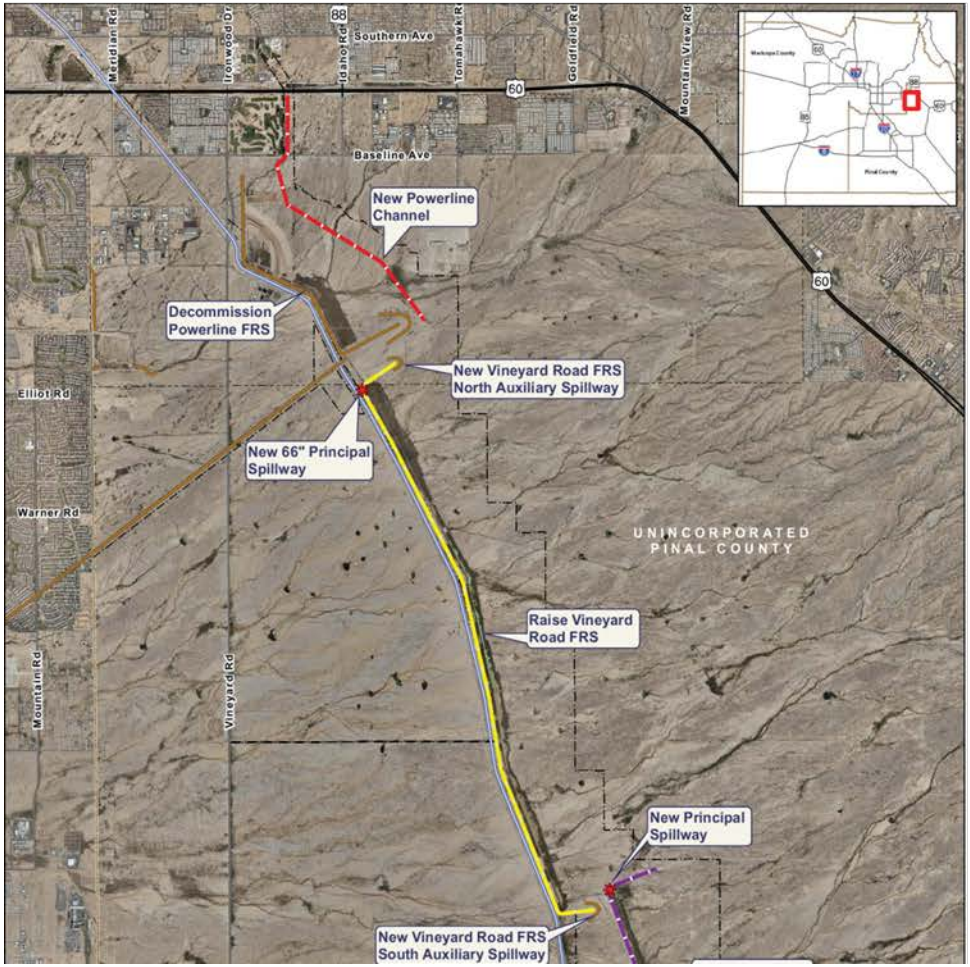
Granite Reef Watershed Project – Phase 1



- Lead Agency – City of Scottsdale
- Design Phase 1 continues:
  - Final H/H modeling to be submitted in June.
  - Final design continues with 100% P&S submittal in November.
  - Phase 2 design to begin in summer 2016.
- ROW Acquisition
  - ROW for both basin sites has been acquired.

Construction Manager at Risk (CMAR)

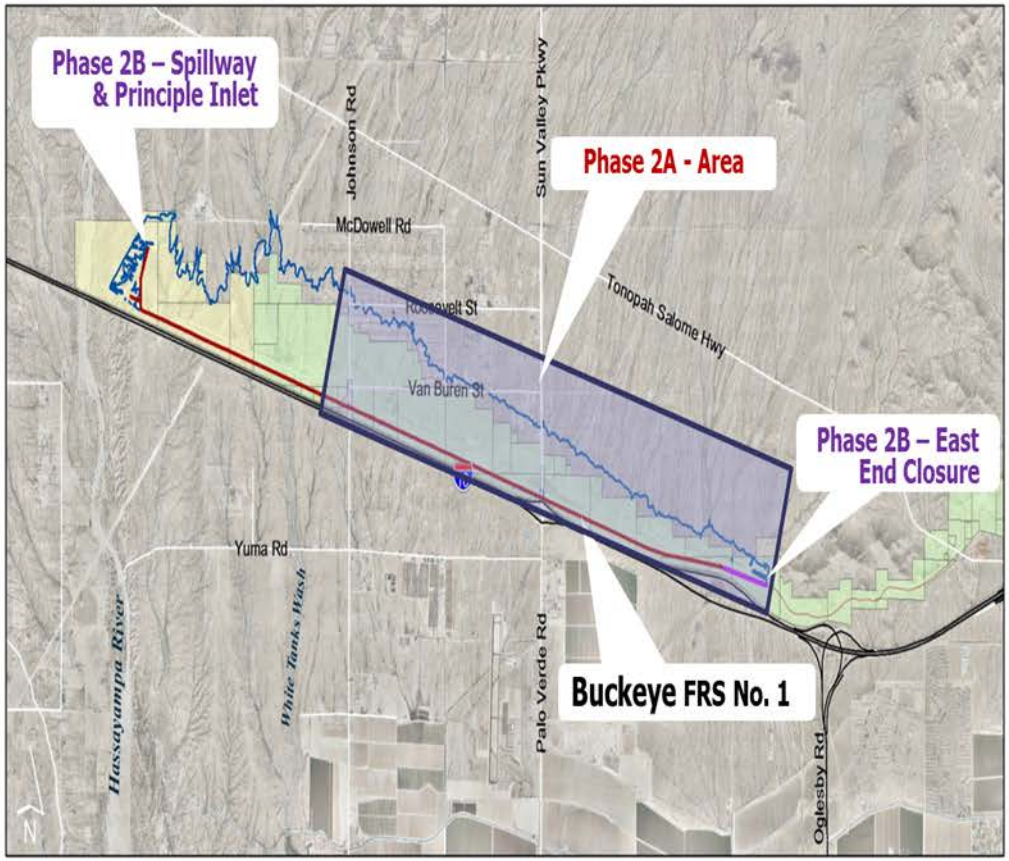
Vineyard Road & Powerline FRS Rehabilitation



- Vineyard:
  - Phase 1 design complete.
  - Phase 2 100% P&S submitted in May.
  - Phase 3 design is underway
- Powerline:
  - 60% design is underway.
  - Continuing to resolve multiple utility conflict issues.
- Archaeological mitigation work completed. Report writing is underway.
- Vineyard Phase 1 construction continues by CMAR.

Construction Manager at Risk (CMAR)

Buckeye FRS No. 1 Rehabilitation Project



Project Objectives:

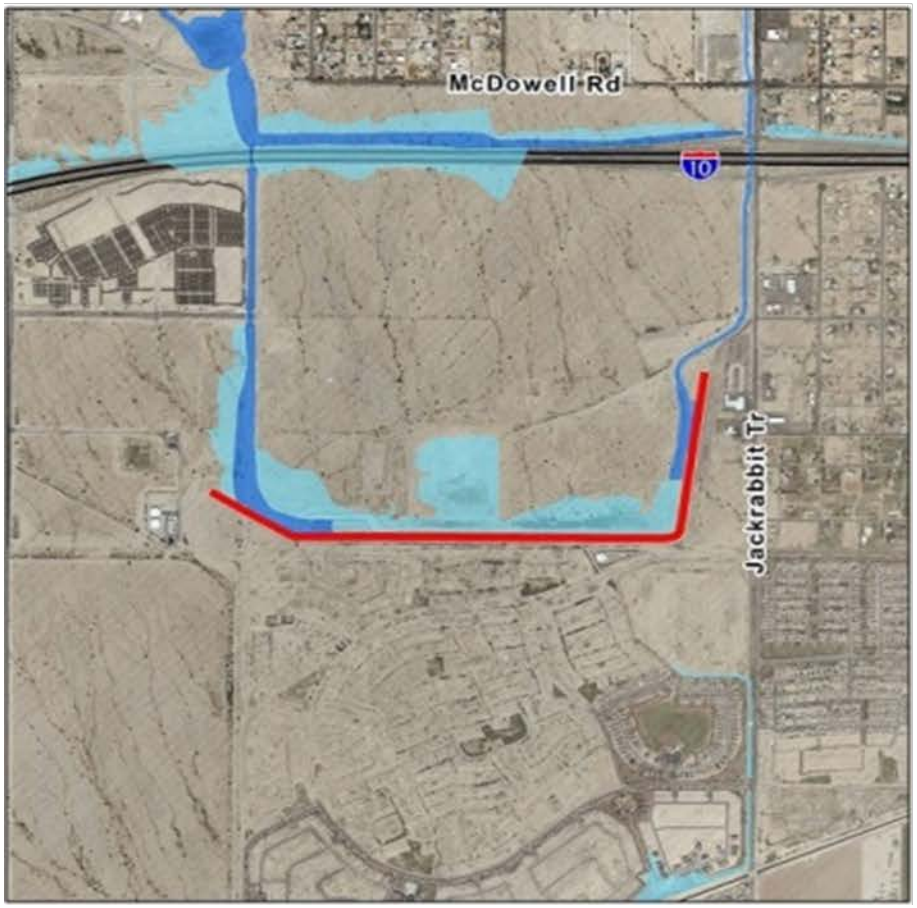
- Correct Dam Safety Deficiencies.
- Meet current dam safety standards.
- Project partner - NRCS

Current Work Underway:

- Phase 2B design continues.
- Phase 2A Dam Rehabilitation Work.
  - Eastern dam raise.
  - Placement of a central filter.
  - Estimated construction completion date is April, 2017.

Construction Manager at Risk (CMAR)

White Tanks FRS No. 4 Rehabilitation Project



Project Objectives:

- Mitigate Dam Safety Deficiencies.
- Meet current NRCS, ADWR and FCD criteria for high hazard dams.
- Project partner – NRCS.

Current Work Underway:

- Phase 2 Dam Rehabilitation Work Underway
  - Modify Emergency Spillway.
  - Embankment stockpile processing.
  - Embankment construction.
  - Estimated construction completion date is June, 2017.

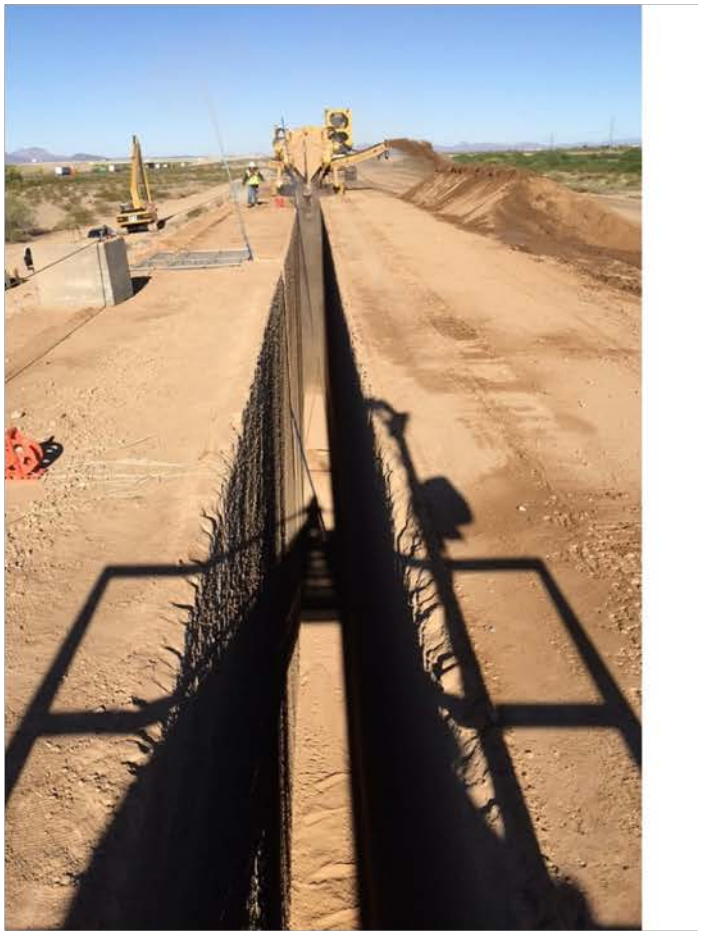
Construction

Ashbrook Wash Improvements

- Construction is on-going
  - Palm tree removal maintenance period continues.
  - Bayfield Dr. culvert complete.
  - Saguaro Blvd. culvert is 50% complete.
- Construction completion late summer 2016.
- Project partnership with Town of Fountain Hills.

Questions?

Buckeye FRS#1 – Phase 2
View of the trenching machine digging the center filter trench 3 feet wide by up to 40 feet deep.



ROUND TABLE

Flood Control District of Maricopa County