



September 5, 2012
Queen Creek Town Council Meeting

A Partnership in Flood Protection

Flood Control District of Maricopa County and Town of Queen Creek

Presented by
Timothy S. Phillips, P.E.
Chief Engineer and General Manager
Flood Control District of Maricopa County

Presentation Topics

- Overview of Flood Control District of Maricopa County
- Partnership/Collaboration between the District and Town
- Flood Hazard Mitigation Benefiting the Town
- Future of District and Town Partnership



Historical Queen Creek Flooding August 19-20, 1954



\$1.8 million in damage
17,000 acres of crops flooded



Current Flooding – July 14, 2012



Higley Rd. and Hunt Hwy.
0.75 inch of rain; "15-year" storm



Current Flooding – July 29, 2012



Riggs Rd. and 196th St.
0.47 inch of rain; "45-year" storm



Flood Control District of Maricopa County

An Overview

Mission: To reduce the risks of injury, death, and property damage from flooding for Maricopa County residents.

- Established in 1959 by the Maricopa County Board of Supervisors as authorized by Arizona Statute
- Governed by a Board of Directors:
Maricopa County Board of Supervisors
- Oversight by a citizen Flood Control Advisory Board

- Funded primarily by a Special Property Tax
- Fiscal Year 2012-2013 total budget = \$84 million



Flood Control District of Maricopa County Strategic Programs

Education about Flood Hazards and Mitigation Projects

Identification of Flood Hazards

Regulation of Development in Floodplains

Remediation of Flood Hazards



Partnership between Flood Control District and Town of Queen Creek

- Collaboration on 8 flood control capital improvement projects and drainage studies since 1990
- \$39 million spent to date by District on capital improvements (\$53 million including anticipated costs for pending projects)
- \$2 million spent to date by District on planning studies



Flood Hazard Mitigation Benefiting Queen Creek

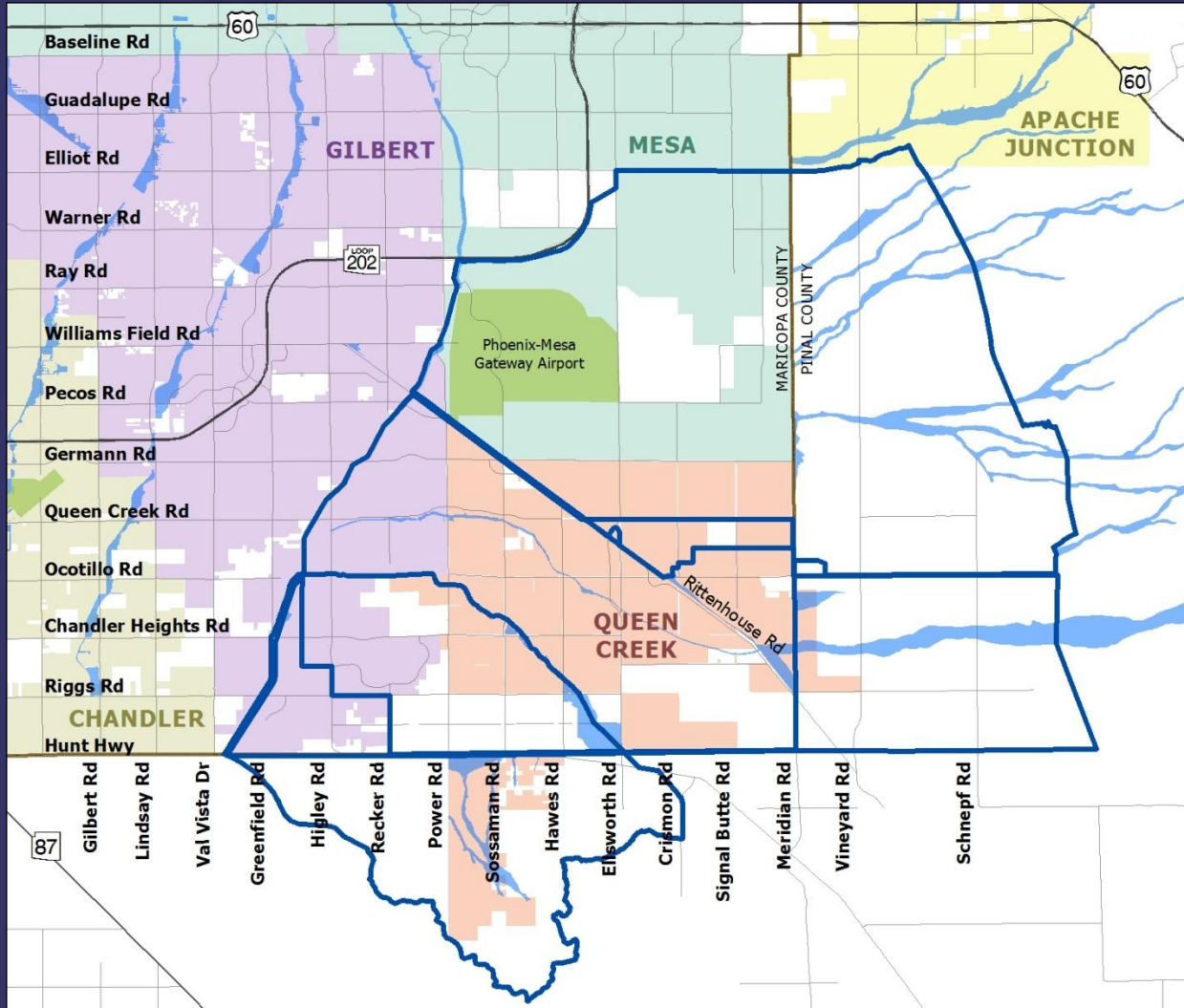


Area Drainage Master Studies/Plans

- Define and quantify flood hazards
- Analyze historic rainfall data, stormwater runoff computer modeling, topographic mapping, and soil data
- Recommend strategies to reduce flood hazards impacting existing and future development
- 100% funded by District



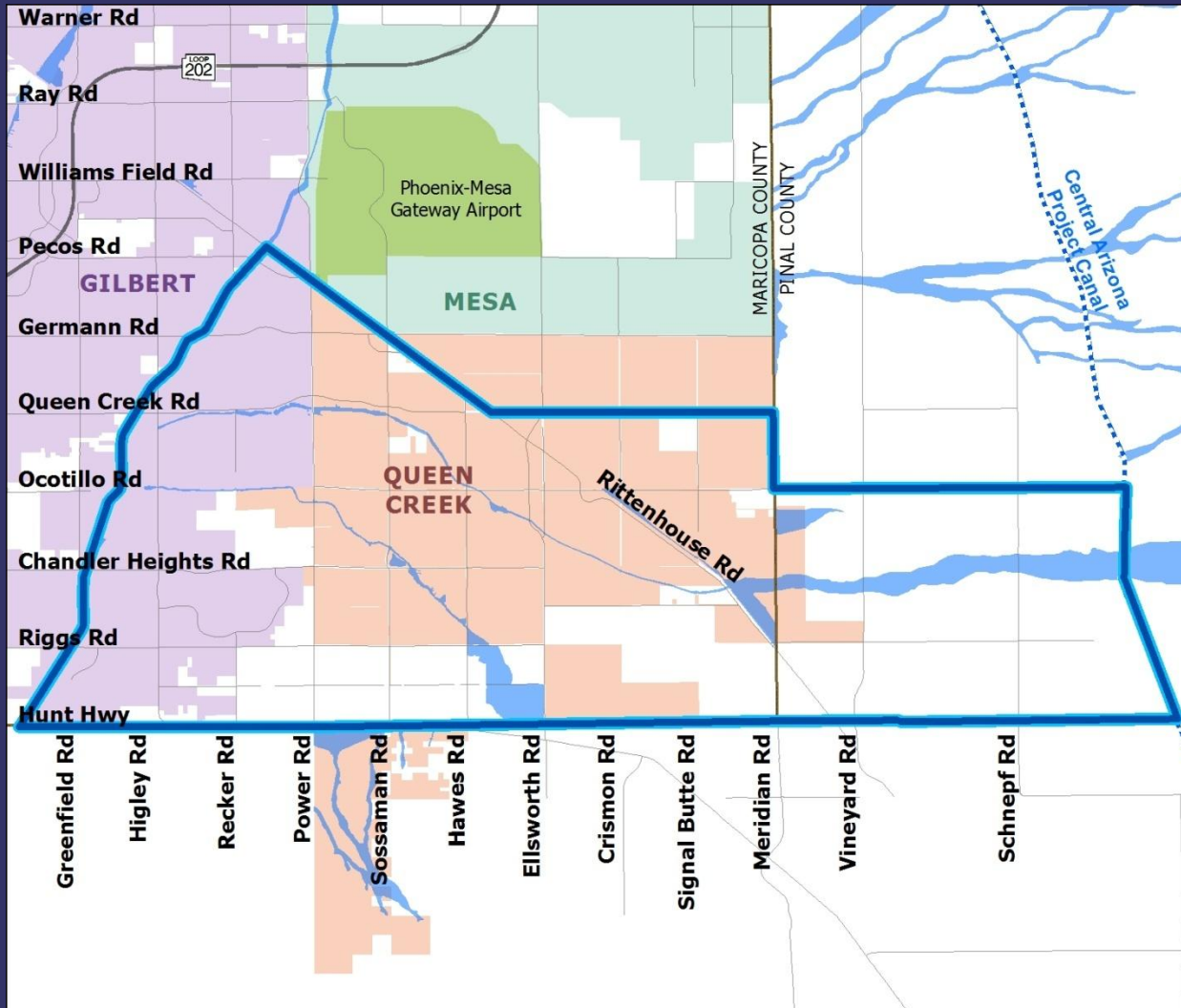
Area Drainage Master Studies/Plans



Series of four studies and plans since early 1990s



Queen Creek Area Drainage Master Study



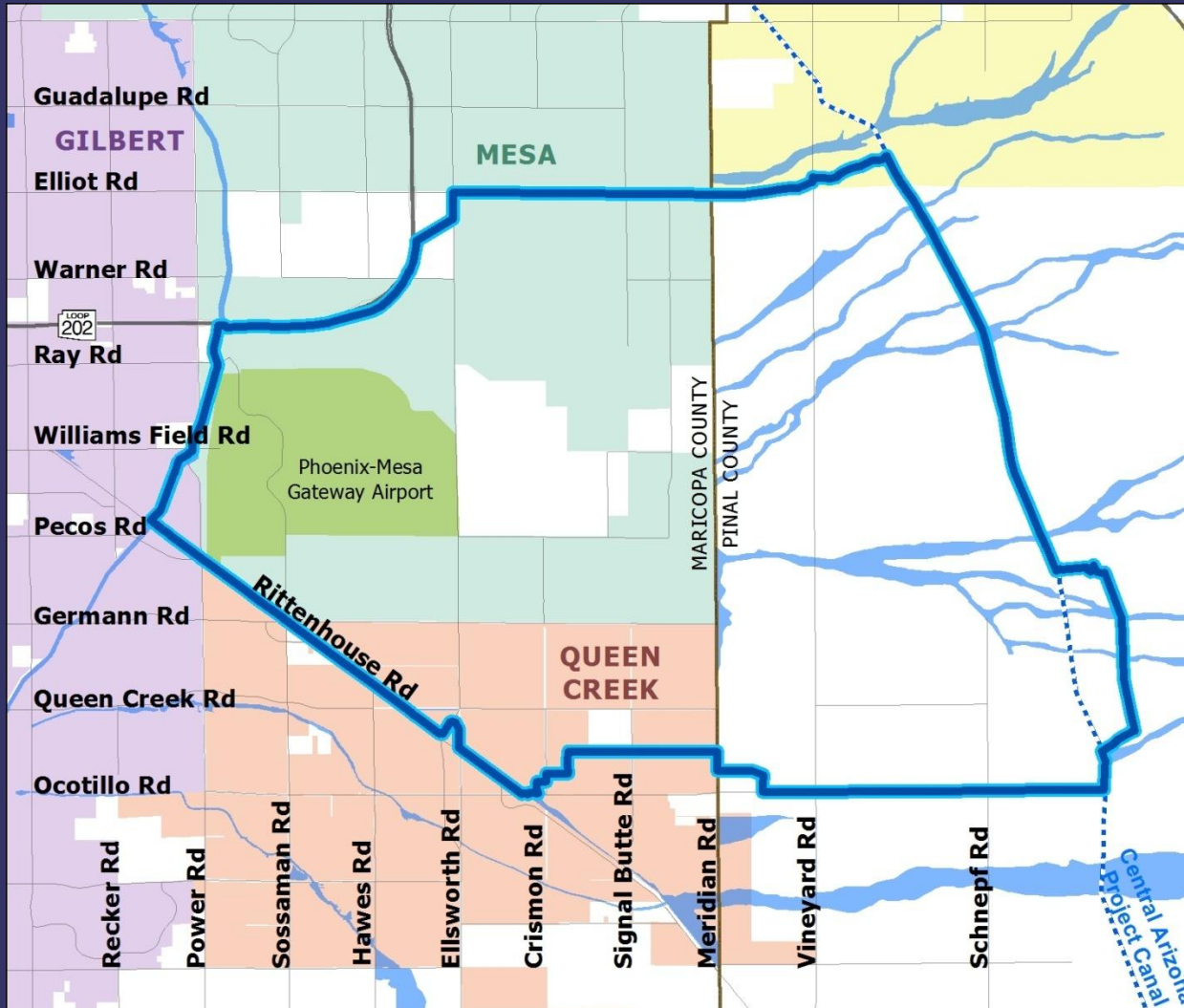
Completed in 1991

Est. flood hazards along Queen Creek, Sonoqui Wash, and Southern Pacific RR

Proposed Queen Creek and Sonoqui Wash improvements to reduce floodplains



East Mesa Area Drainage Master Plan



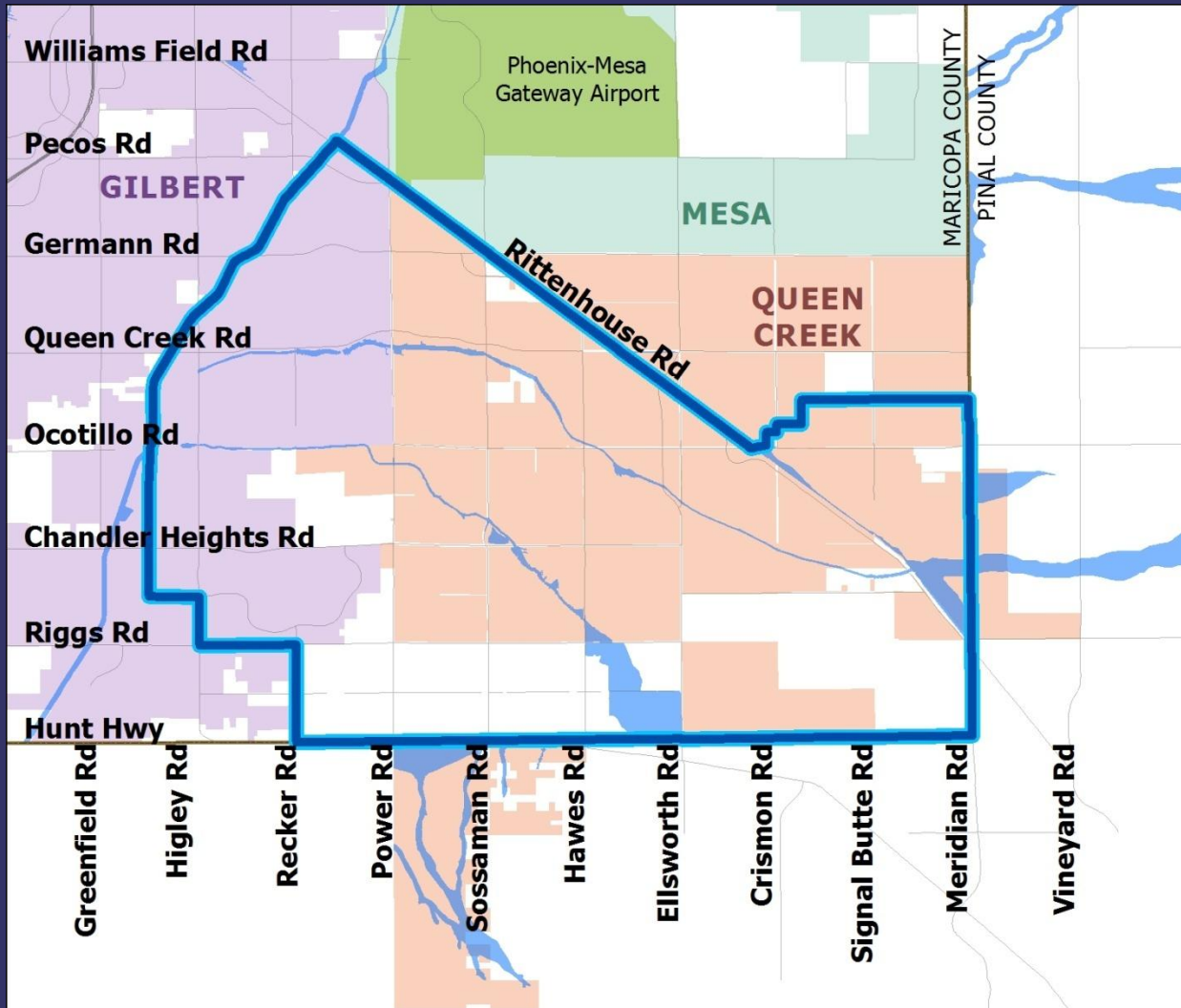
Orig. study completed in 1998

Update study started in Feb. 2012 using revised rainfall data and considering new development impacts

Will determine ways to reduce flooding along Germann Rd. and Queen Creek Rd.



Queen Creek/Sonoqui Wash Hydraulic Master Plan

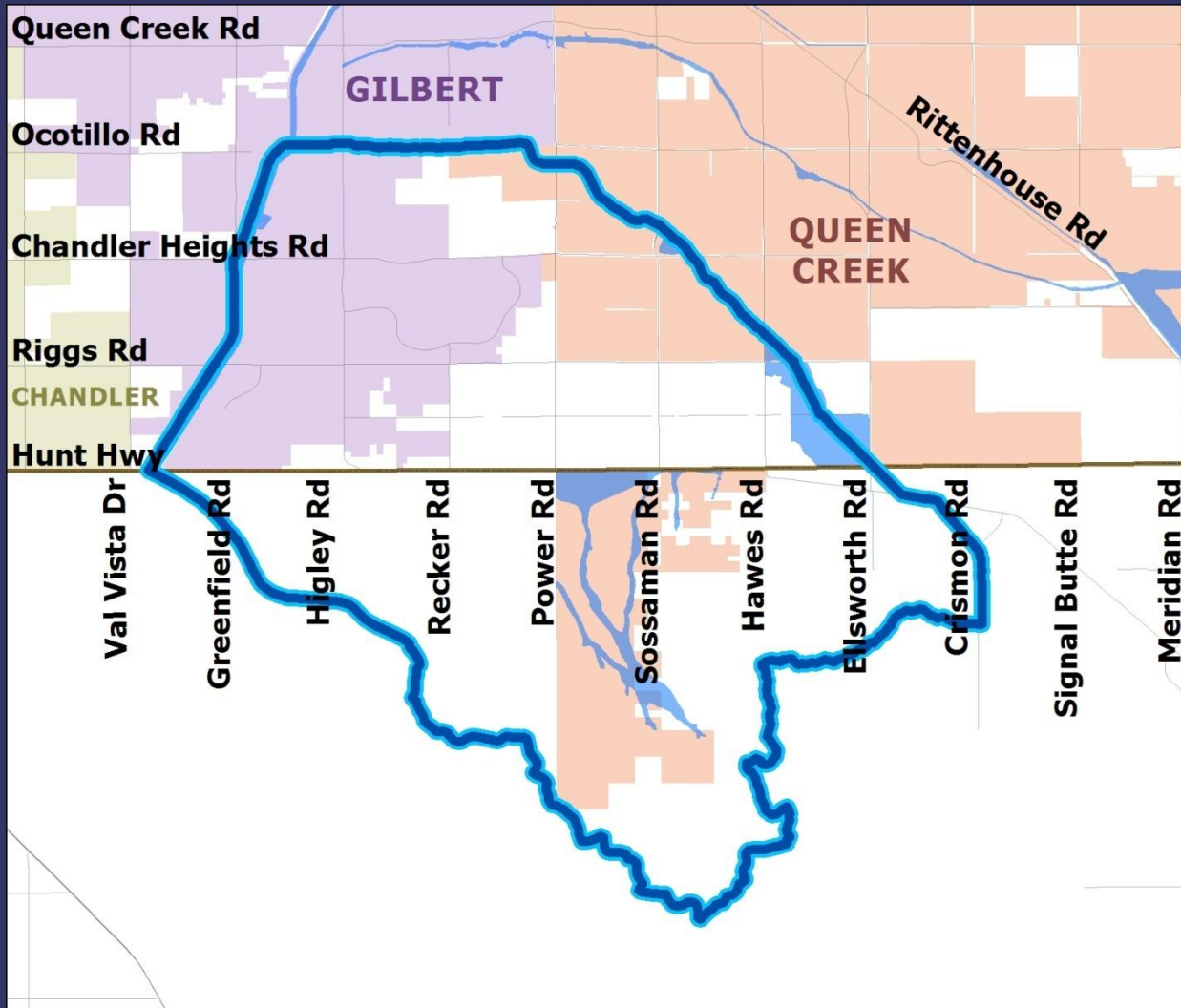


Completed in 2000

Focused on increasing stormwater capacity of Queen Creek and Sonoqui Wash



San Tan West Area Drainage Master Study



Study period
June 2012 – Nov. 2013

Utilizing new 2-D
stormwater flow
computer modeling to
identify floodprone
areas

Recommendations to
protect future
development from
flooding

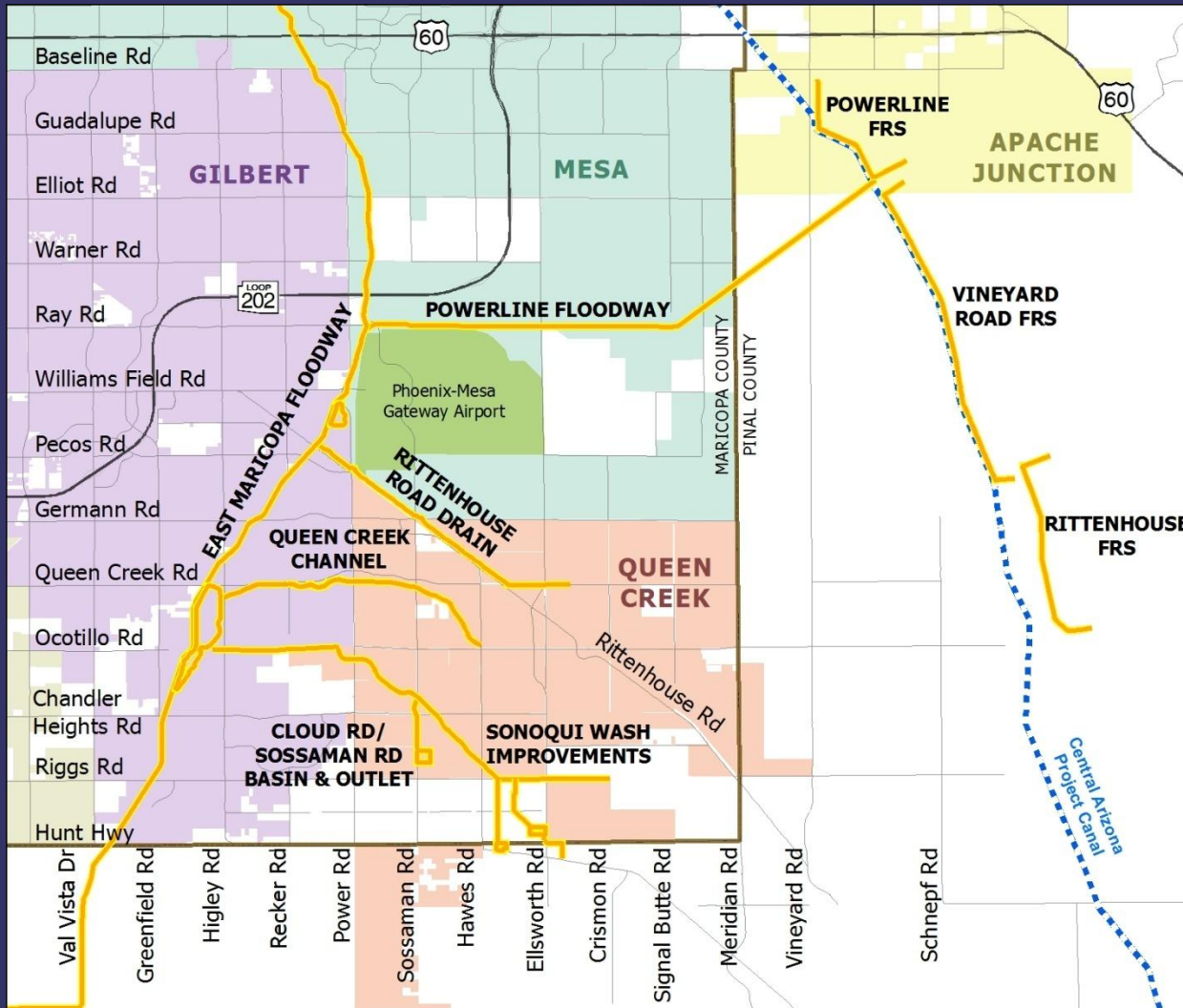


Capital Improvement Projects

- Design and construction of flood control channels, basins, storm drains, and dams to remediate flooding hazards
- Funded through cost-share IGA with town
- District pays at least 50% of cost
- Town responsible for operation and maintenance



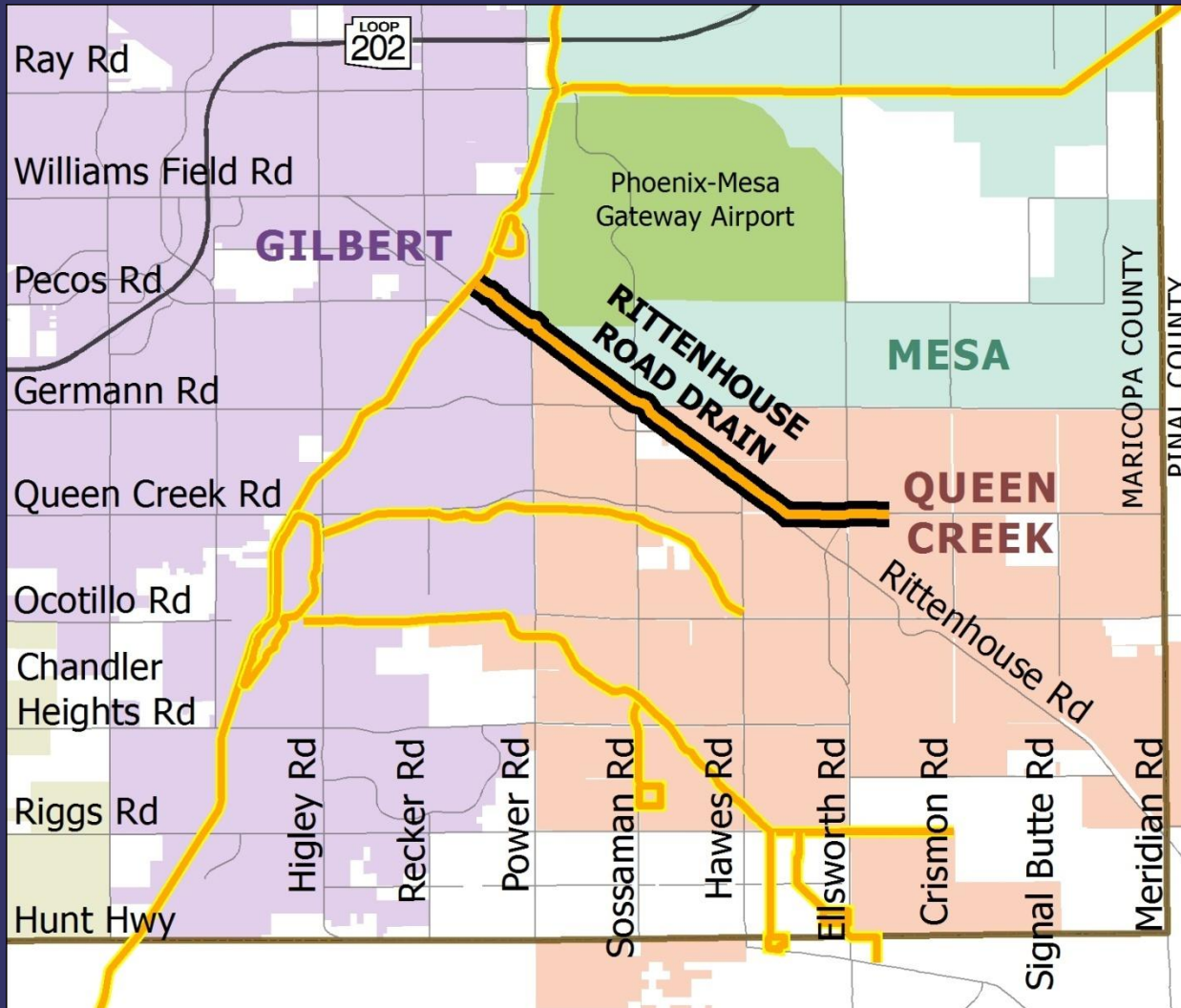
Capital Improvement Projects



Many of these flood control projects were recommended by previous Area Drainage Master Studies/Plans and Town-initiated prioritization requests



Rittenhouse Road Drain and Basin



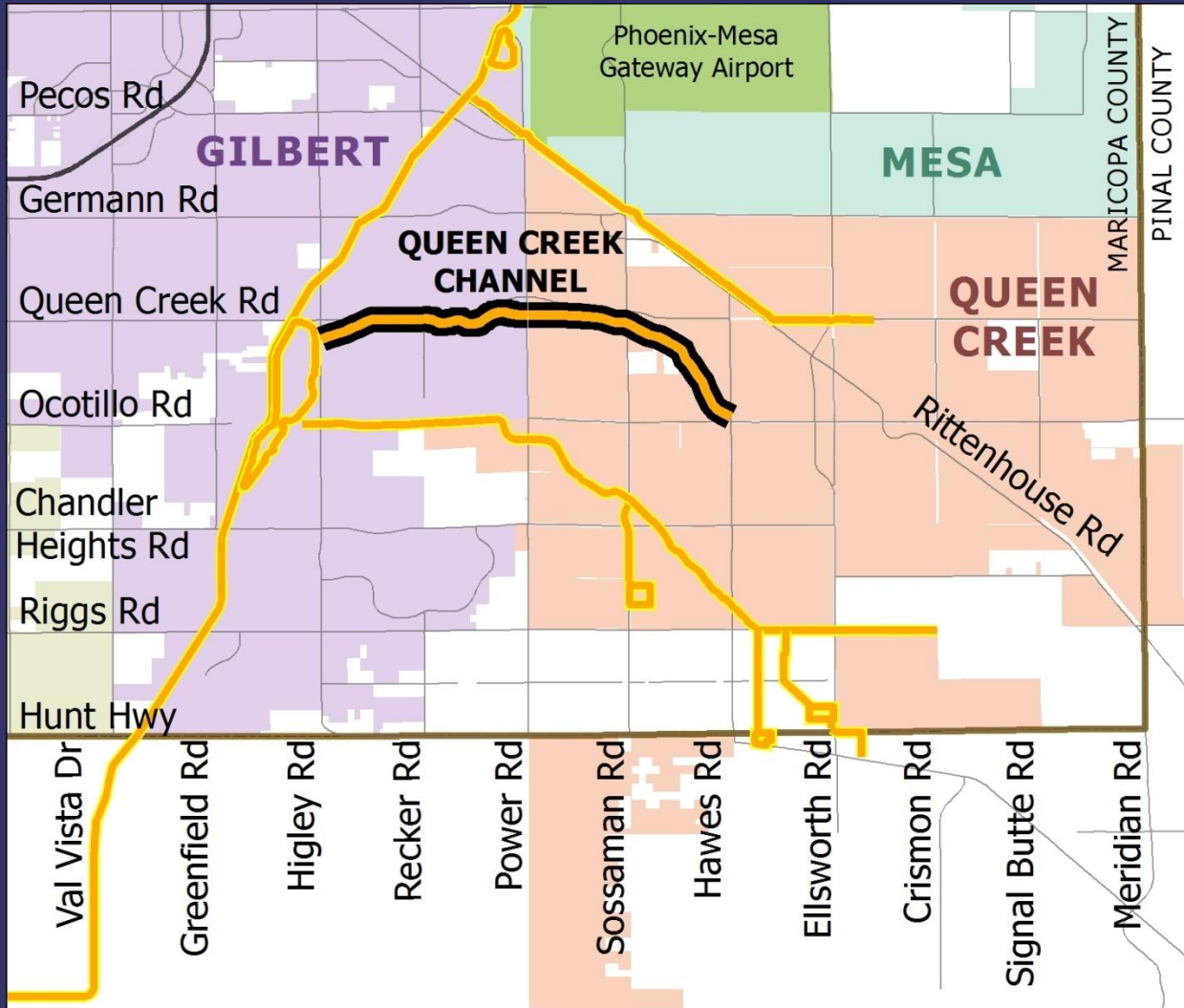
Completed in 1998

Recommended by
Queen Creek ADMS

Reduces floodplain
on north side of
Southern Pacific
Railroad



Queen Creek Channel



Completed in 2006

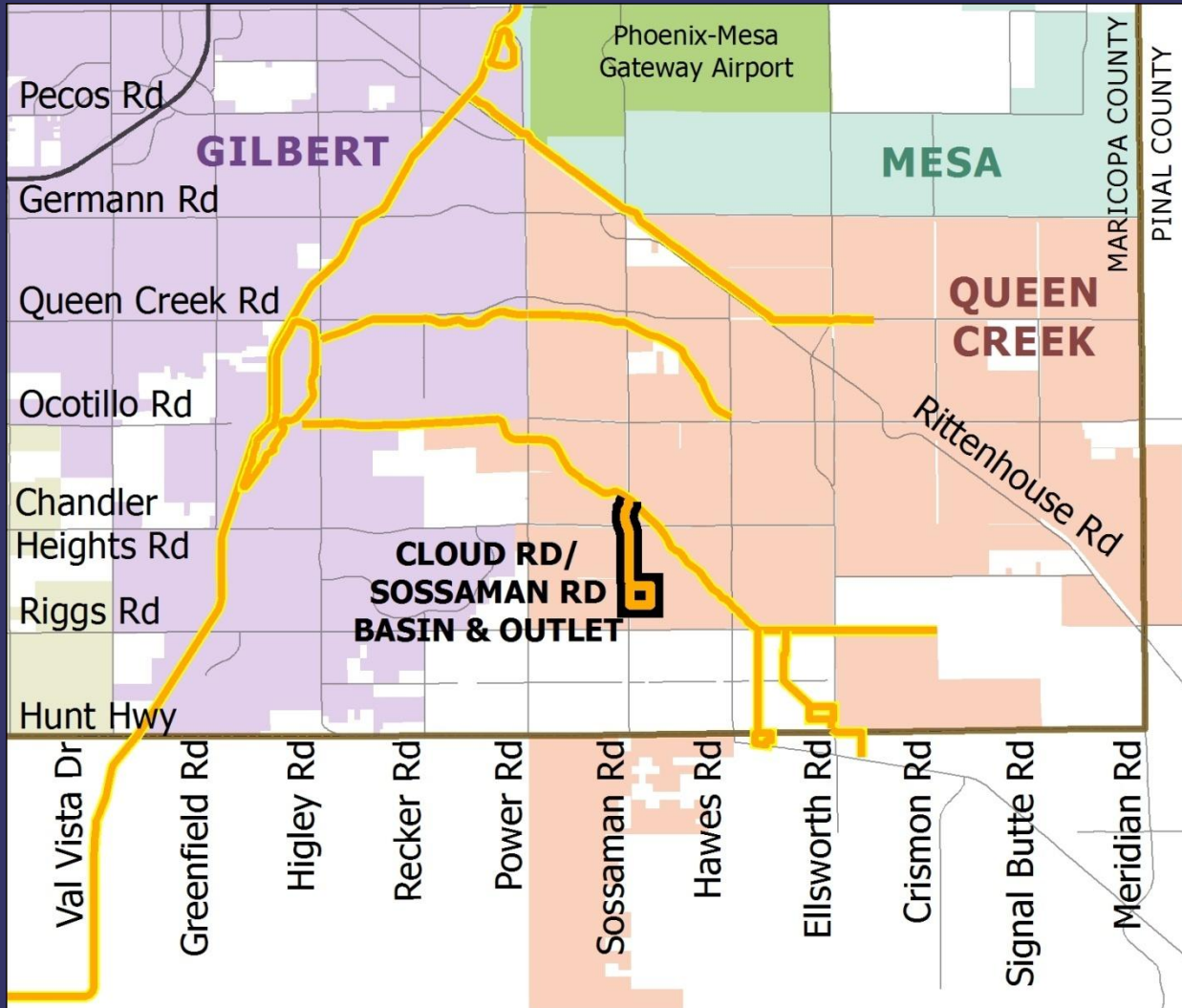
Recommended by
Queen Creek ADMS

Increased channel
width to carry the
stormwater of a
100-year rainfall
event

Reduced 100-year
floodplain to
protect
homeowners



Cloud Rd./Sossaman Rd. Basin & Outlet



Completed in 2012

Remediates insufficient area drainage capacity

Outlet north along Sossaman Rd. to Sonoqui Wash

Connects to existing drainage system on Cloud Rd. and Power Rd.



Cloud Rd./Sossaman Rd. Basin & Outlet

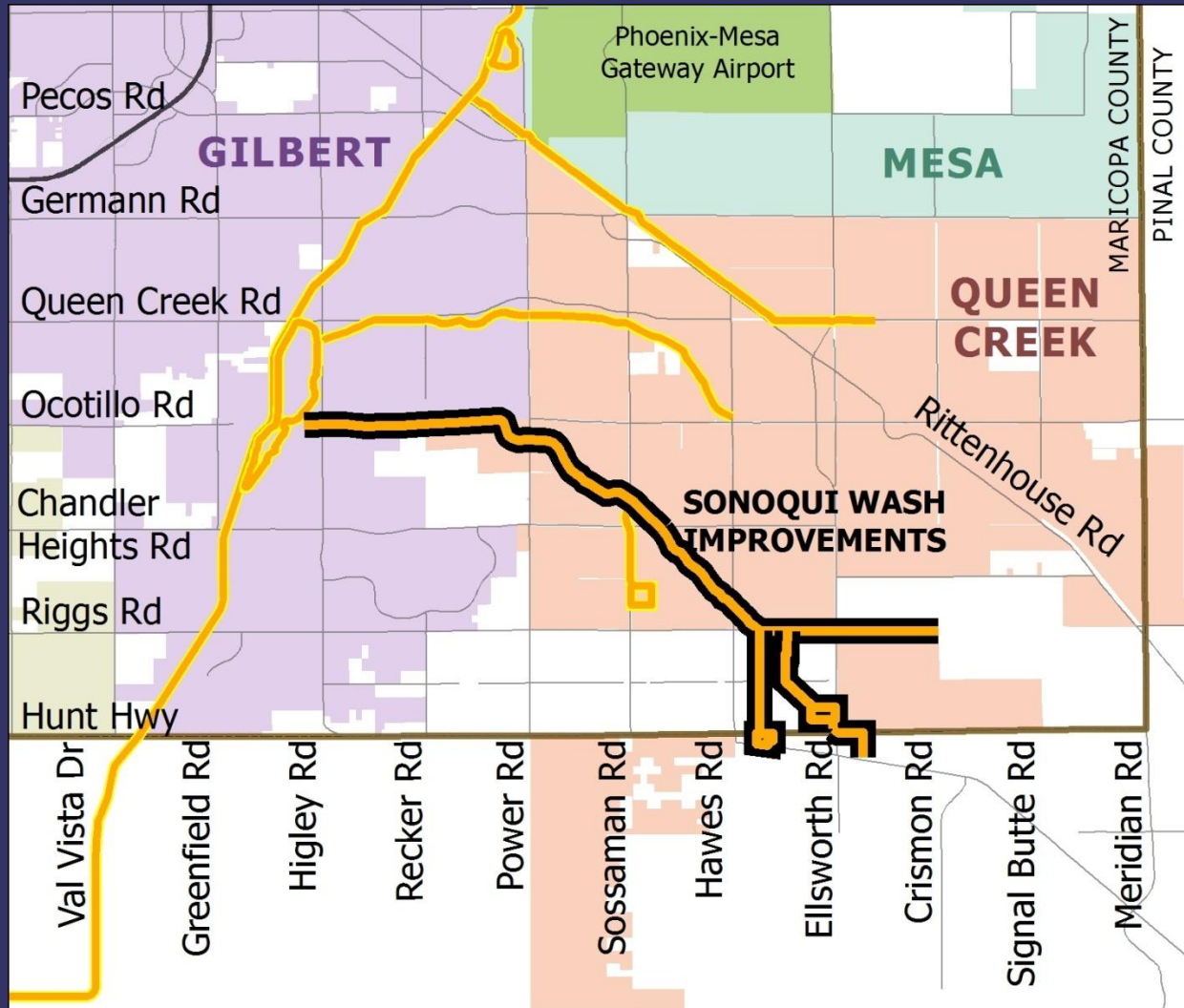


Before



After

Sonoqui Wash Improvements



Phase I in 2008, Higley Rd. to Chandler Heights Rd.

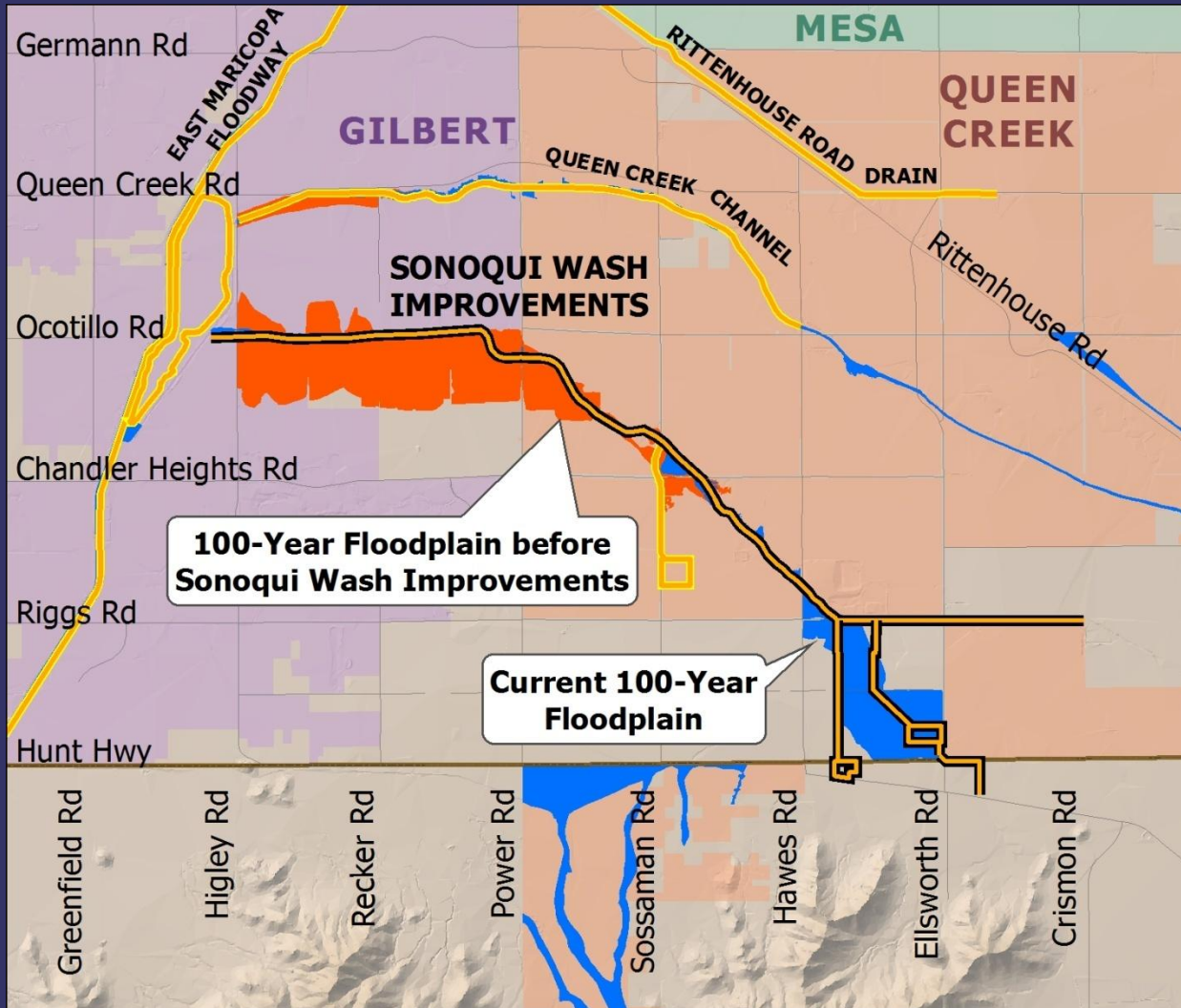
Phase II-A in 2012, Chandler Heights Rd. to Ellsworth Rd.

Phase II-B to be completed by Queen Creek, Ellsworth Rd. to Crismon Rd.

Phase III construction started Aug. 2012, Riggs Rd. to Hunt Hwy.



Sonoqui Wash Improvements



Channels, underground culverts, and basins

Multi-use trail

Phases I/II removed more than 200 properties from the floodplain

Protects 900 acres from flooding

Additional floodplain removal with Phase III



Sonoqui Wash Improvements

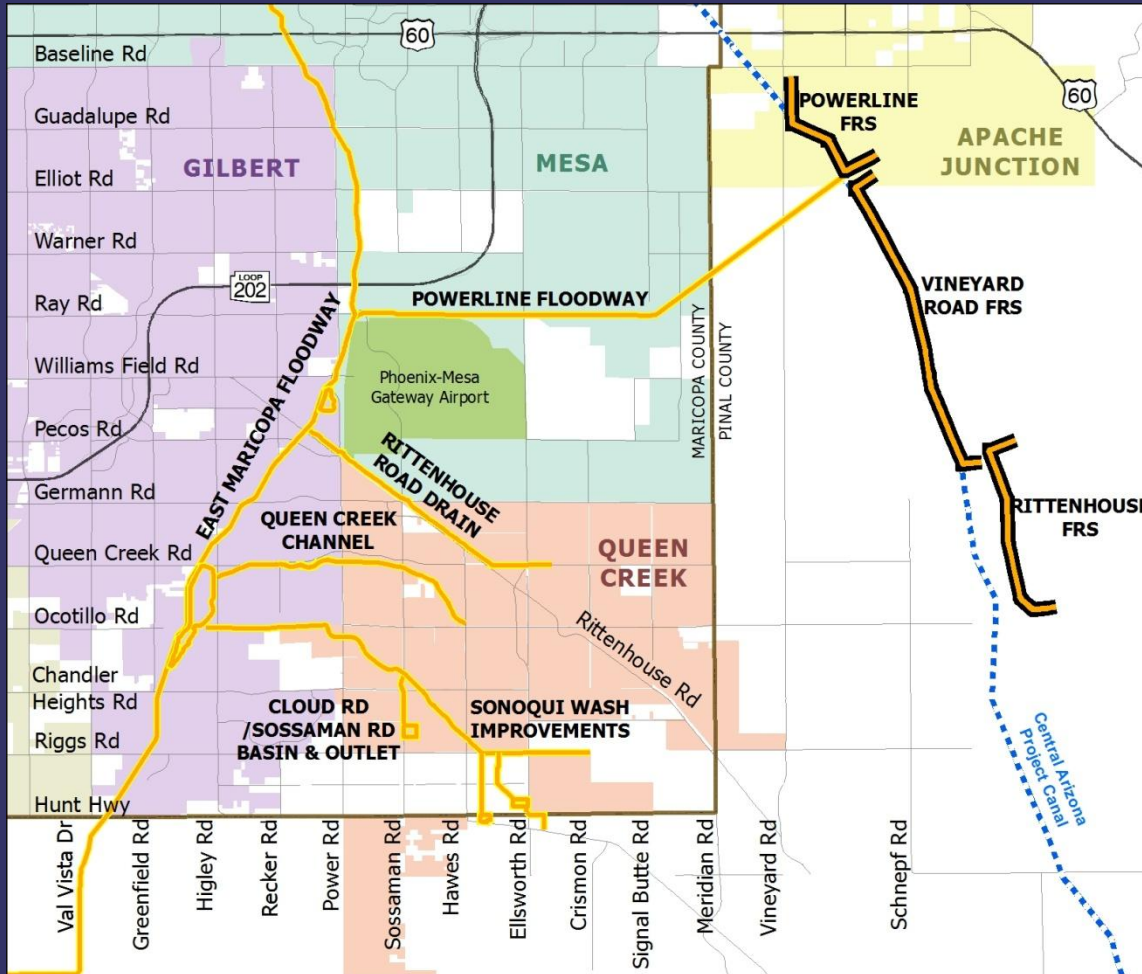


Before



After

Powerline FRS/Vineyard Road FRS/Rittenhouse FRS Flood Control Dam Rehabilitation Project



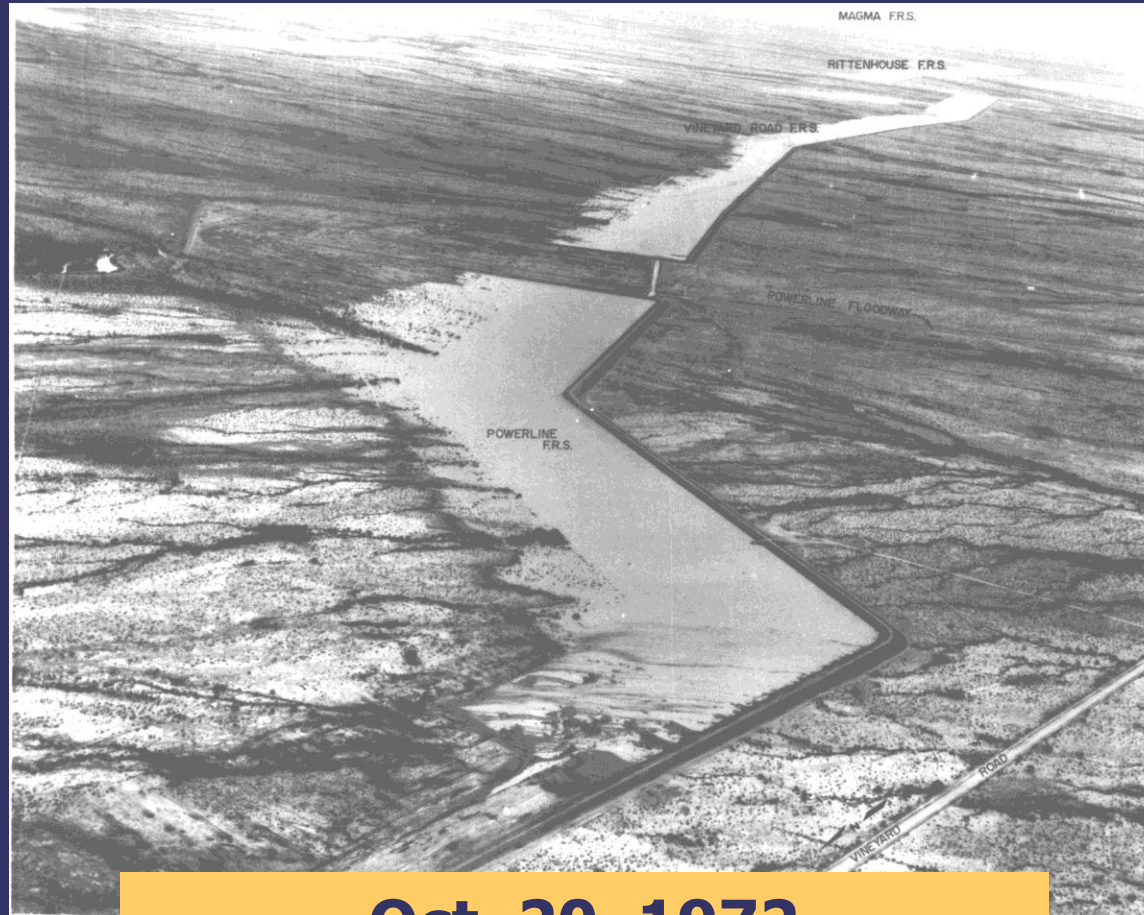
Dams provides flood protection to 72 square miles, including NE Queen Creek

40-year-old structures

To be modified to current safety standards and optimum stormwater retention



Powerline FRS/Vineyard Road FRS/Rittenhouse FRS Flood Control in Action



Oct. 20, 1972

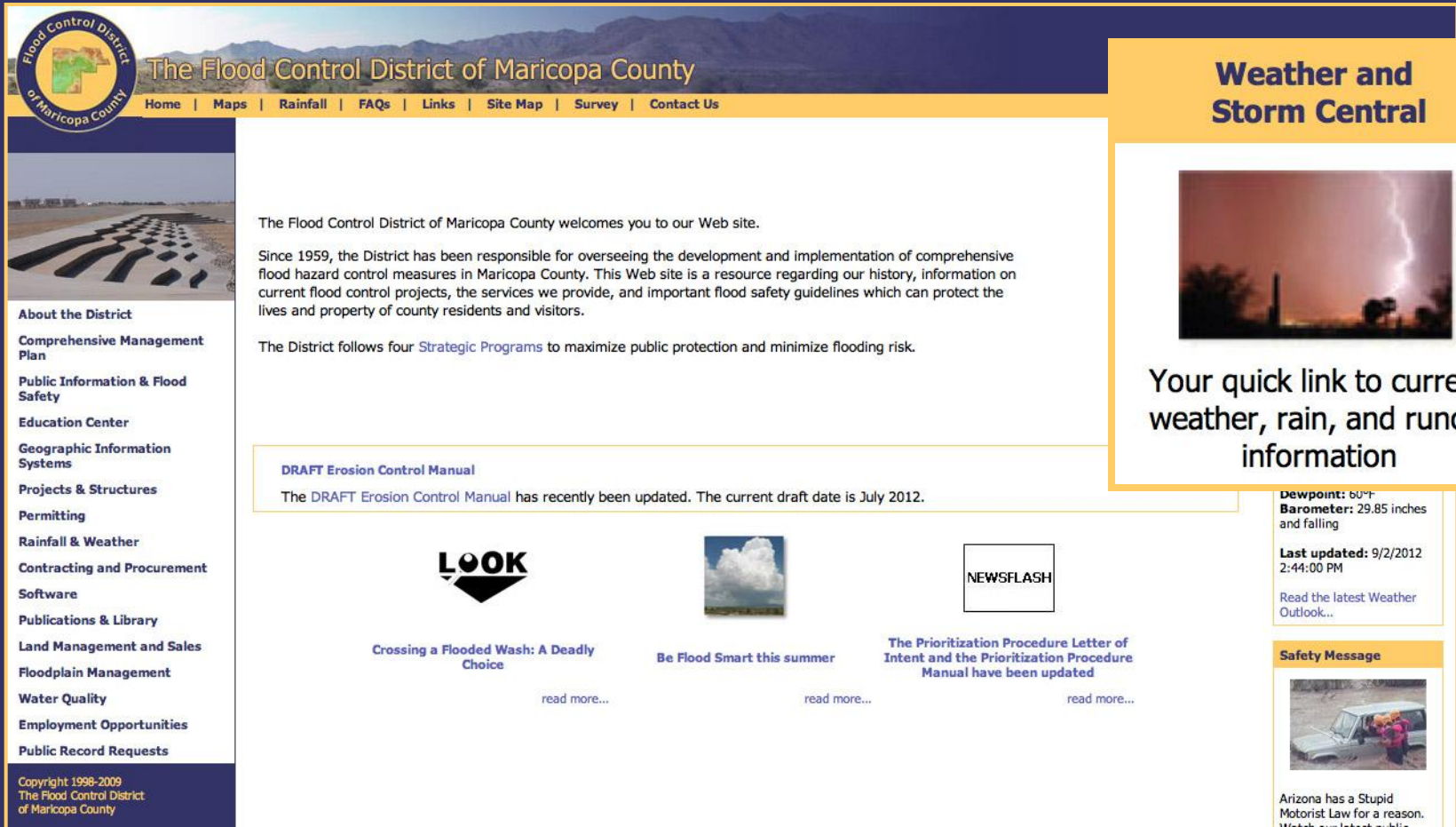


Next Steps

- Sonoqui Wash Improvements Phase II-B
 - future construction by Town of Queen Creek
 - Ellsworth Rd. to Crismon Rd.
- Sonoqui Wash Improvements Phase III
 - construction commenced by District Aug. 2012
 - Riggs Rd. to Hunt Hwy. to be completed by Dec. 2013
 - Riggs Rd. to Empire Blvd. (West Branch) pending funding
- San Tan West study results
- East Mesa study results
- Coordination with MCDOT on Chandler Heights Rd. channel



Online Weather and Storm Data



Flood Control District of Maricopa County

The Flood Control District of Maricopa County

Home | Maps | Rainfall | FAQs | Links | Site Map | Survey | Contact Us

The Flood Control District of Maricopa County welcomes you to our Web site.

Since 1959, the District has been responsible for overseeing the development and implementation of comprehensive flood hazard control measures in Maricopa County. This Web site is a resource regarding our history, information on current flood control projects, the services we provide, and important flood safety guidelines which can protect the lives and property of county residents and visitors.

The District follows four *Strategic Programs* to maximize public protection and minimize flooding risk.

DRAFT Erosion Control Manual

The DRAFT Erosion Control Manual has recently been updated. The current draft date is July 2012.

LOOK

Crossing a Flooded Wash: A Deadly Choice

[read more...](#)

Be Flood Smart this summer

[read more...](#)

NEWSFLASH

The Prioritization Procedure Letter of Intent and the Prioritization Procedure Manual have been updated

[read more...](#)

Weather and Storm Central

Your quick link to current weather, rain, and runoff information

Dewpoint: 60°F
Barometer: 29.85 inches and falling

Last updated: 9/2/2012 2:44:00 PM

[Read the latest Weather Outlook...](#)

Safety Message

Arizona has a Stupid Motorist Law for a reason.

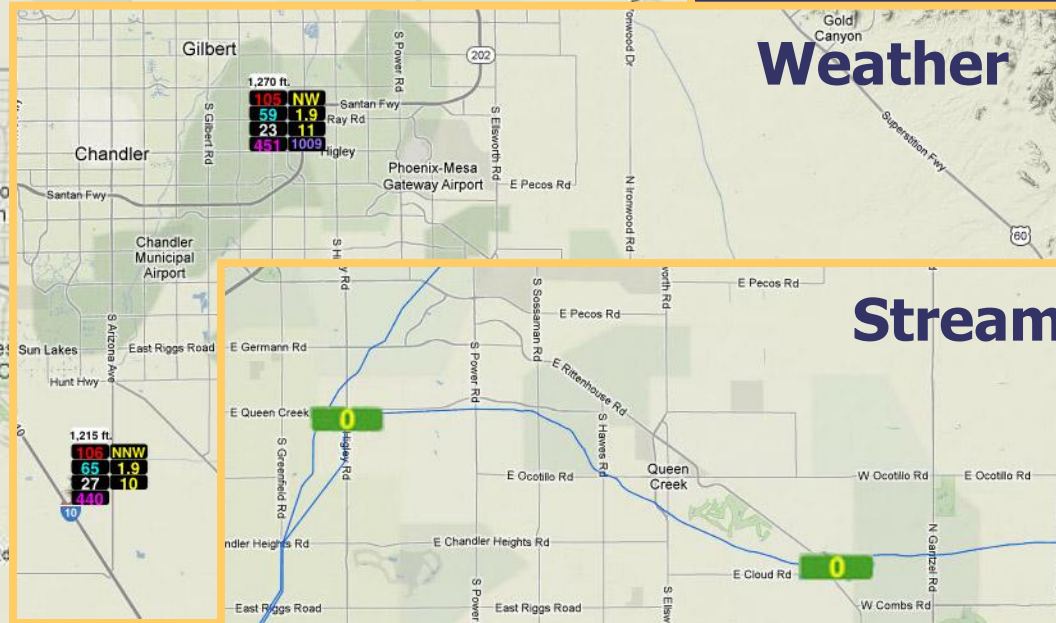
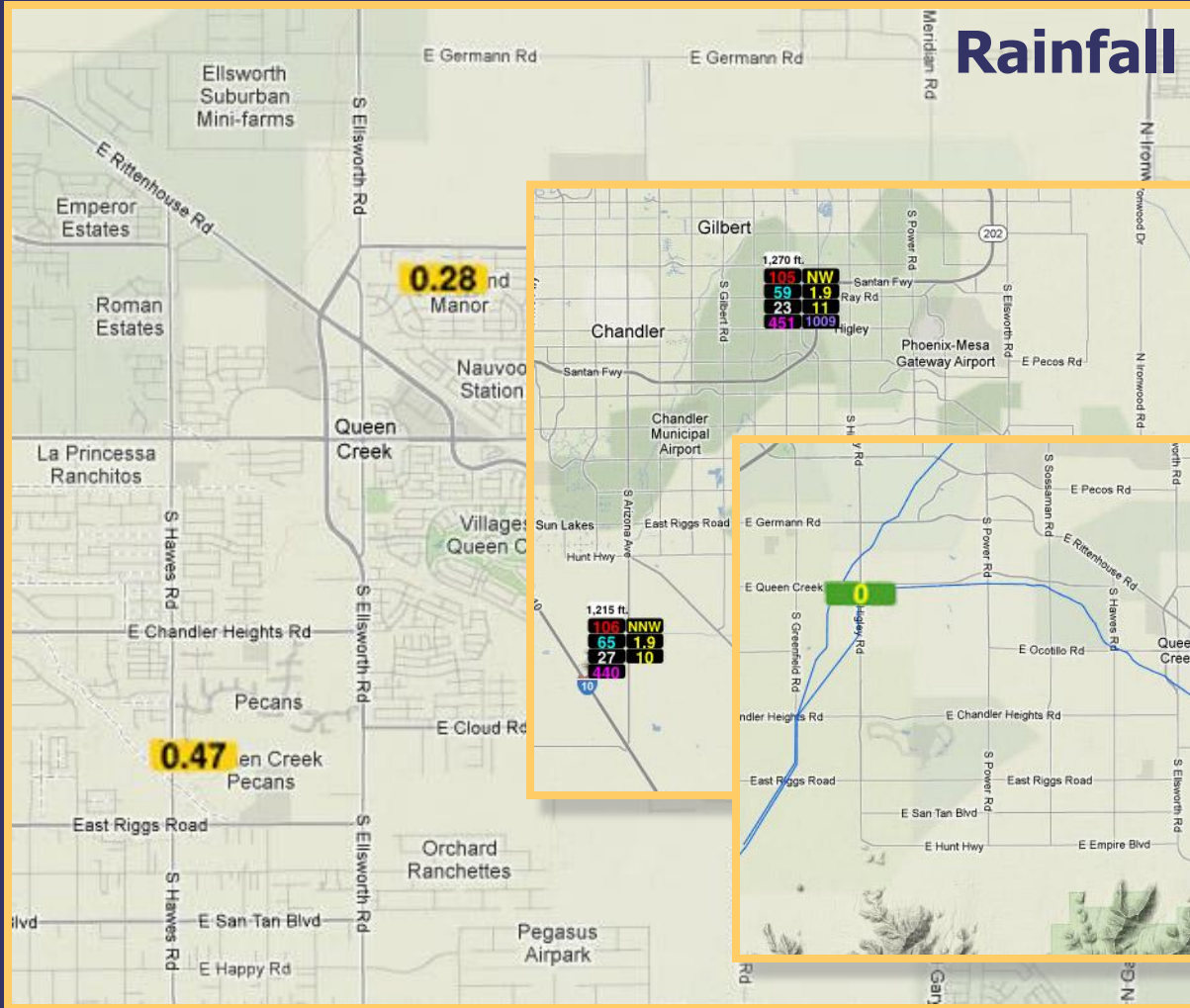
[Read the latest public...](#)

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www.fcd.maricopa.gov



Queen Creek Area ALERT Gages



Questions?

