

Airport Wash (South) Basin Management Study

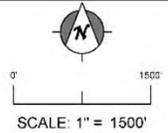
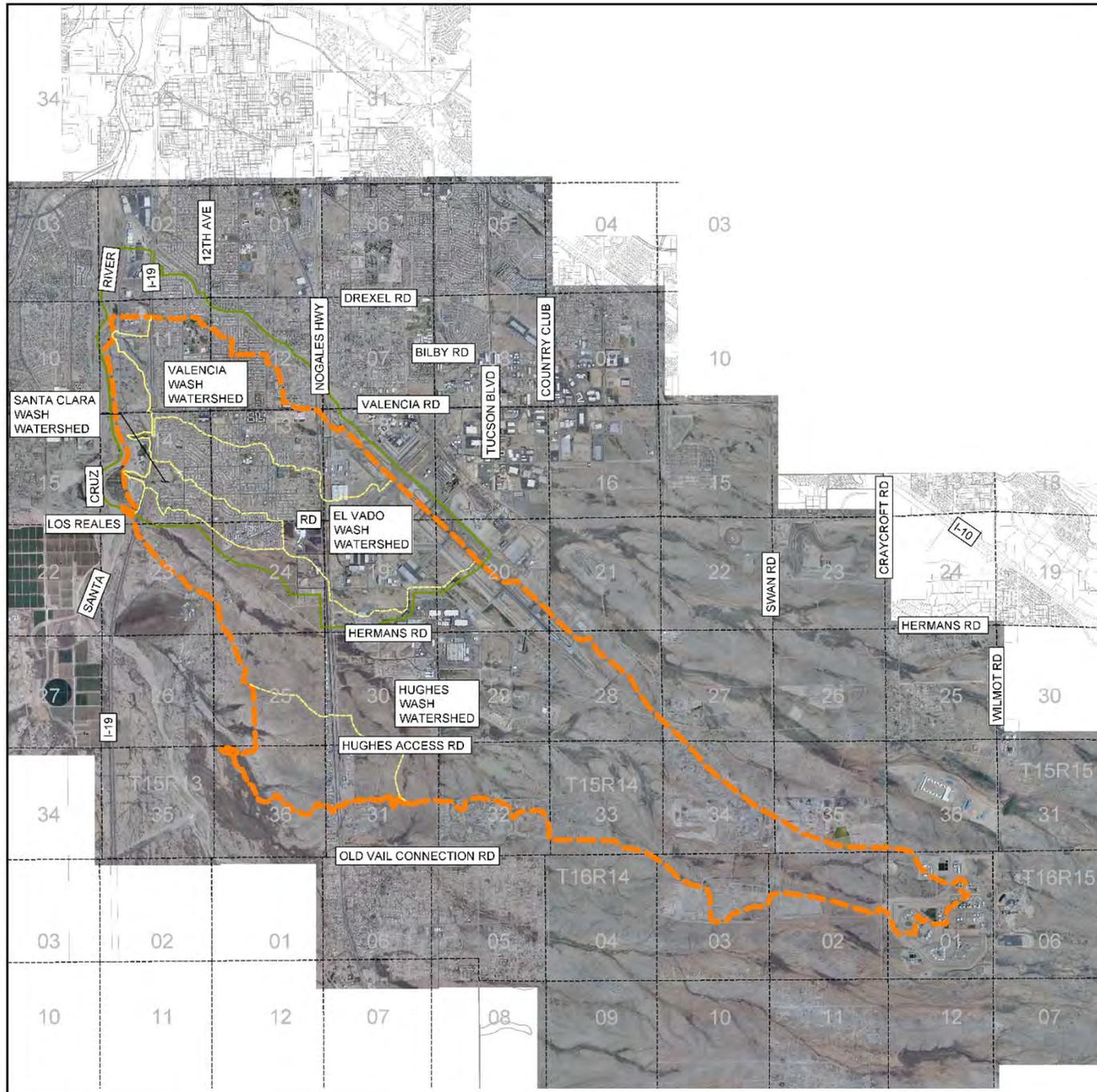


PIMA COUNTY

FLOOD CONTROL

Airport Wash South Basin Management Study

- Presentation followed by small group discussions/Q&A
 - RFCD - Introduction to Project
 - CMG - Existing Conditions
 - KHA - Project Recommendations
 - WMG - Green Infrastructure
 - RFCD - Next Steps
- Comment Cards & Project Boards for Questions/Information



LEGEND

- SECTION LINES
- 23 SECTION NUMBERS
- TSMS WATERSHED BOUNDARY
- FLO-2D MODELING AREA BOUNDARY
- STUDY AREA LIMITS

MAPPING REFERENCE DATA:
 1. AERIAL PHOTO PROVIDED BY PIMA COUNTY, DATED 2008.



CMG DRAINAGE ENGINEERING, INC.
 3555 N. Mountain Ave. Tucson, Arizona 85719
 Phone (520) 882-4244 Fax (520) 888-1421



STUDY AREA MAP
AIRPORT WASH (SOUTH) BASIN
MANAGEMENT STUDY
 DATE: JUNE 2014 CMG PROJECT NO: 13-013

Visit Our Website

1) Visit www.pima.gov



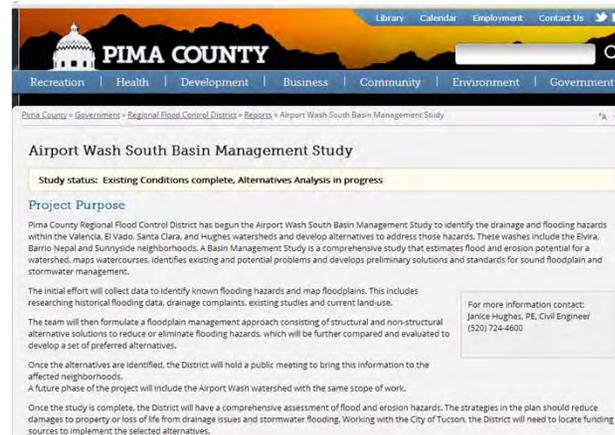
2) Enter 'Airport Wash' in search bar



3) Click the link listed first



4) Read Project Information



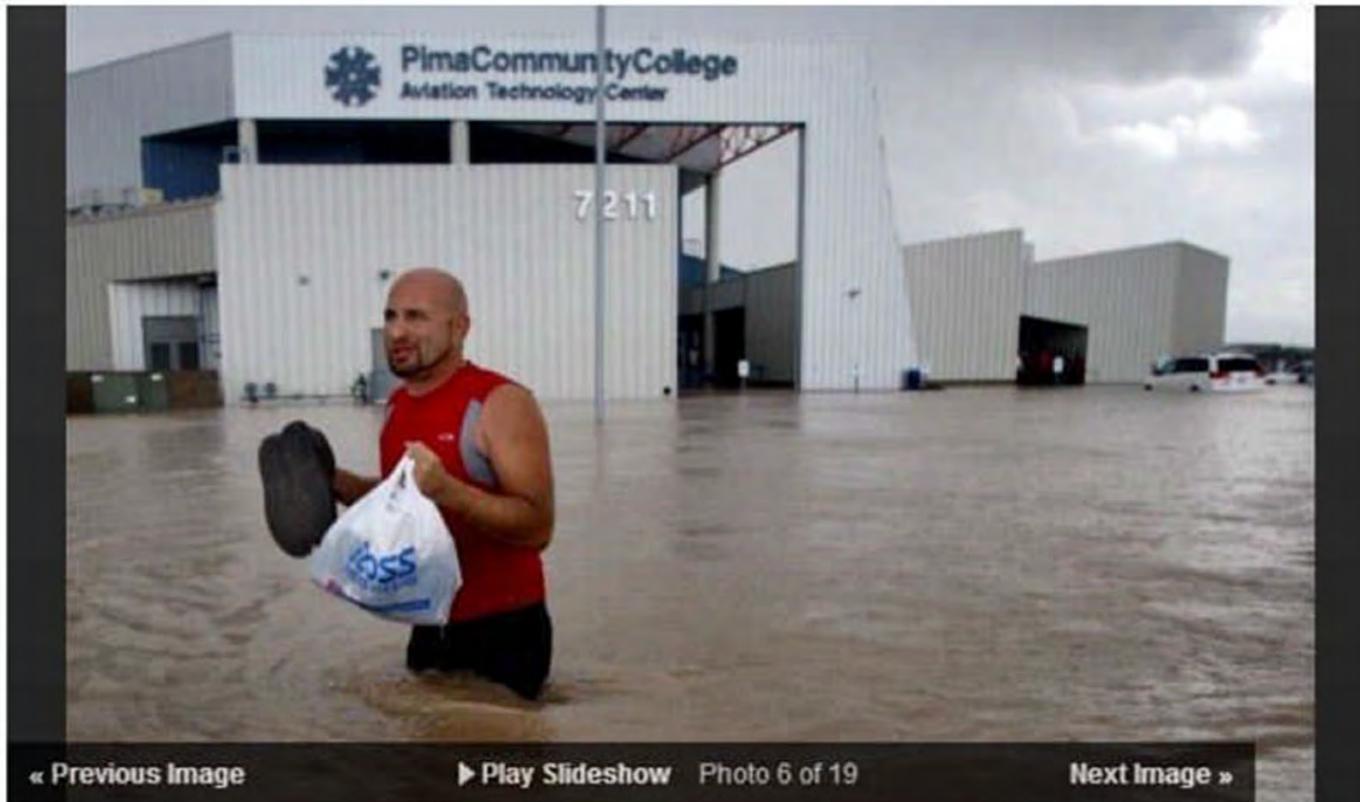
Data Gathering

- Inventoried existing drainage systems
- Surveyed drainage structures
- Gathered other data:
 - Previous studies and plans
 - COT drainage complaint records
 - Historic flooding accounts- Neighborhood Assoc. outreach, news accounts, NWS rainfall records



Sept. 15, 2011: Multiple storms flood streets and buildings, force evacuation of homes and keep fire/rescue cre

September 15, 2011 4:33 pm



« Previous Image ▶ Play Slideshow Photo 6 of 19 Next Image »

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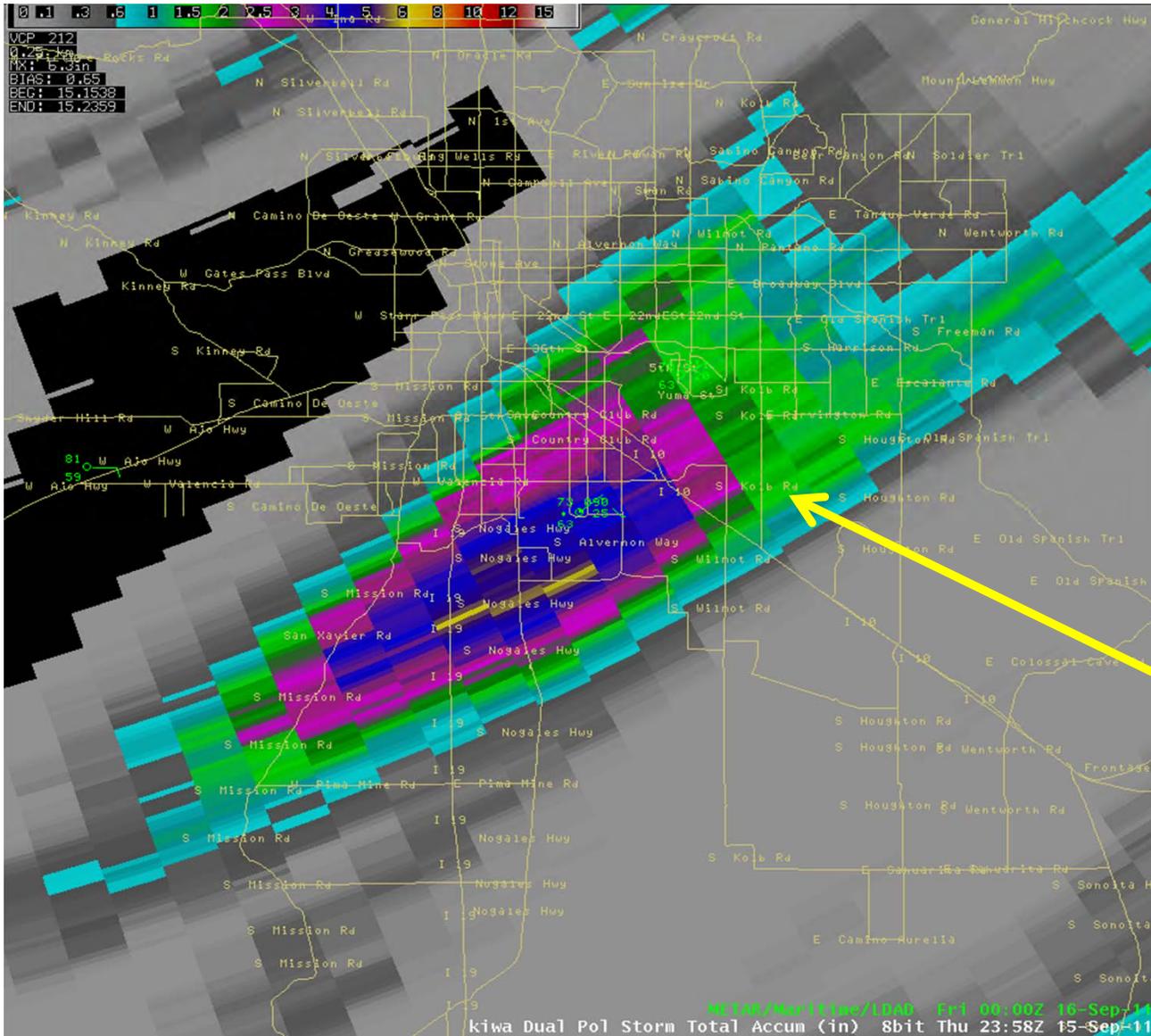
Powerful storm floods southside

[Buy Now](#)

Kelly Presnell/Arizona Daily Star

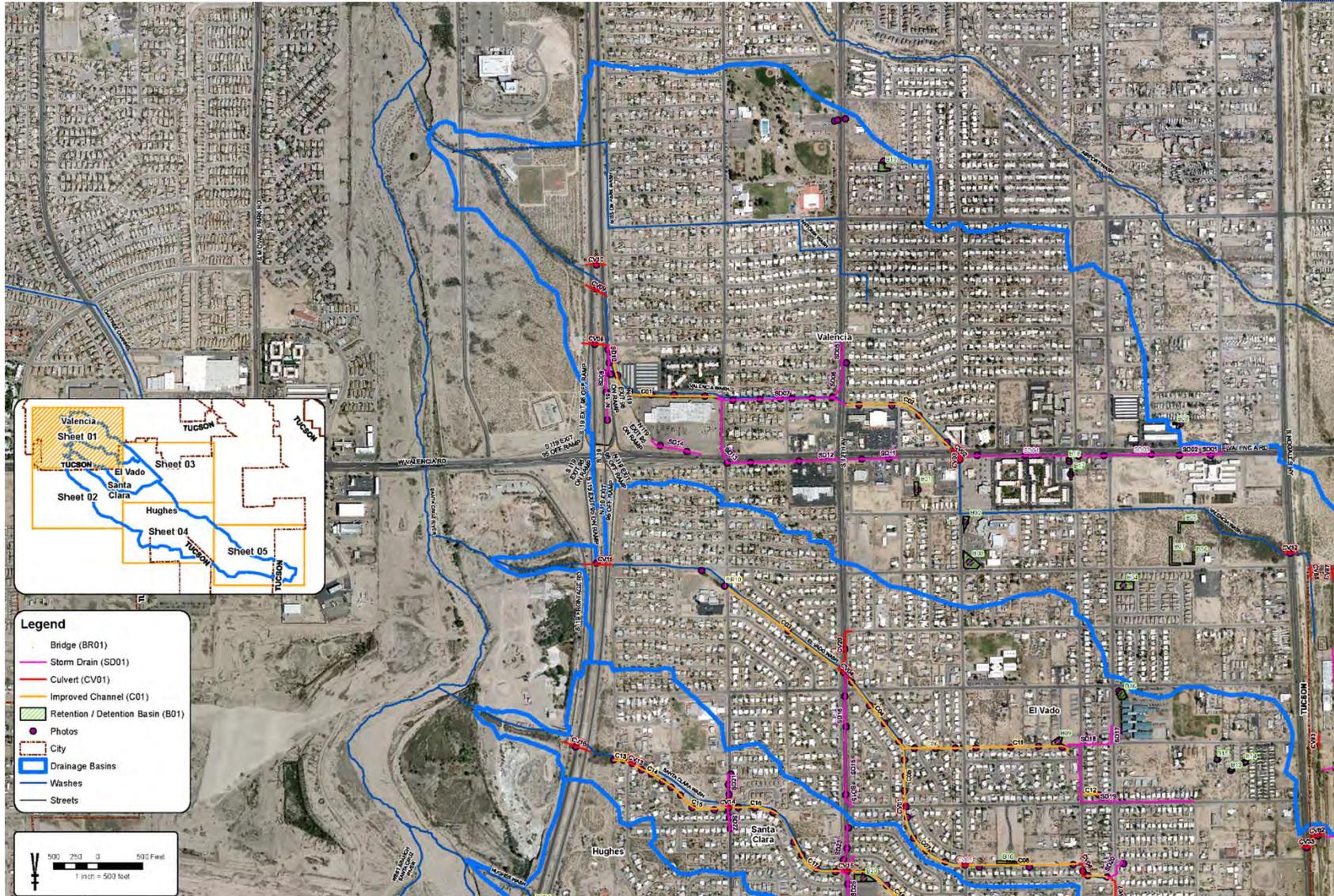
Jared Trevena makes his way to higher ground through the waist deep waters inundating the parking lot and parts of the Pima County Community College Aviation Technology Center near Tucson International Airport.

National Weather Service KIWA Dual-POL Rainfall Estimates



Sep 15, 2011
Tucson Airport
2.84" rain

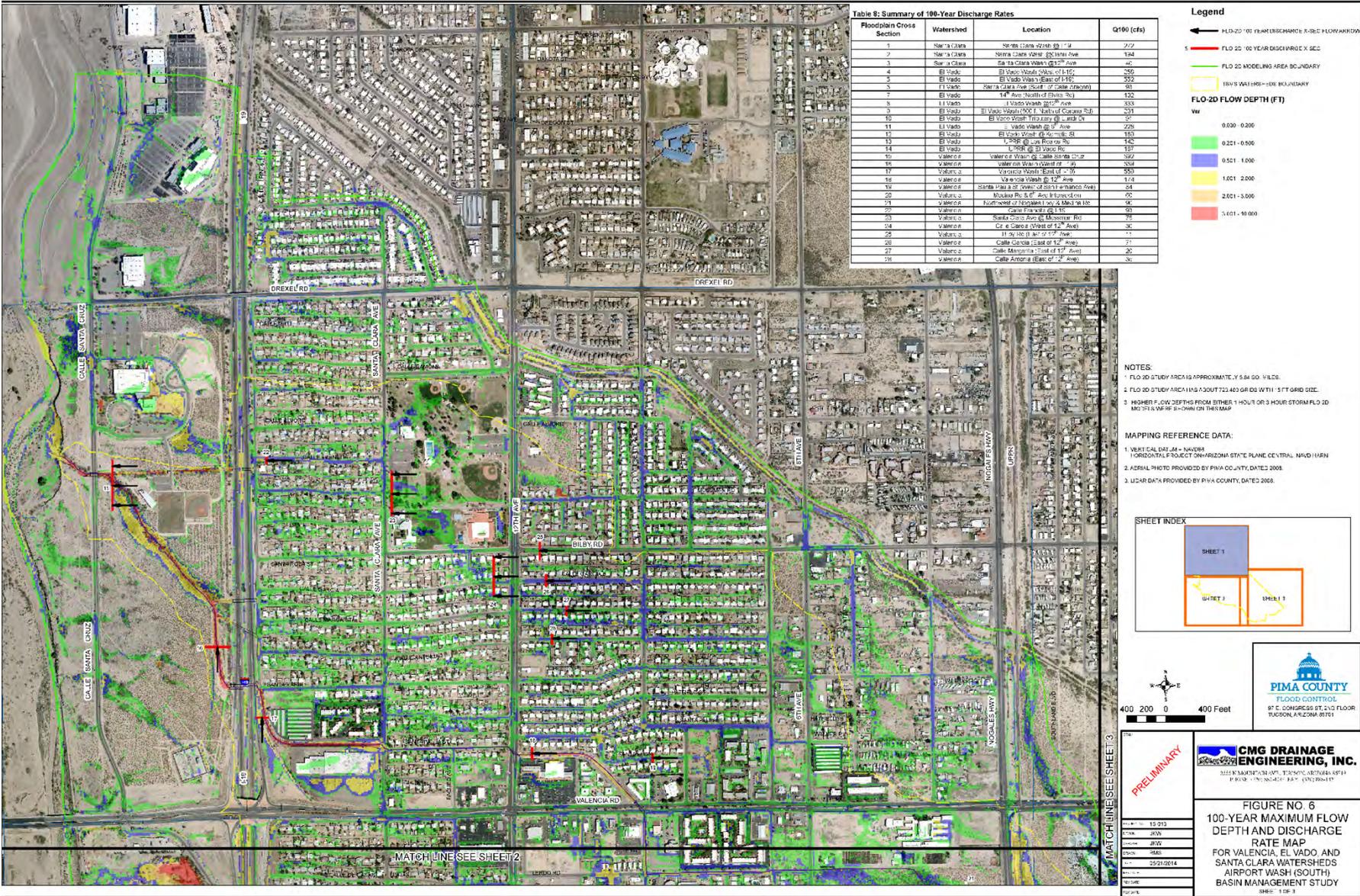
Drainage Inventory Map



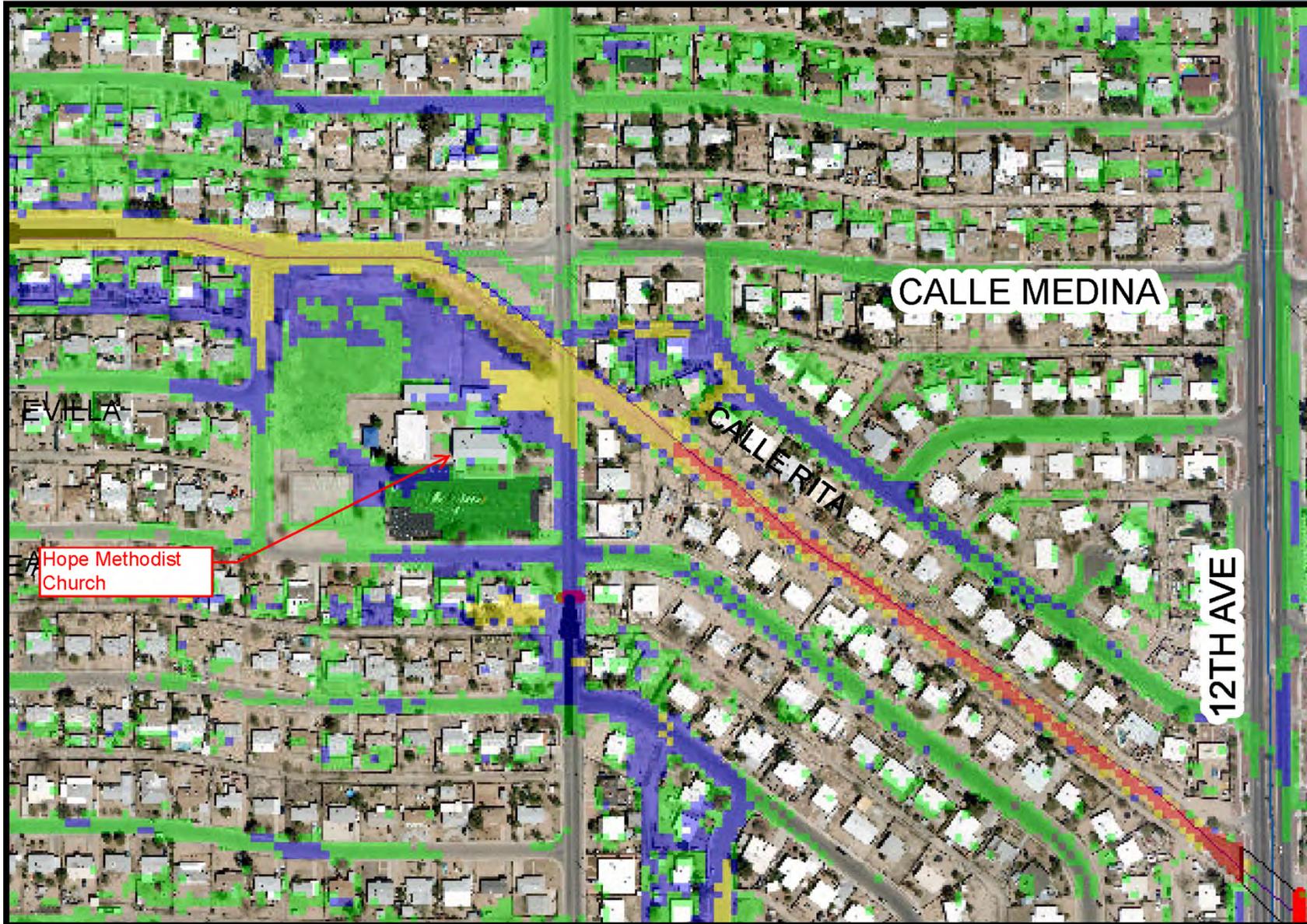
Existing Flooding Conditions

- 100-year Storm
- Computer models used to simulate floods
- Flood Depth Maps for urban areas in the Valencia, El Vado & Santa Clara Watersheds
- Floodplain Limits Map for Hughes Wash Watershed

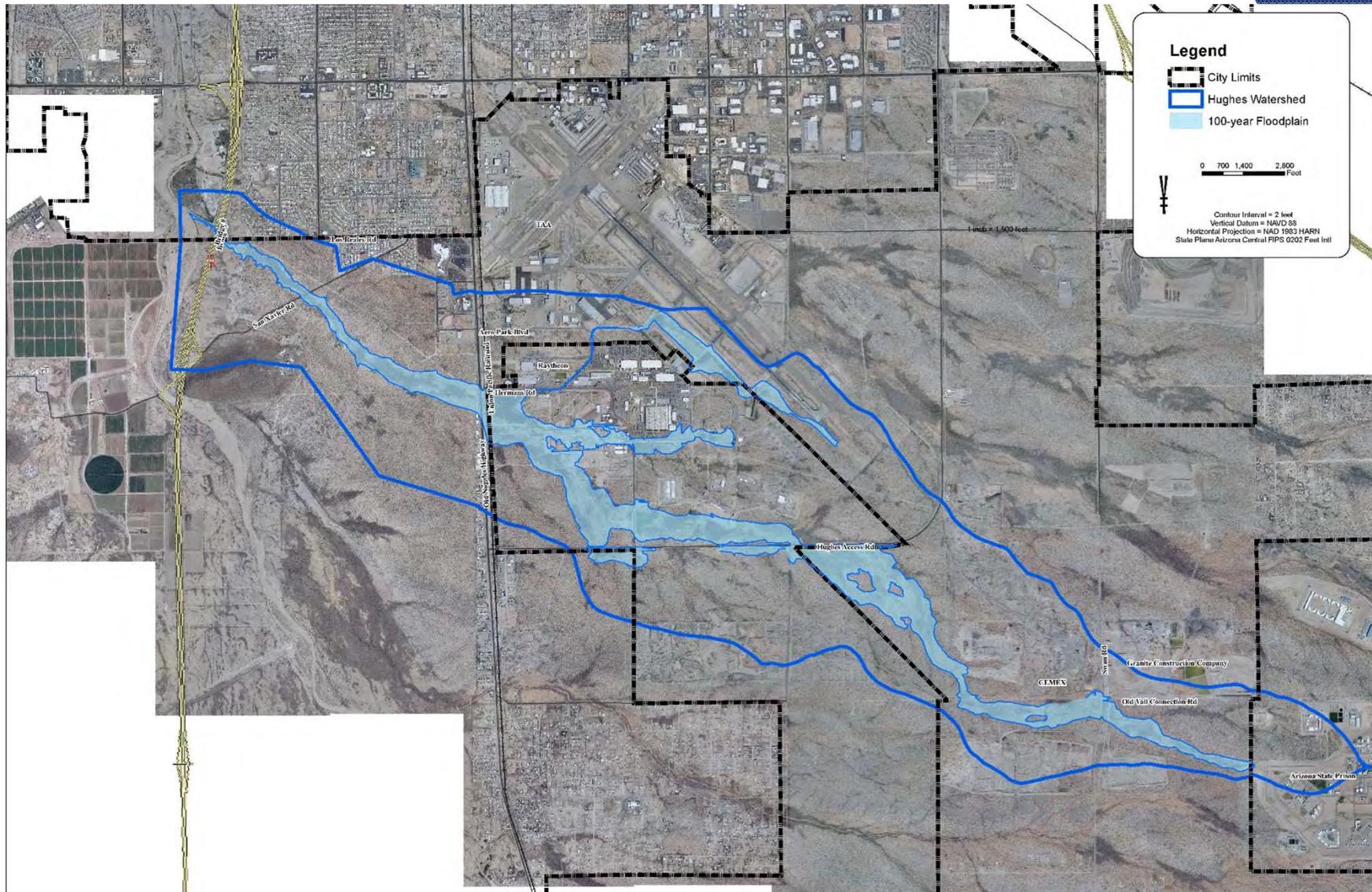
Example Urban Area Flood Depth Map



El Vado Wash at Santa Clara Ave



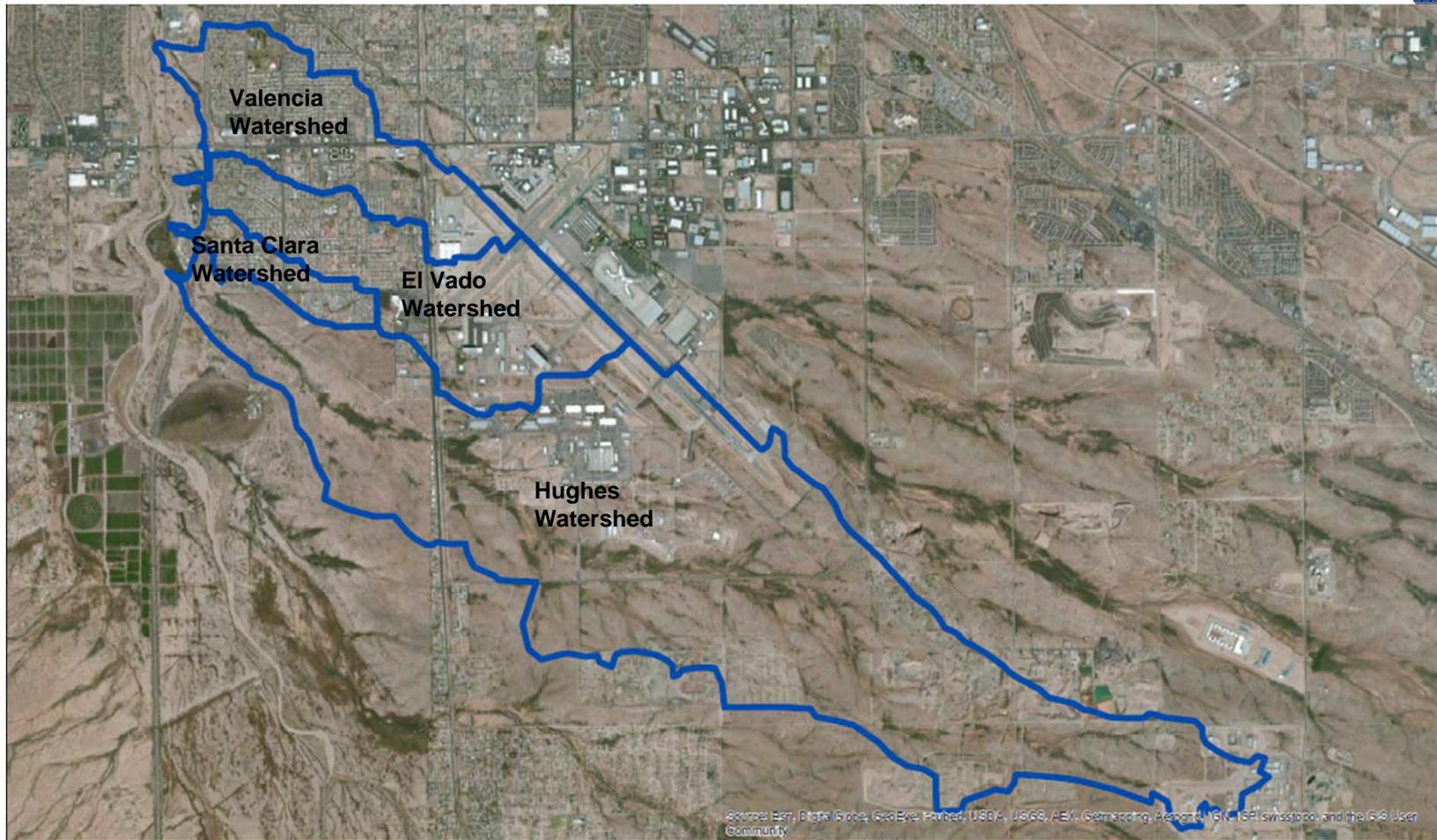
Example Hughes Wash Floodplain Map



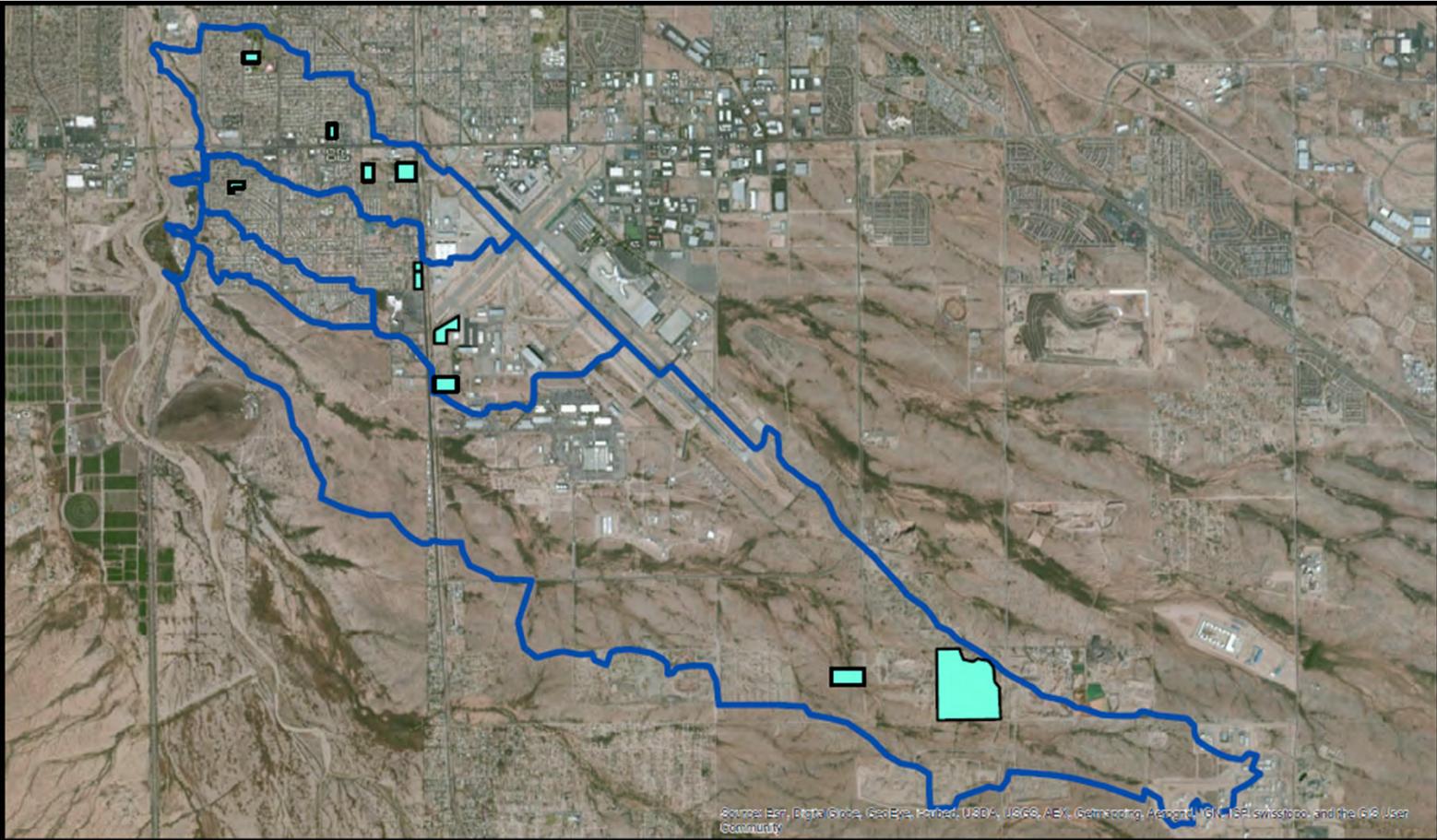
Alternative Analysis

- Steps Included
 - Identify alternatives in Study Area
 - Apply defined criteria
 - Select Final 12 Projects and determine conceptual feasibility and cost

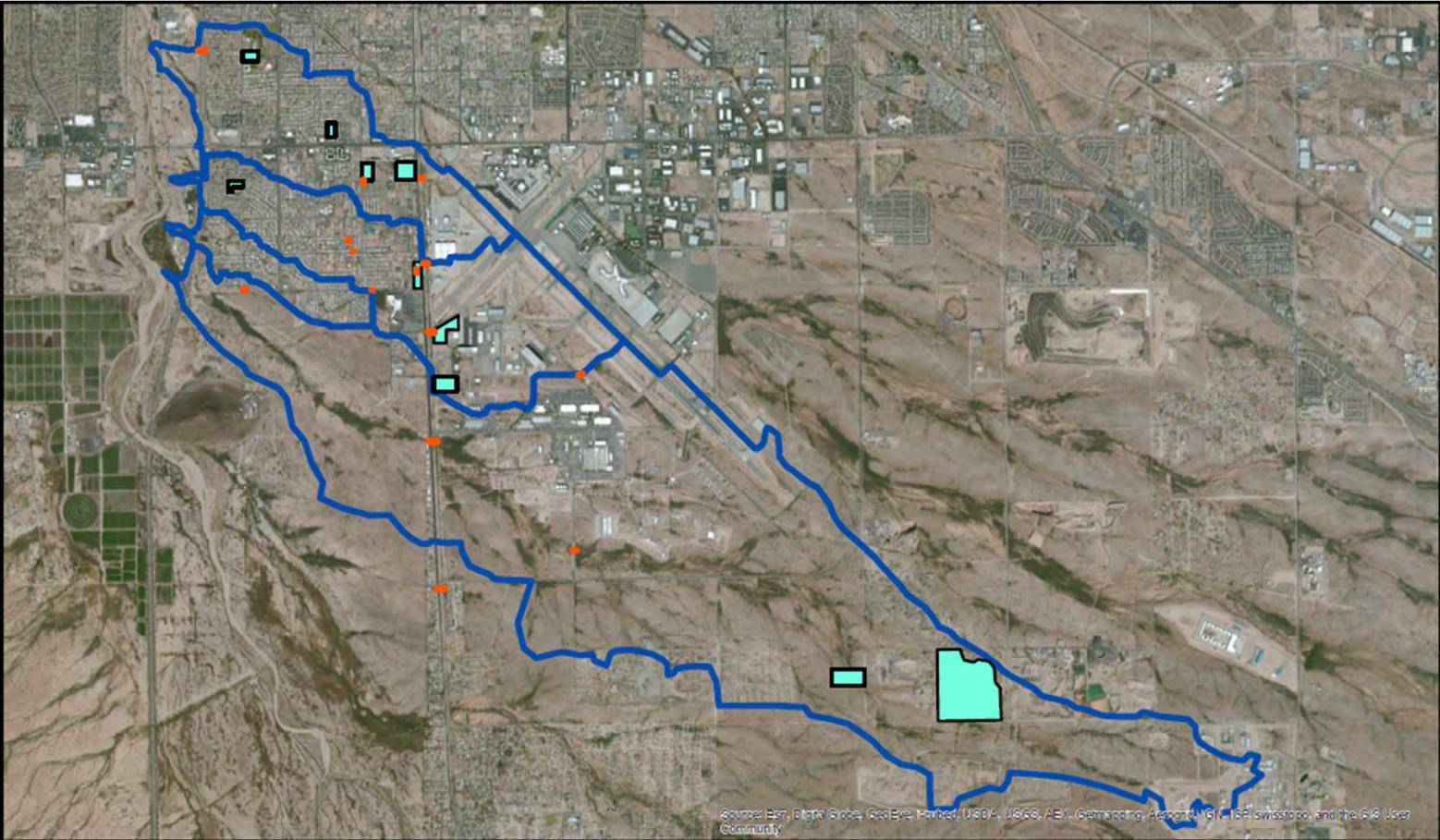
Alternatives Comprised of:



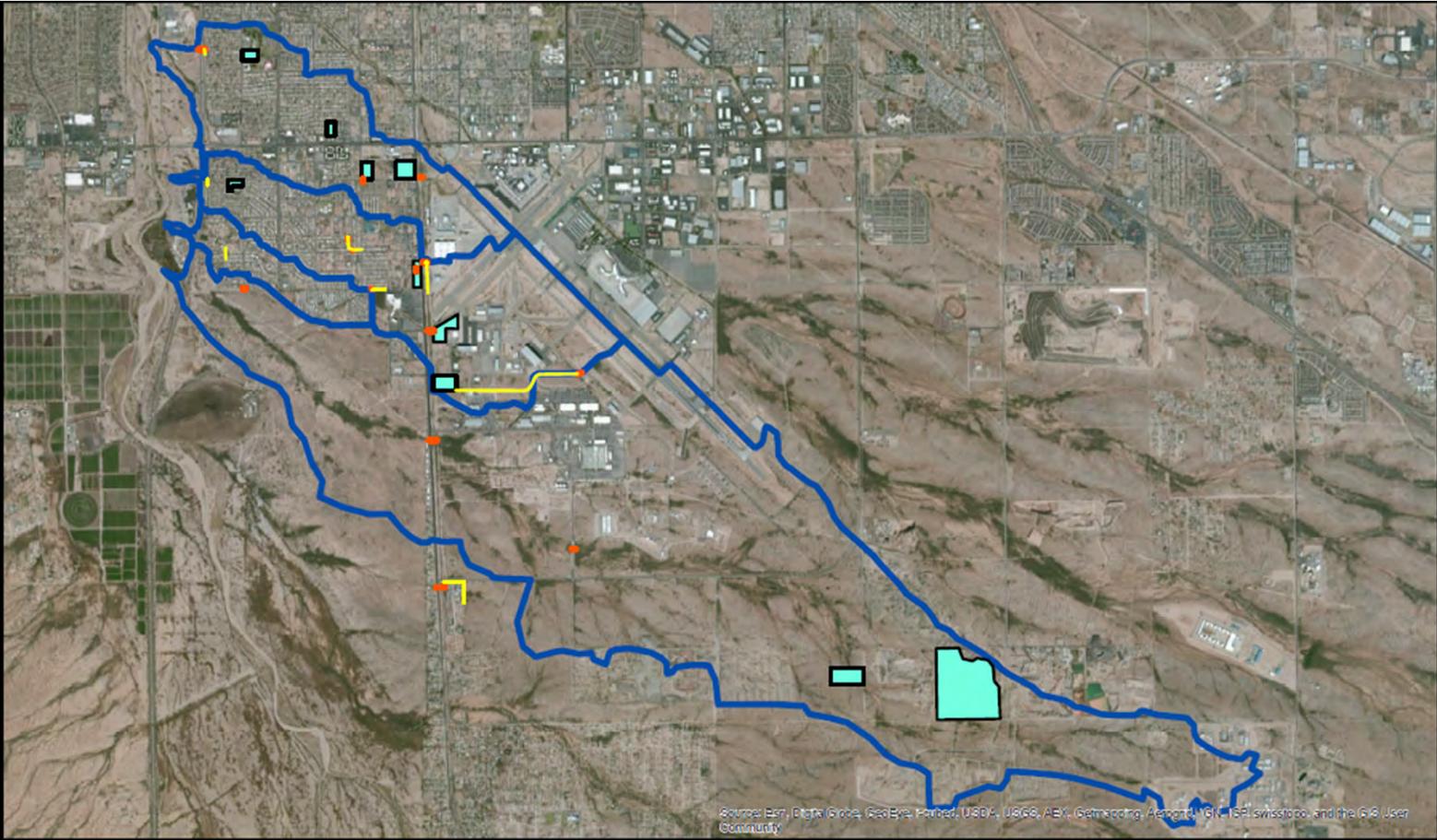
Regional Basins



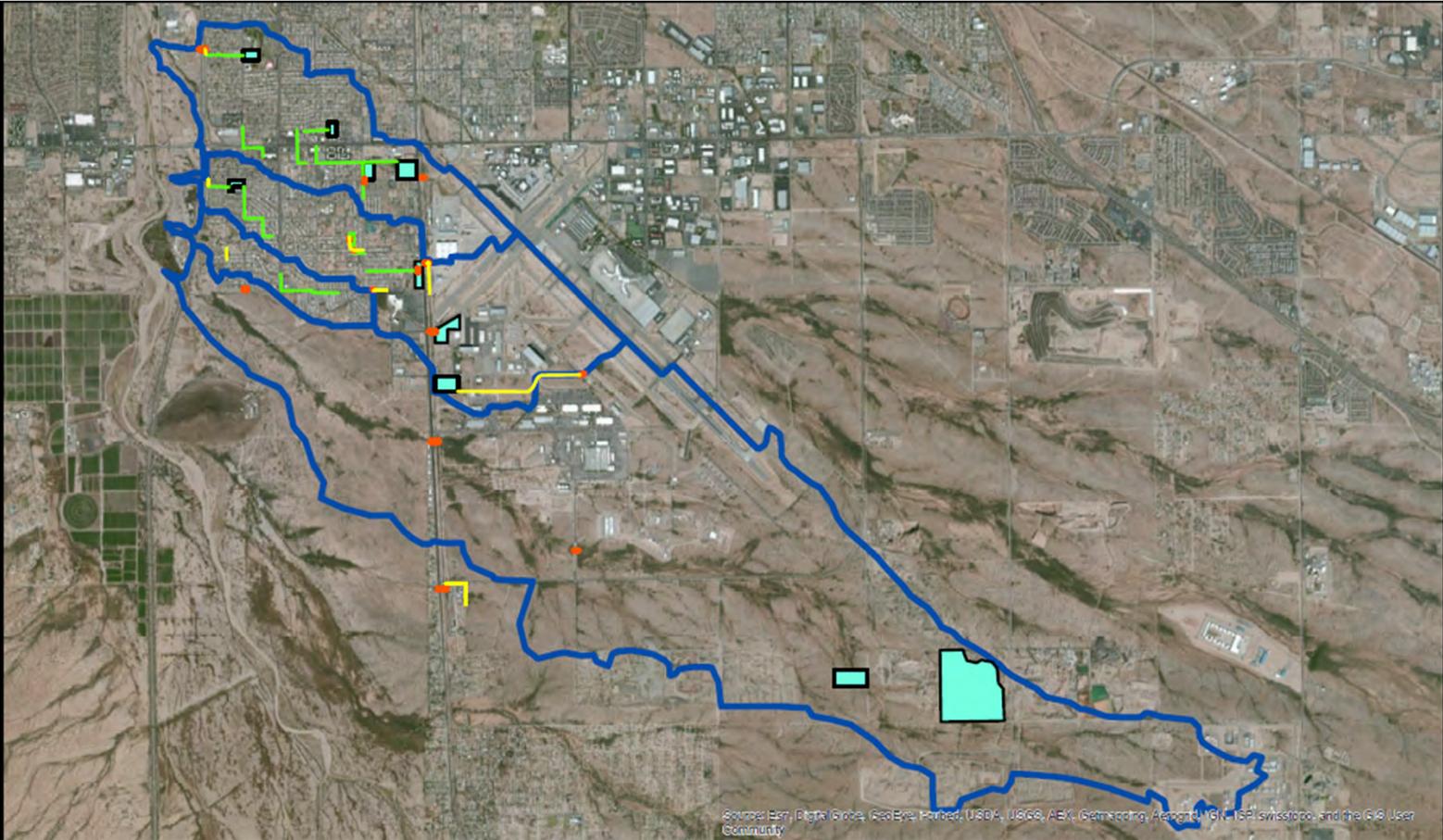
Culverts



Channels



Storm Drains



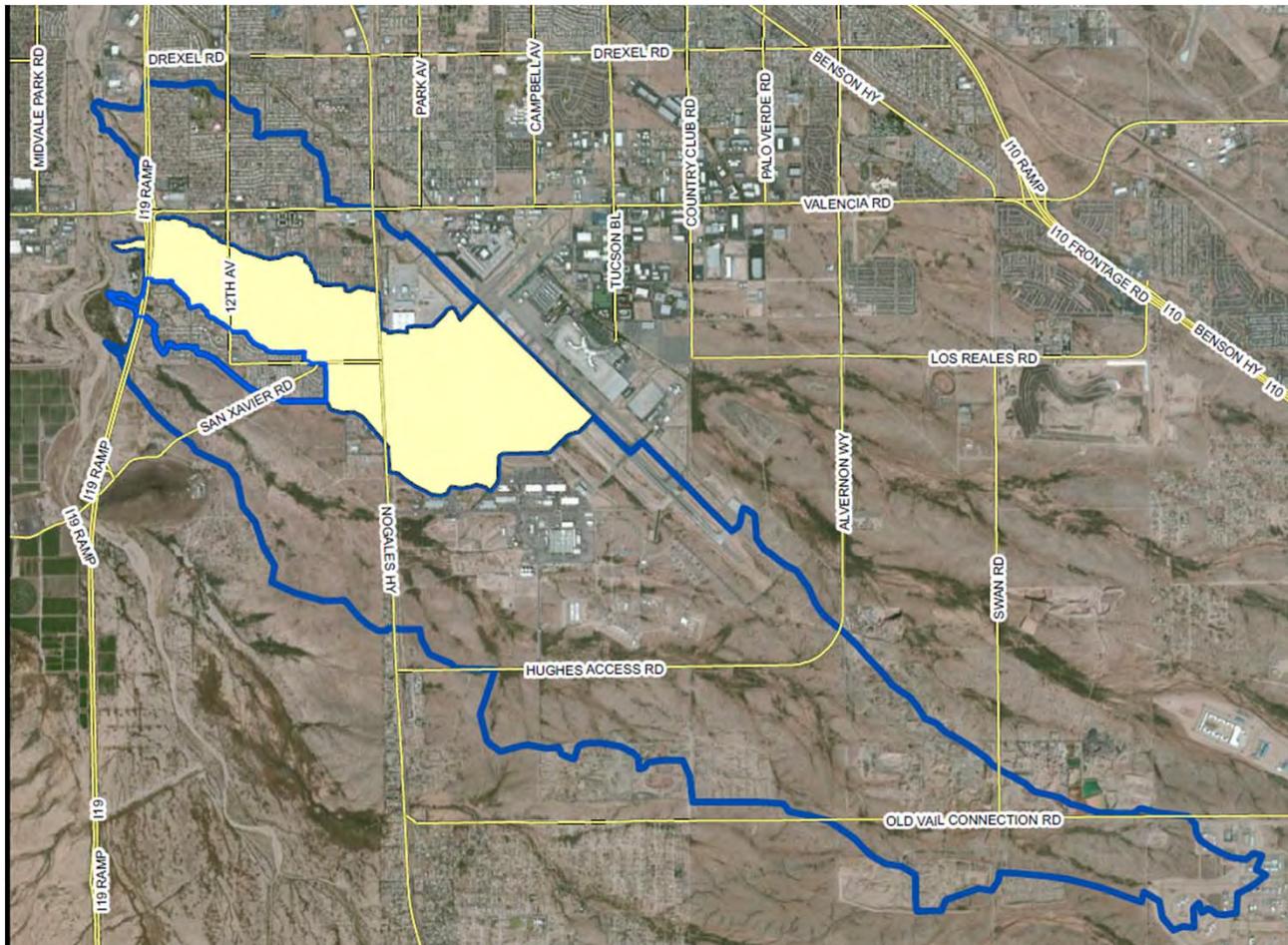
Final Projects Selected

Project ID	Description	Estimated Cost
EV1	Add upstream basin and upgrade UPRR structure to Desert Diamond channel.	\$ 1,544,000
EV2	Add flood wall, add collector channel, and add culvert to cross Los Reales Rd. near Desert Diamond Casino.	\$ 446,000
EV3	Add channel upstream of UPRR, upgrade UPRR structure near PCC Aviation Technology Center, ask PCCATC to regrade parking lot, add basin at NW corner of Los Reales Rd/Old Nogales Hwy, and add storm drain to El Vado Wash. There would be an equalizer culvert between the 2 basin sections.	\$ 943,000
EV4	Upgrade storm drain from 6th Ave/Corona Rd to El Vado Wash auxiliary channel. Add curb and gutter from 6th Ave/Corona Rd to 6th Ave/Missiondale Rd.	\$ 586,000
EV5	Add basin at NW corner of Calle Medina and Santa Clara Ave, add storm drain from basin to channel underneath Calle Sevilla, channel from storm drain to I-19 structure, and improve the inverted crown on Calle Medina from Santa Clara Ave to I-19.	\$ 1,591,000
EV6*	Add storm drain from Teton St/Pacheco Ave to Calle Medina basin.	\$ 980,000
EV7*	Add Culvert across Santa Clara Ave between Calle Medina and Calle Aragon.	\$ 269,000
SC1	Add storm drain from Turquoise Ln/Mesquite Dr to Los Reales Rd/12th Ave, upgrade storm drain near Los Reales Rd/12th Ave to Santa Clara Wash, and add new curb and gutter on Los Reales Rd south from 12th Ave.	\$ 736,000
V1	Upgrade structure at UPRR near Calle Medina, add basin at NW corner of Calle Medina and Old Nogales Hwy, and add 2 sections of storm drain, and 2 sections of new curb and gutter. Sections of storm drain would run from the basin to Valencia Wash culvert at Valencia Rd from basin and from 6th Ave/Aragon Rd to 6th Ave/Calle Medina. Curb and gutter improvements would be from 6th Ave/Aragon Rd to 6th Ave/Calle Medina and from 6th Ave/Lerdo Rd to Missiondale Rd/Lerdo Rd.	\$ 1,206,000
V2	Add basin at NE corner of Calle Medina/6th Ave, add storm drain to Valencia Wash, add storm drain and curb and gutter from Aragon Rd/6th Ave to Calle Medina/6th Ave, and add curb and gutter from 6th Ave/Lerdo Rd to Missiondale Rd/Lerdo Rd.	\$ 1,227,000
V3	Add basin south of Santa Paula St between Fiesta Ave and 8th Ave and storm drain to Valencia Wash.	\$ 732,000
V6	Add basin at Mission Manor Park, add storm drain to channel and channel to I-19 culvert.	\$ 517,000
**Total Estimated Cost		\$ 10,777,000

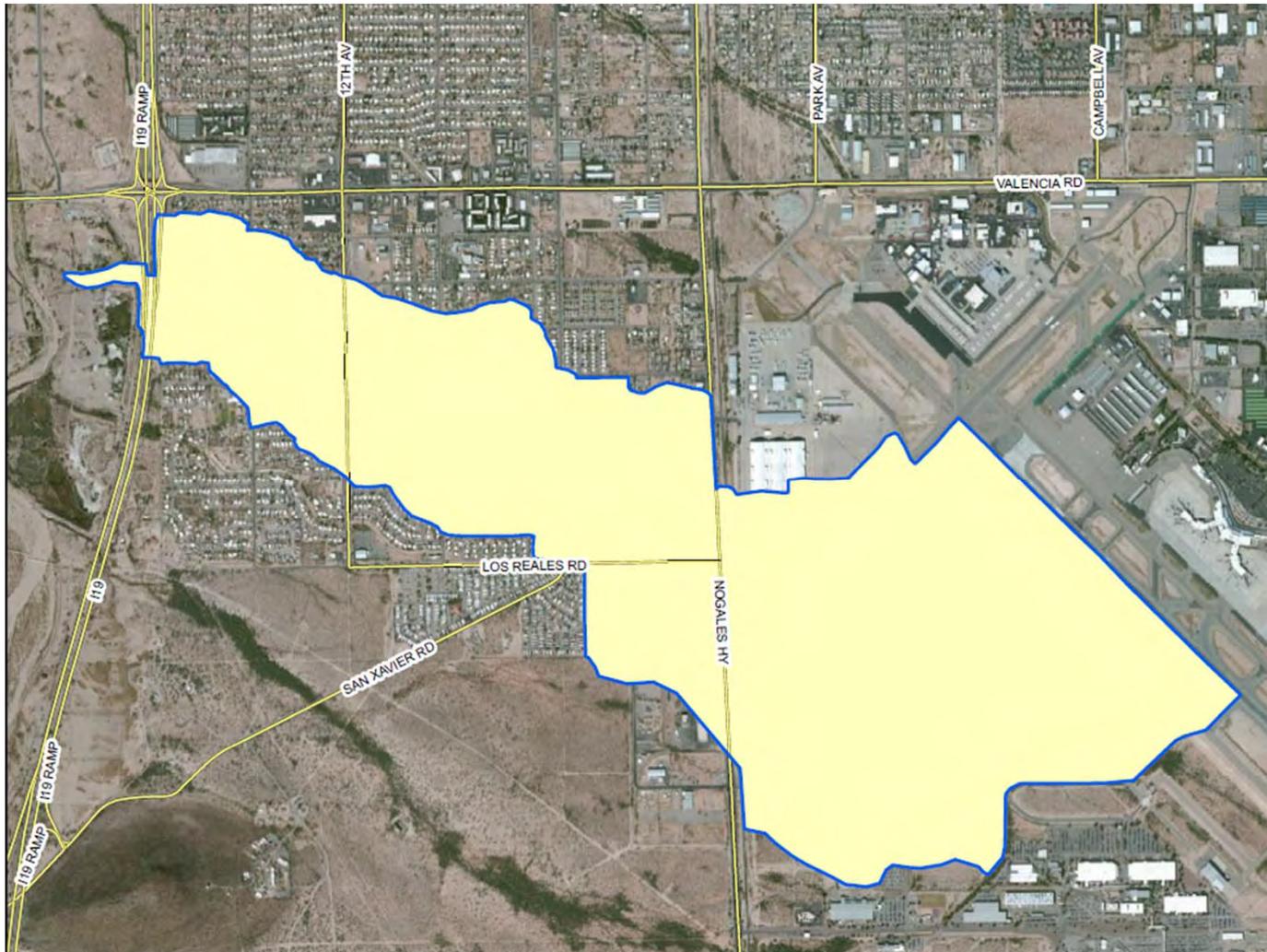
* Project must be programmed after EV5

** Total does not account for inflation for projects programmed in the future

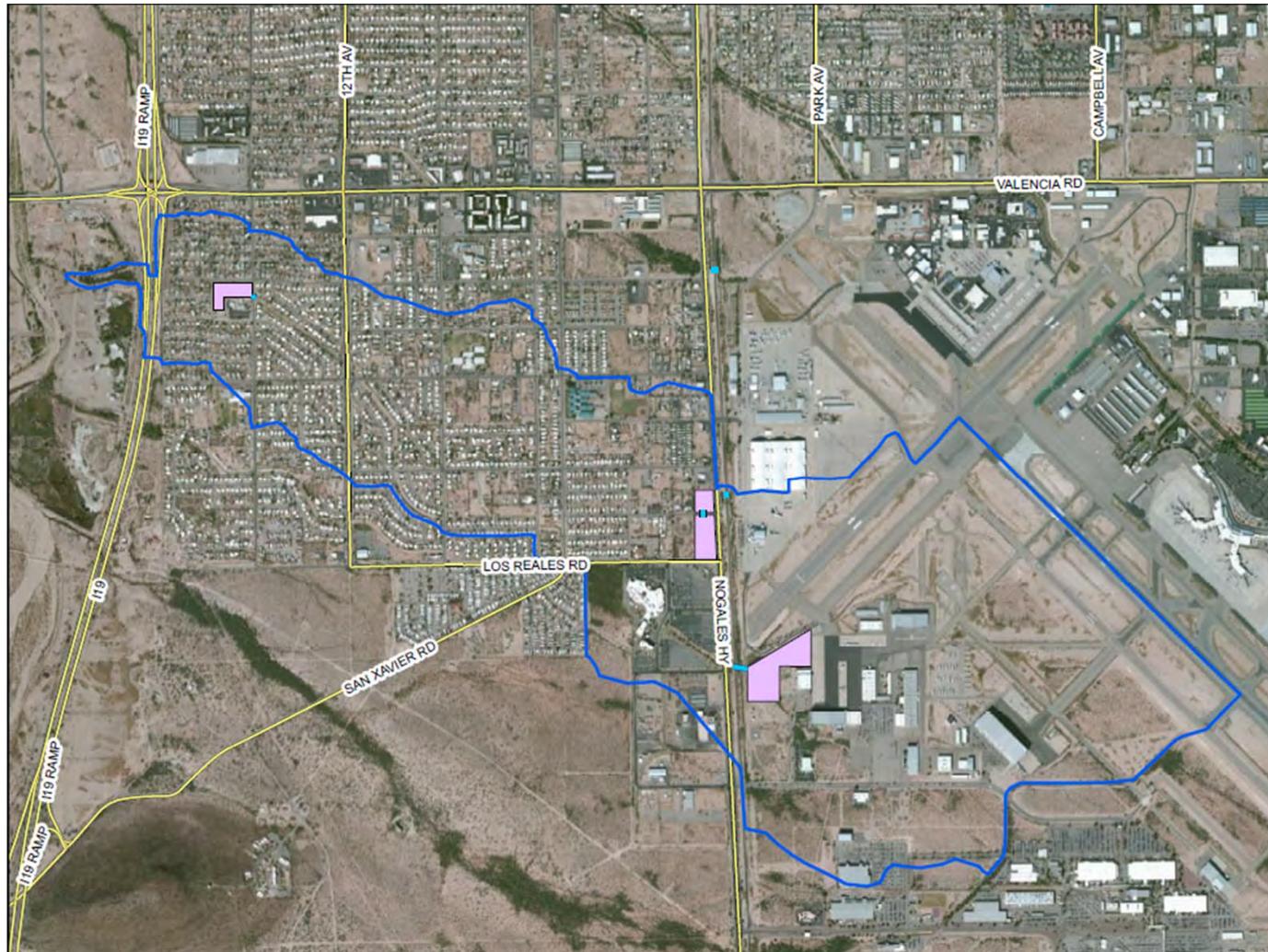
El Vado Watershed Vicinity



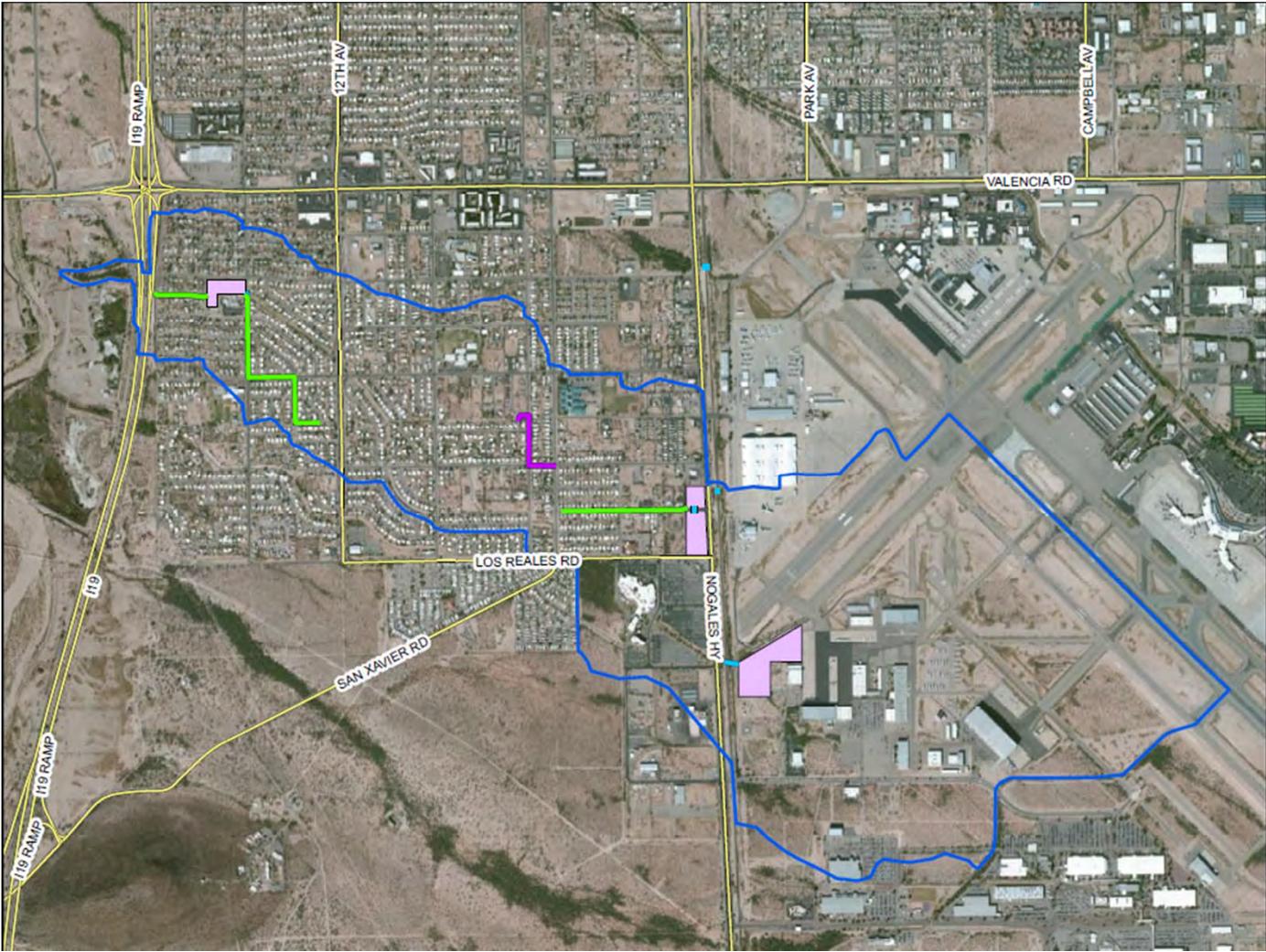
El Vado – Watershed Level Focus



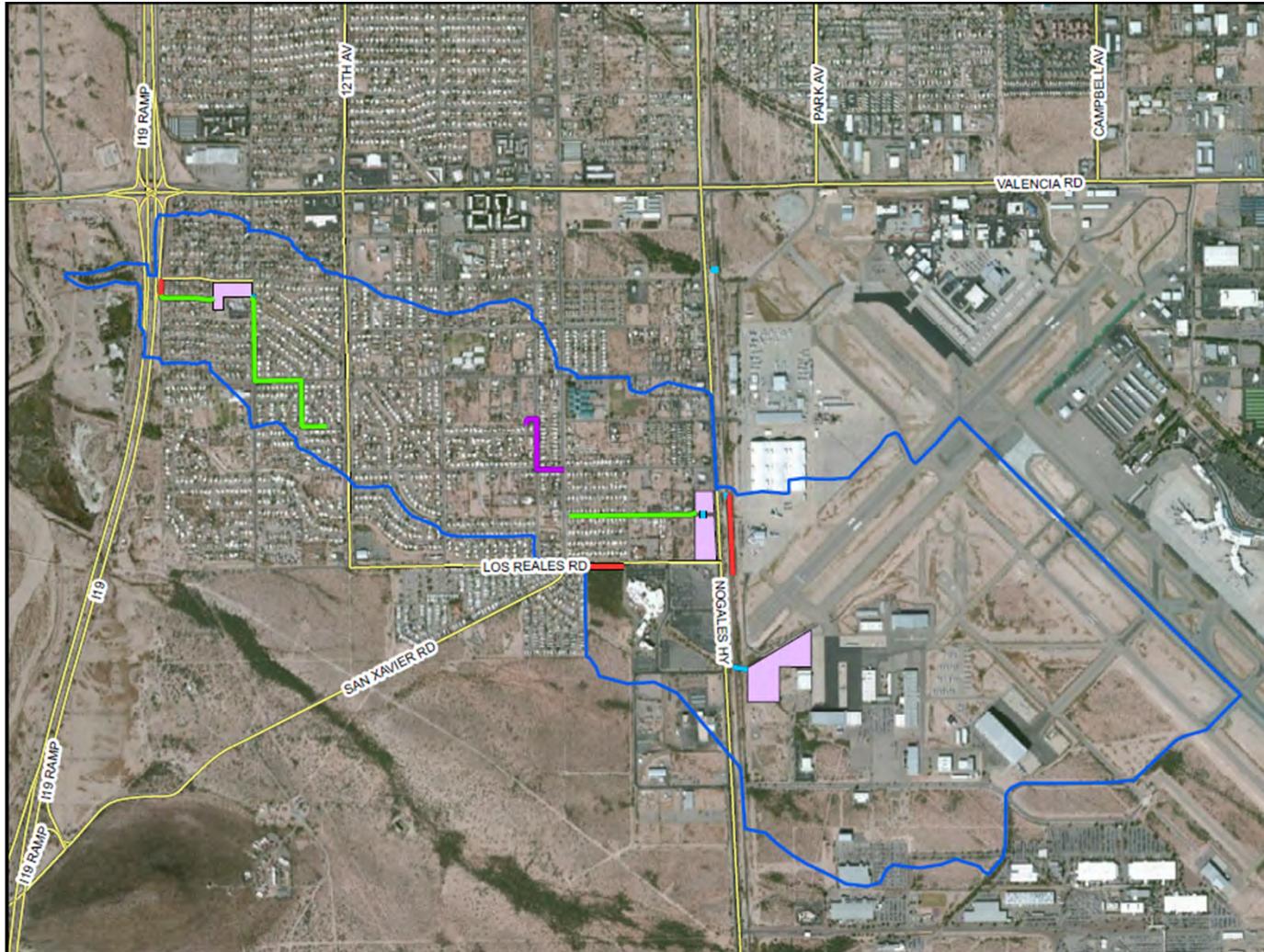
El Vado – Detention Basins/Culverts



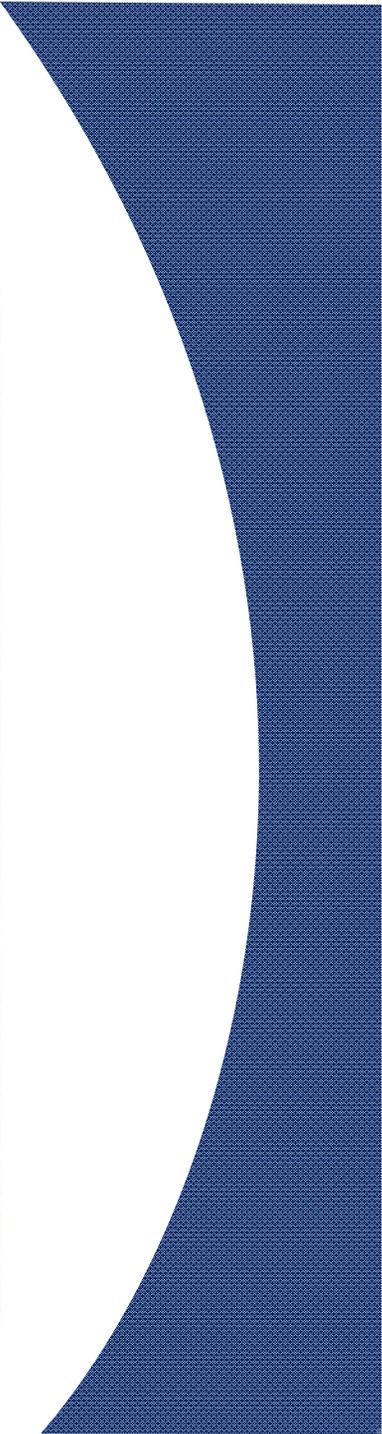
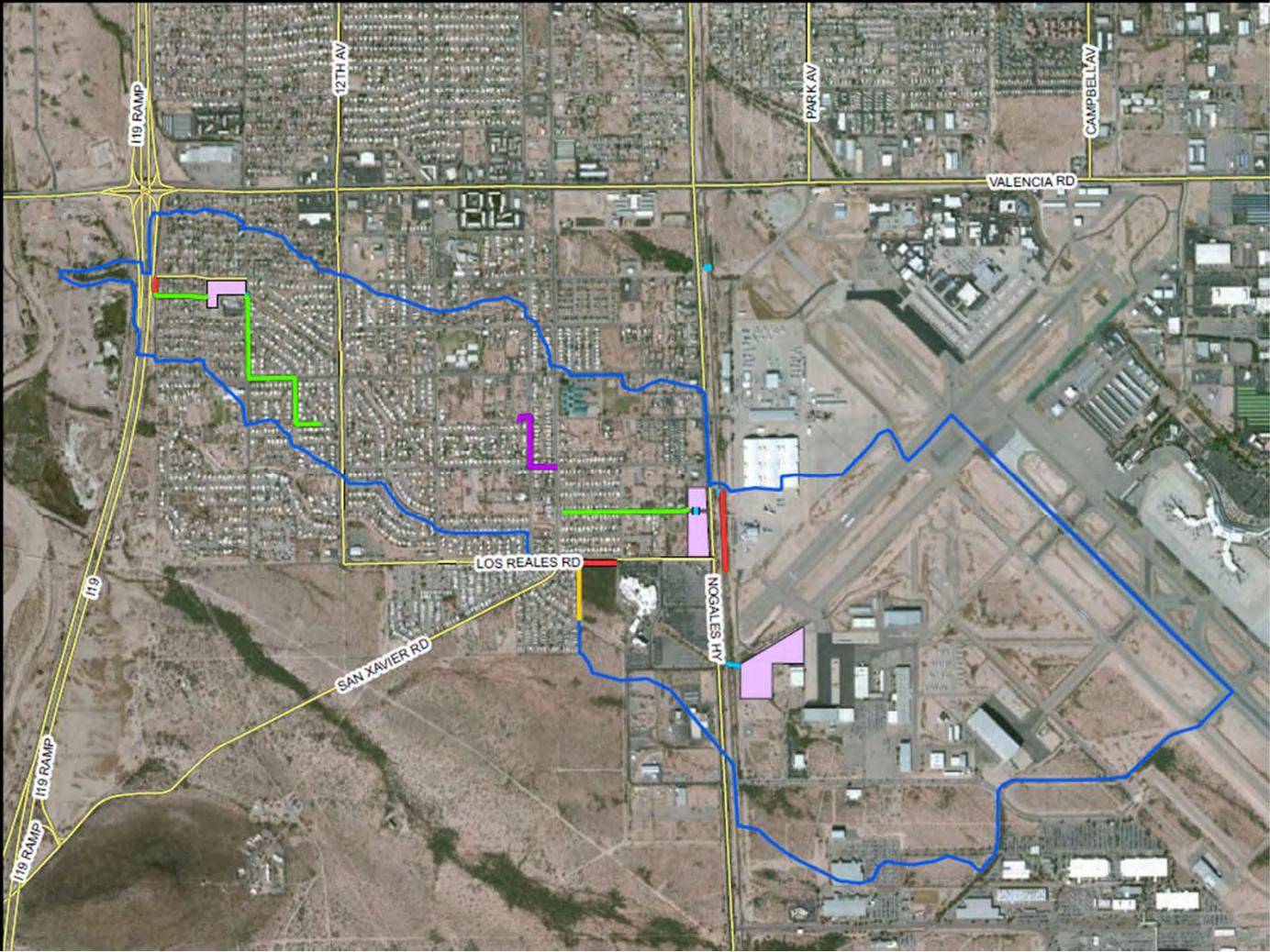
El Vado – Storm Drains



El Vado – Channels/Inverted Crown



El Vado – Floodwall



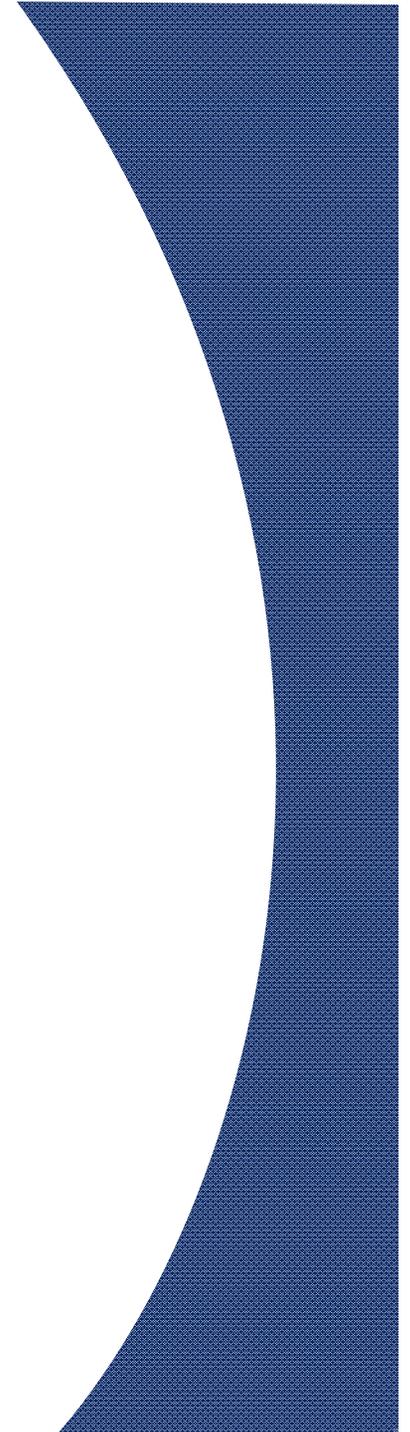
El Vado – Projects EV1-EV7



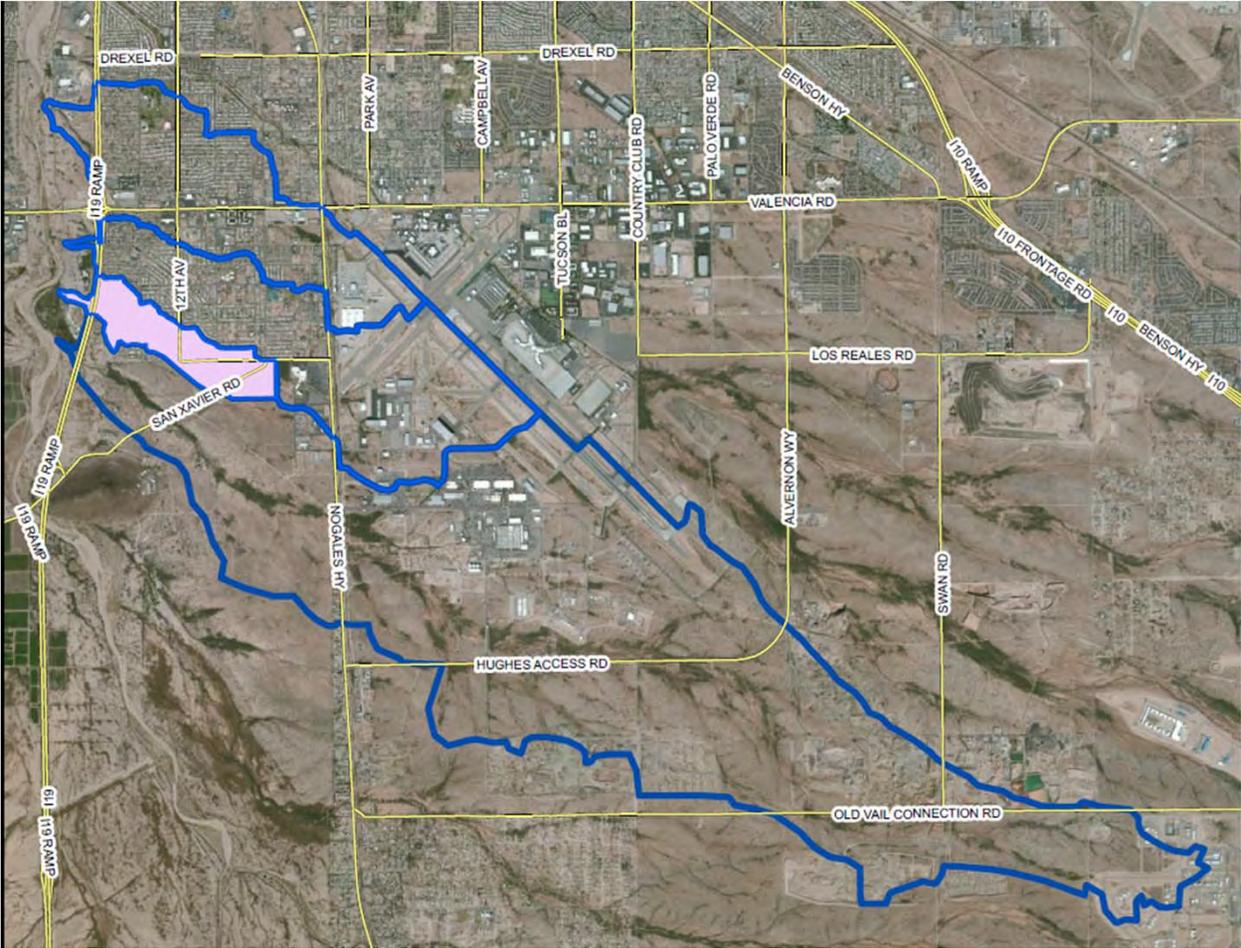
Project EV5 – A prior concept



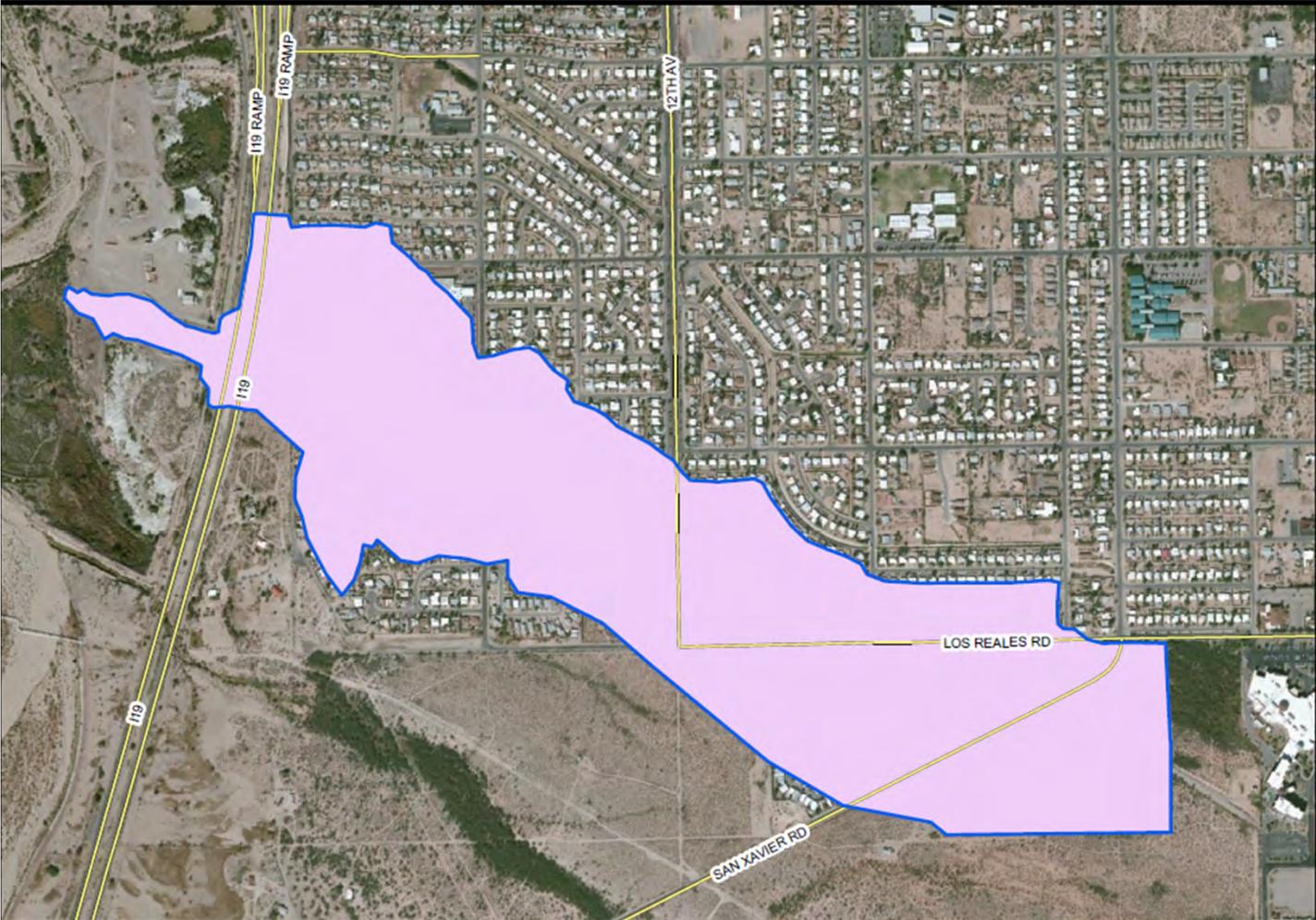
Drachman Institute Concept (2009)



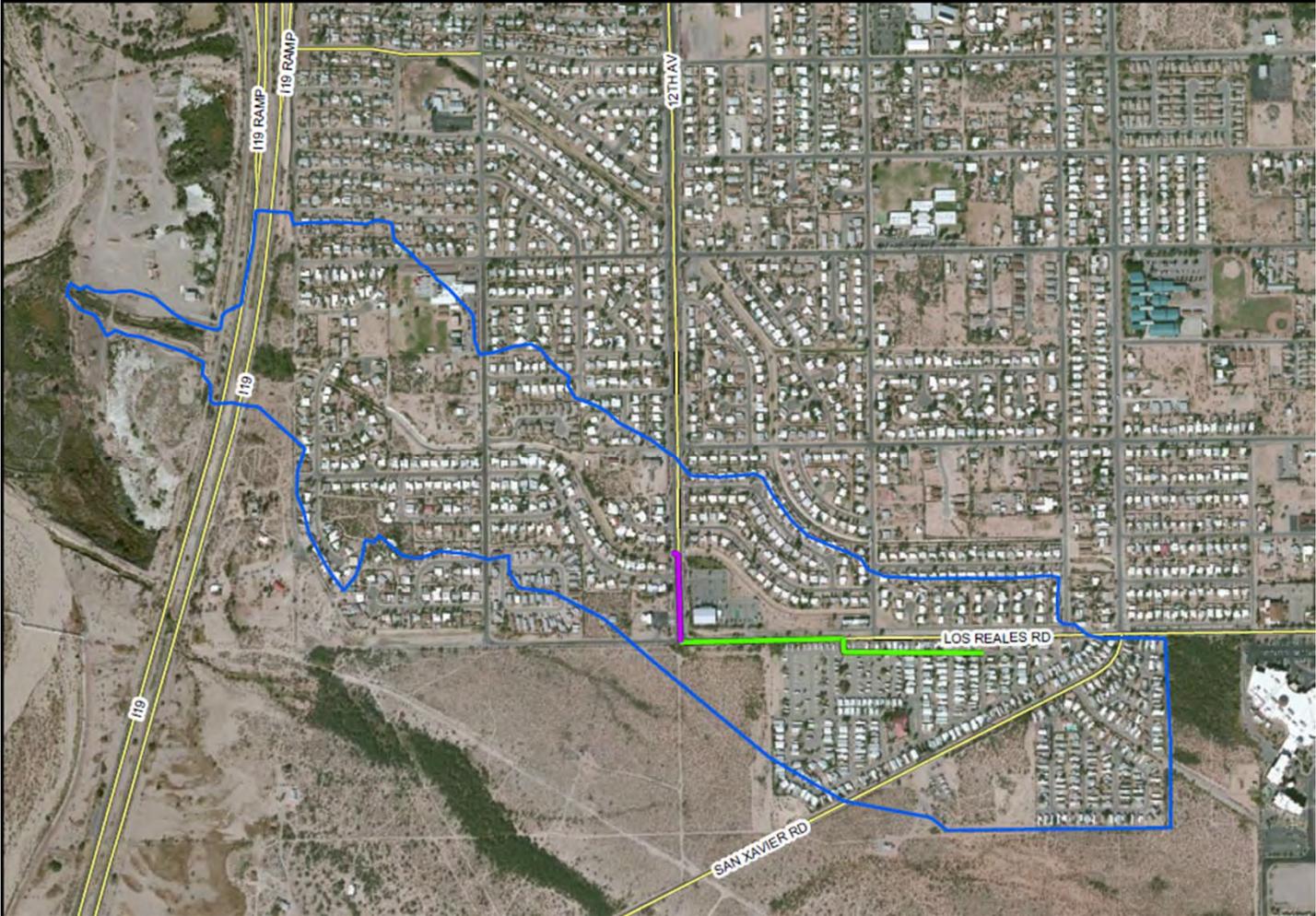
Santa Clara Watershed Vicinity



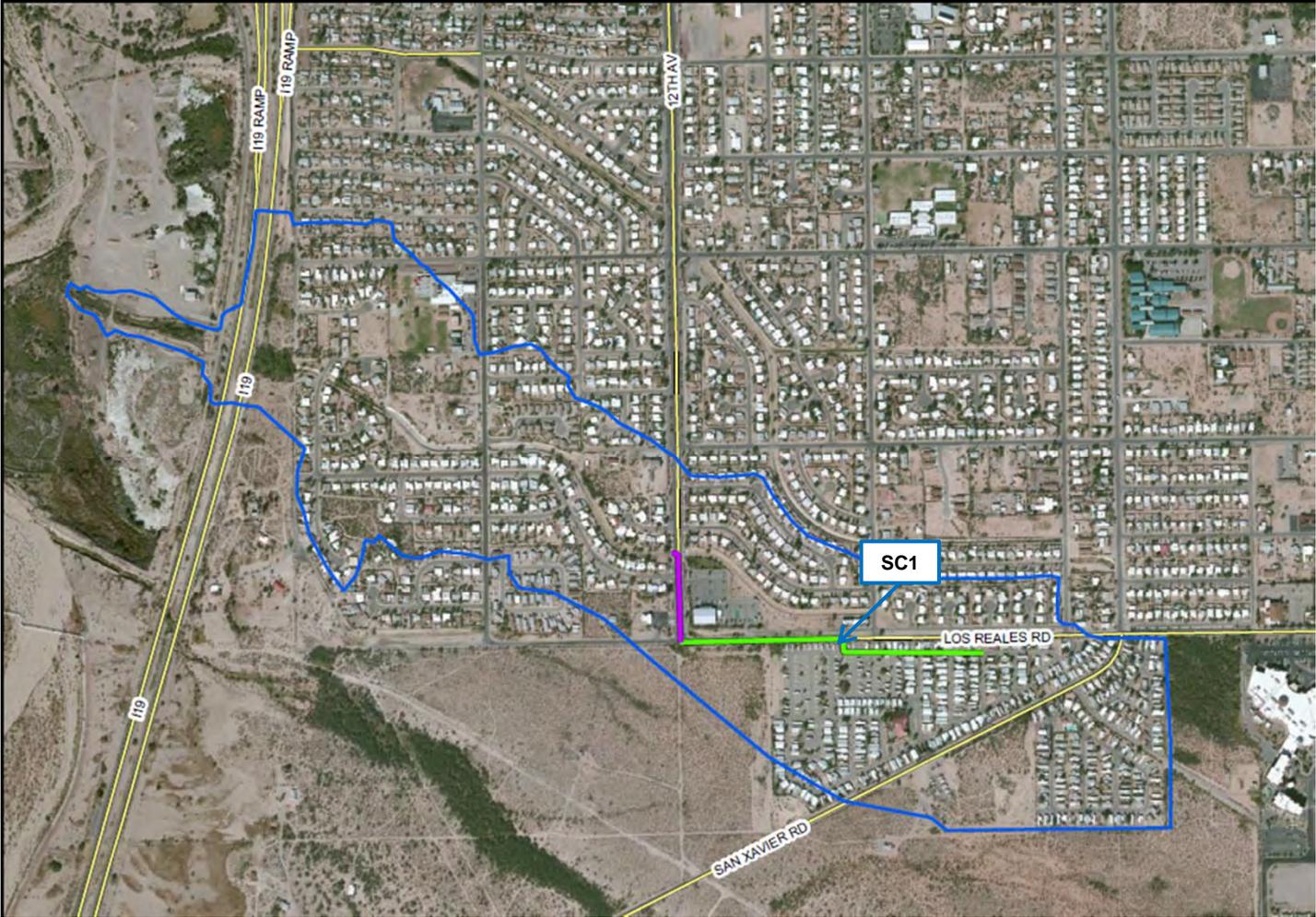
Santa Clara - Watershed Level Focus



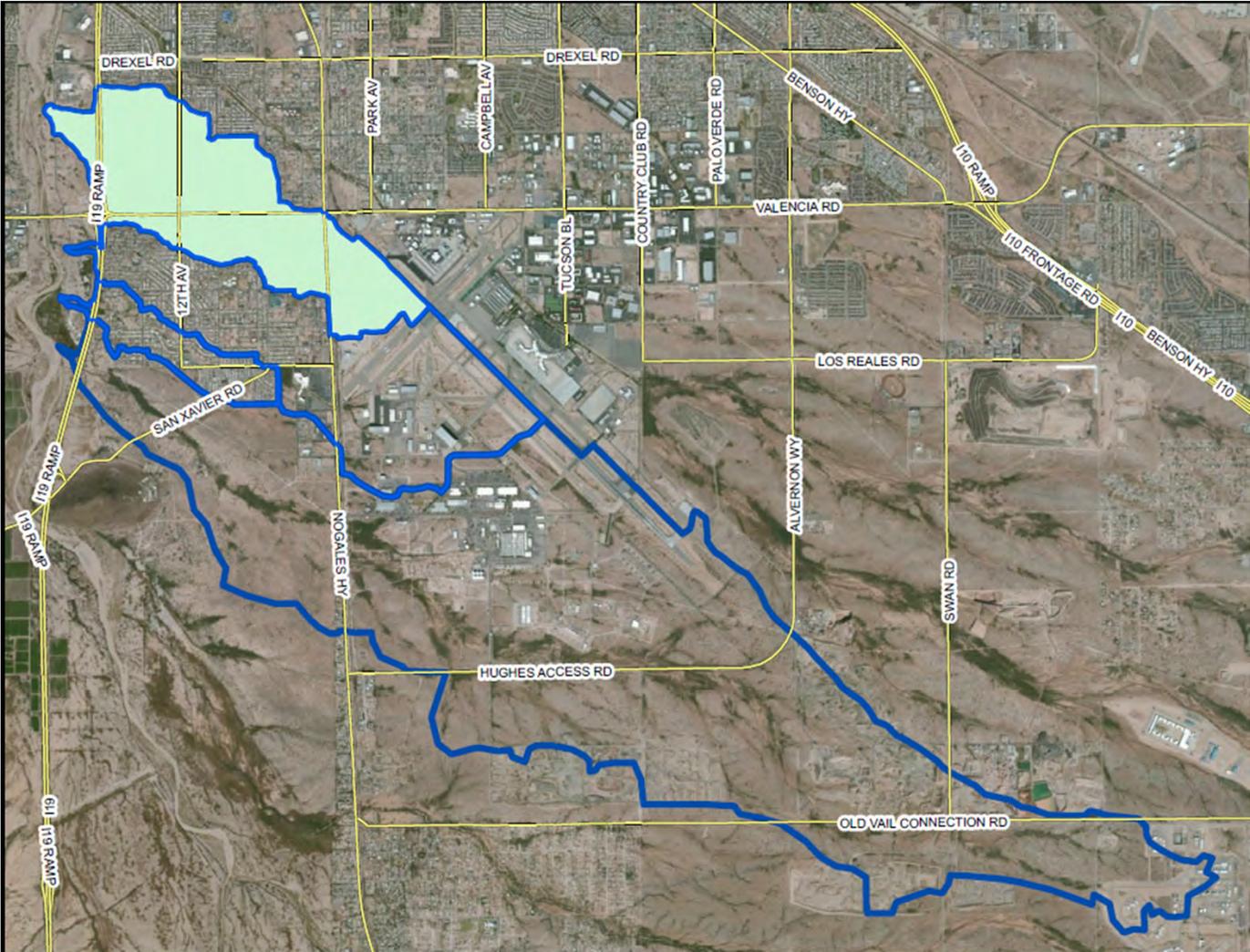
Santa Clara – Storm Drains



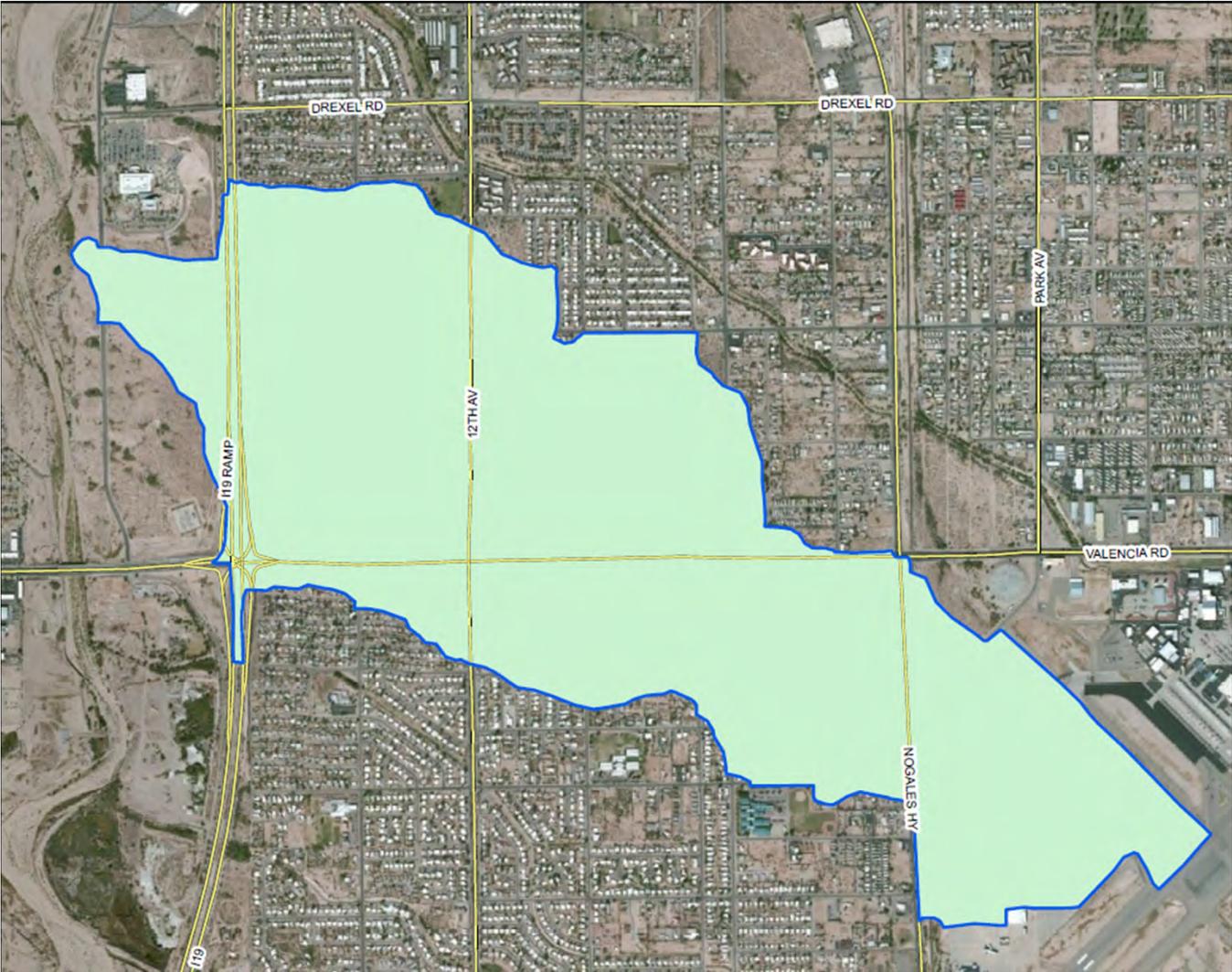
Santa Clara – Project SC1



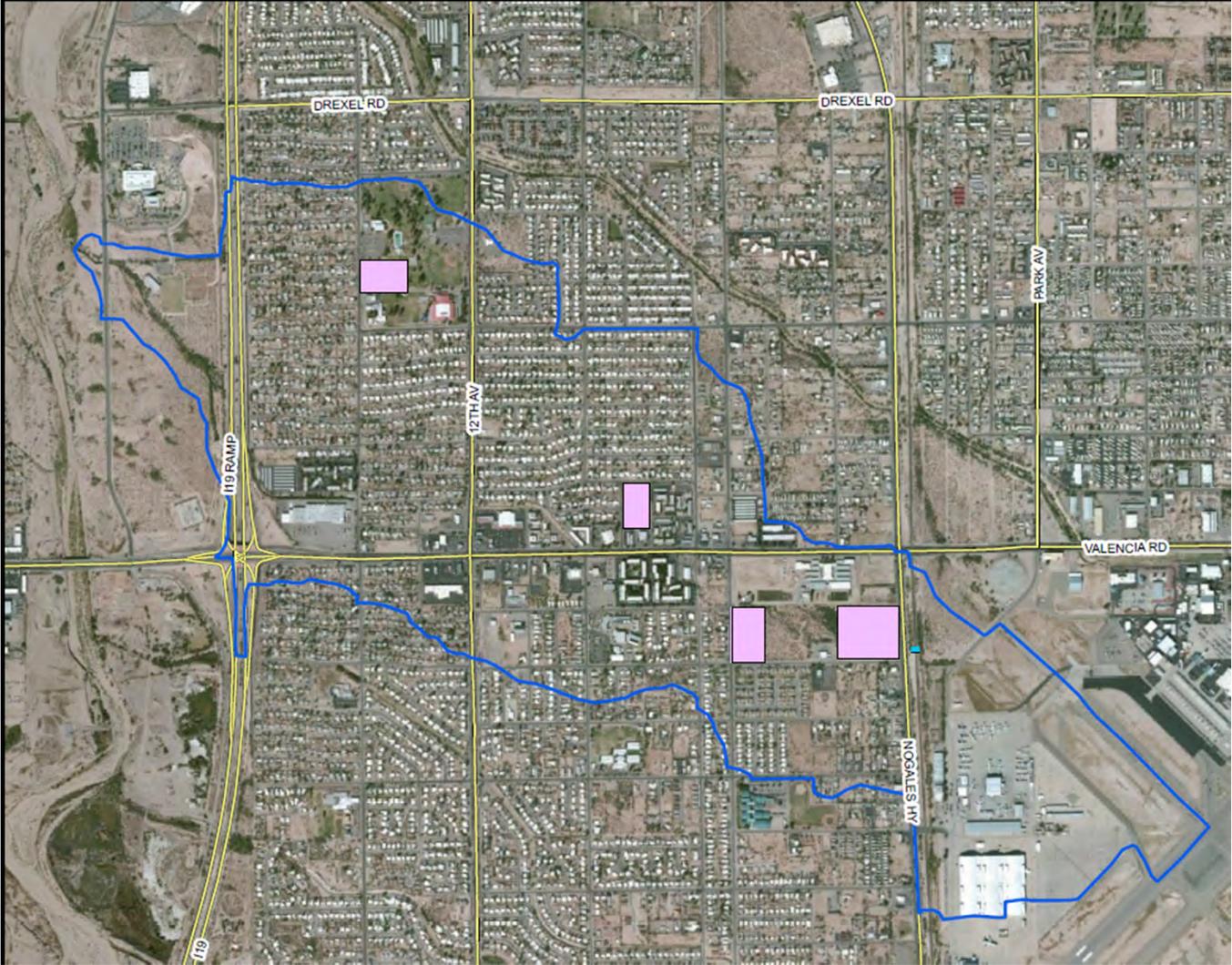
Valencia Watershed Vicinity



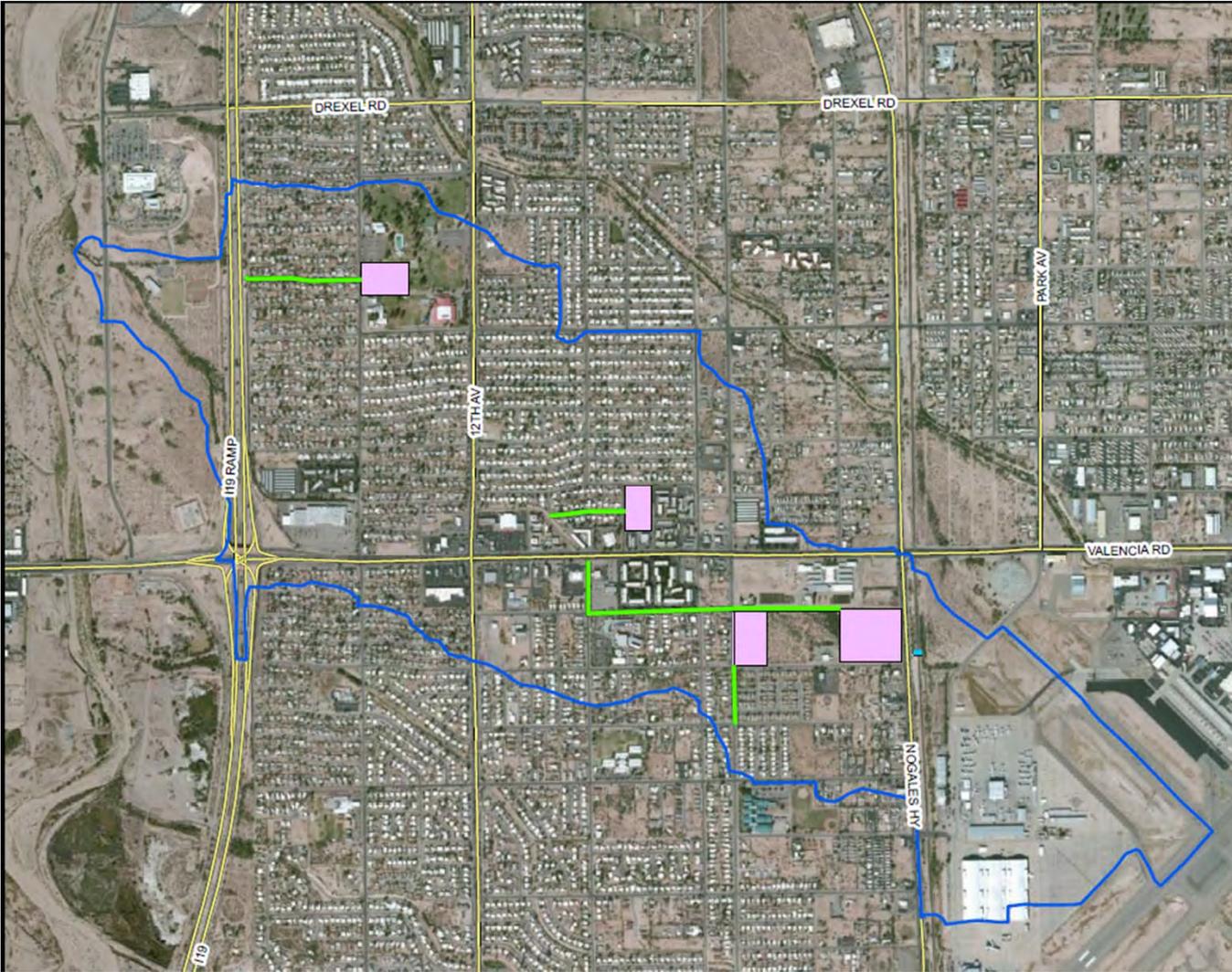
Valencia - Watershed Level Focus



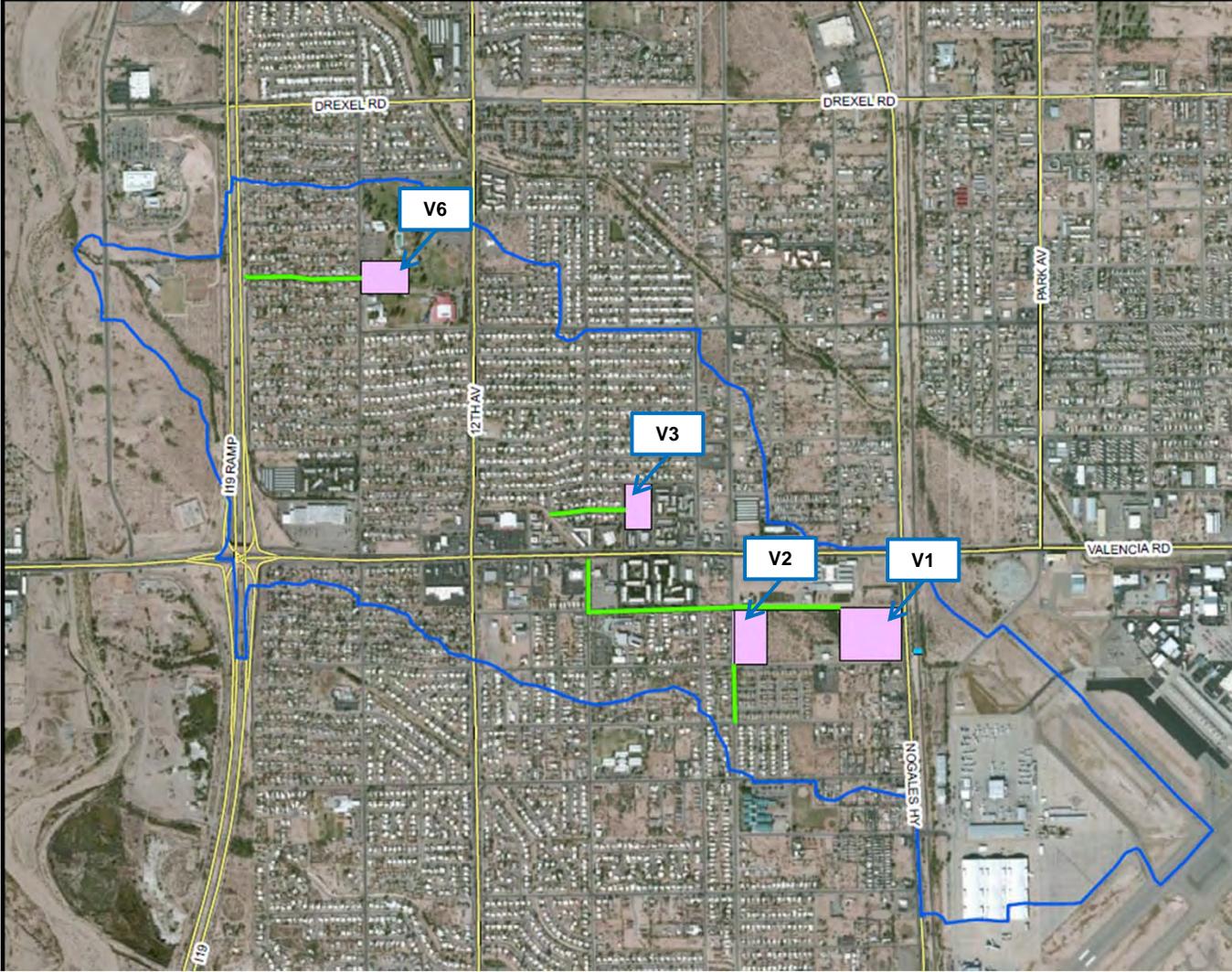
Valencia – Detention Basins/Culverts



Valencia – Storm Drains



Valencia – Projects V1-V3, V6

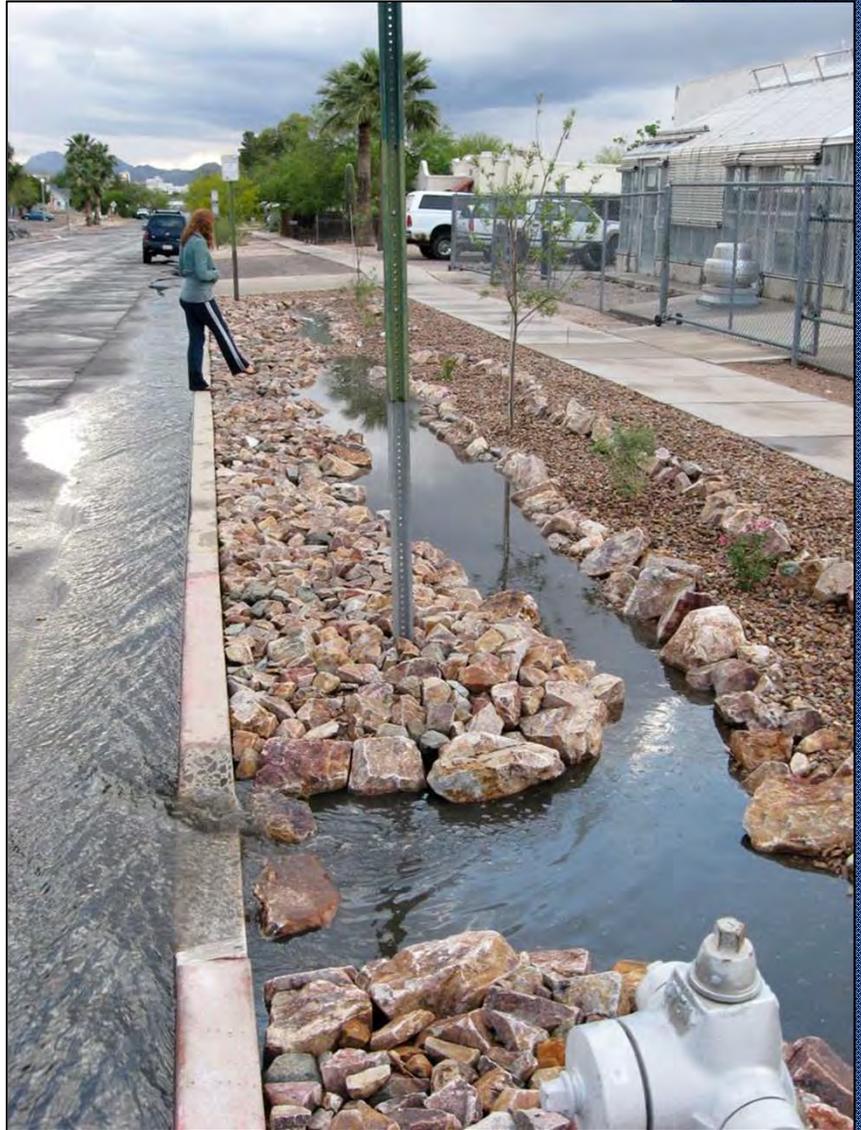




WATERSHED MANAGEMENT GROUP
REDUCING FLOODING
CREATING NEIGHBORHOOD OASES

Kieran Sikdar
Program Manager

www.watershedmg.org



Grey Infrastructure to Green Infrastructure























What Can You Do?

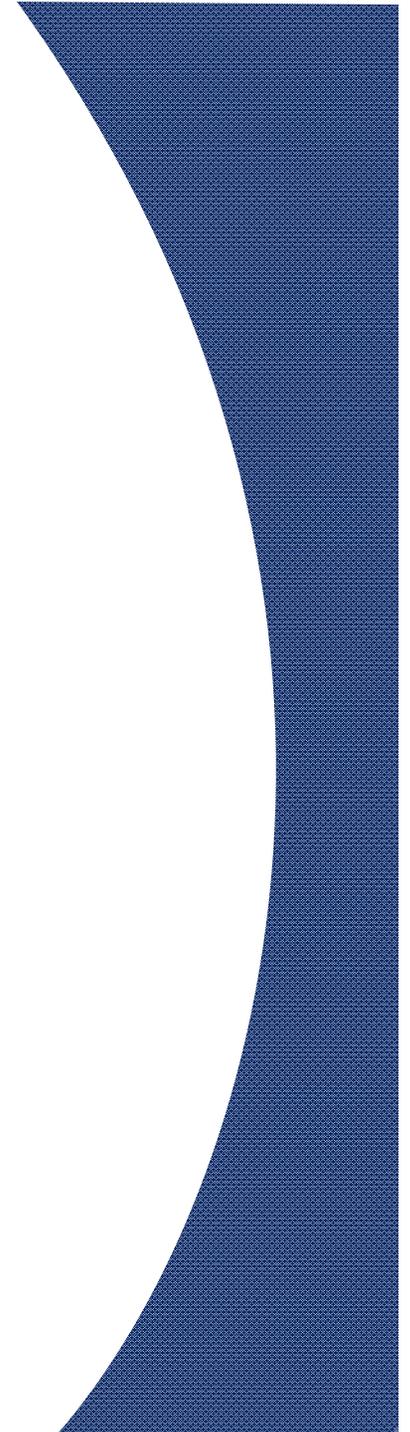
Get involved! Implement your project!

Visit www.watershedmg.org

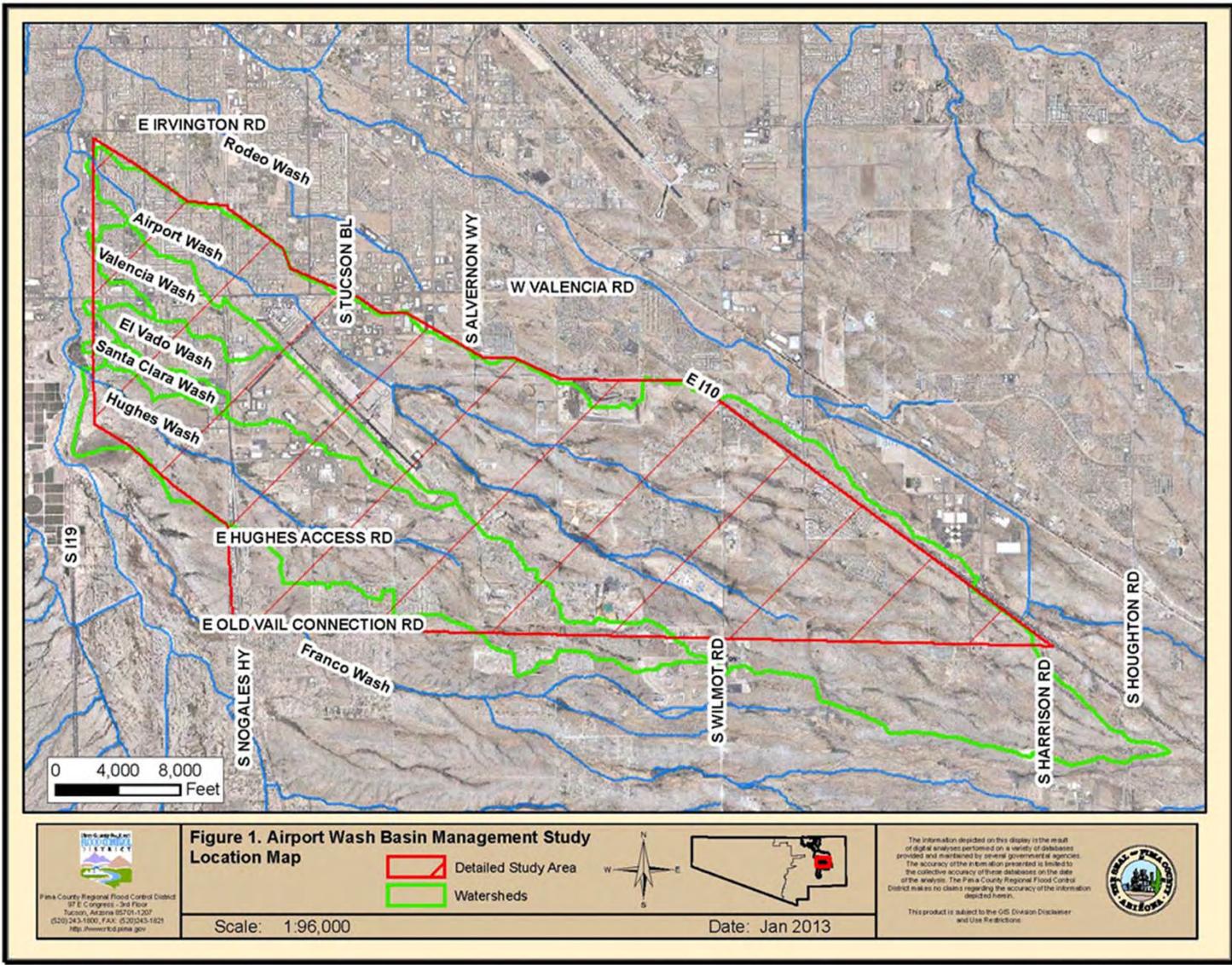


Next Steps

- RFCD/WMG refine Green Infrastructure opportunities
- Jurisdictions work together to prioritize funding



Phase 2 – Airport Wash



Airport Wash (South) Basin Management Study

