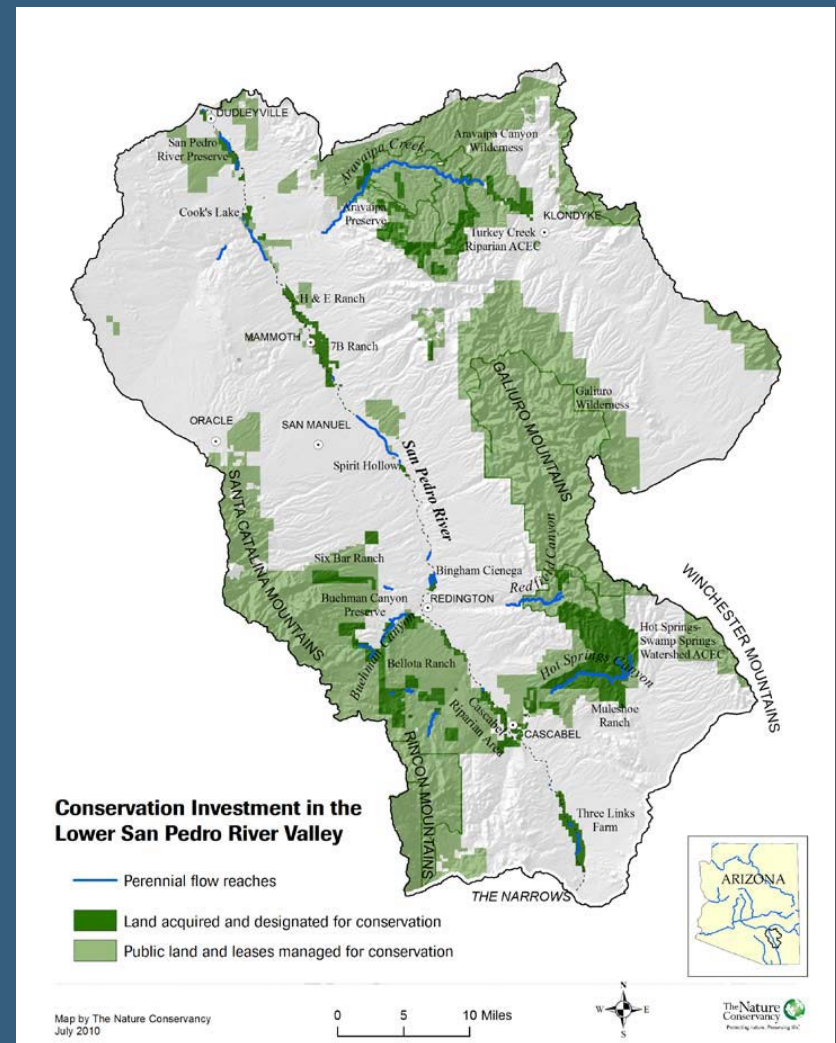


AN UNEXPECTED ALLIANCE:

Collaborative efforts to protect habitat and surface water flows on the Lower San Pedro River



March 20, 2013

Ruth Valencia, Principal Environmental Scientist
Steve Westwood, Senior Water Rights Analyst



Presentation Outline

- Introduction to Salt River Project (SRP)
- Roosevelt Habitat Conservation Plan
 - Lower San Pedro River Activities
- ADWR Subflow Delineation
- Information Needs
- Partnership Activities



Salt River Project

Salt River Valley Water Users Association

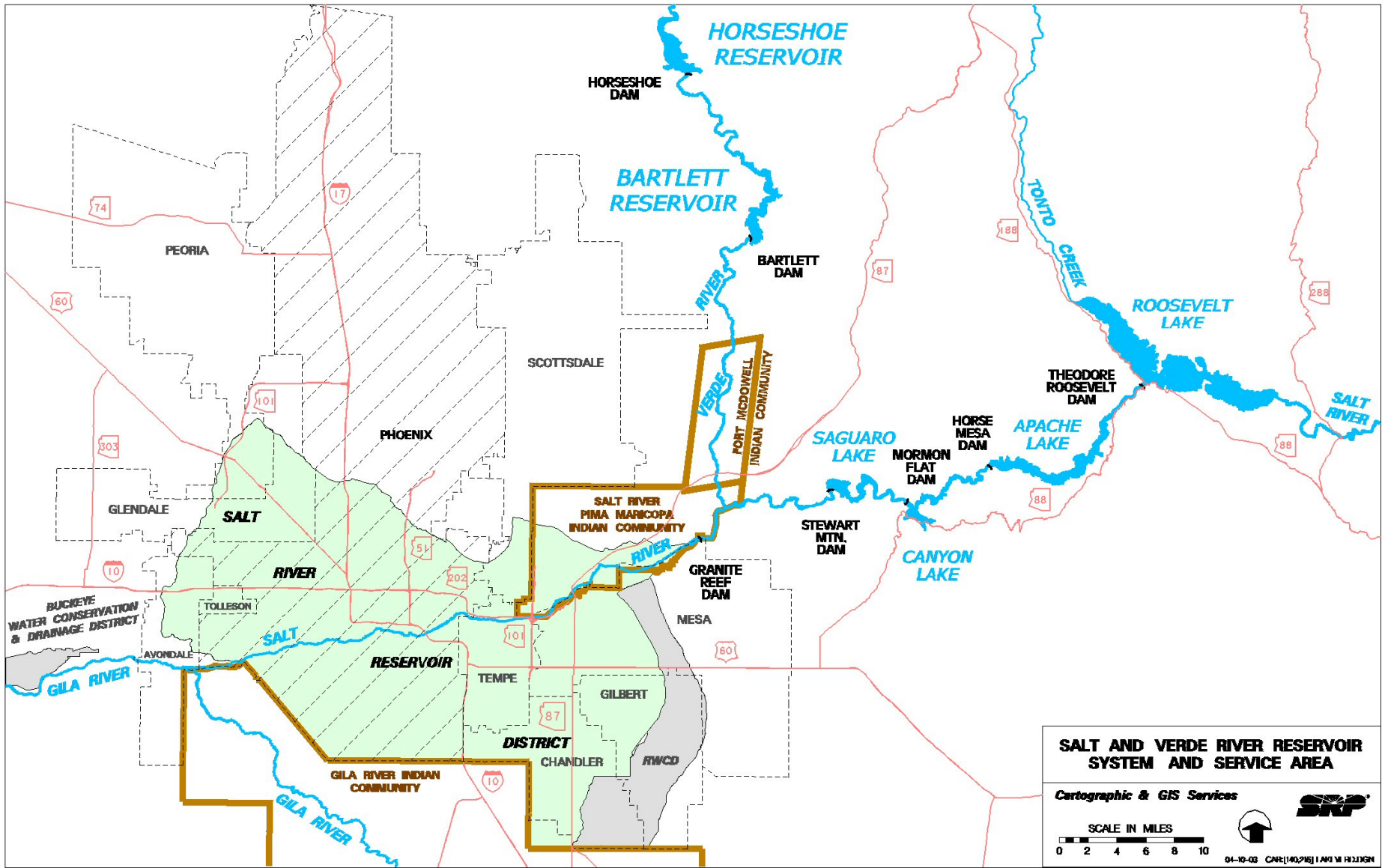
- Established 1903
- Government trustee for Reclamation project (USBR)
- Private corporation
- Agent for Shareholders



SRP Agricultural Improvement and Power District

- Established 1937 as a political subdivision of the state of Arizona
- Created to provide low-cost water
- Property title holder







SALT AND VERDE RIVER RESERVOIR SYSTEM AND SERVICE AREA

Cartographic & GIS Services

SCALE IN MILES

0 2 4 6 8 10

04-10-03 CAPR140215 | AM 18 113130N

Roosevelt Lake Habitat Conservation Plan





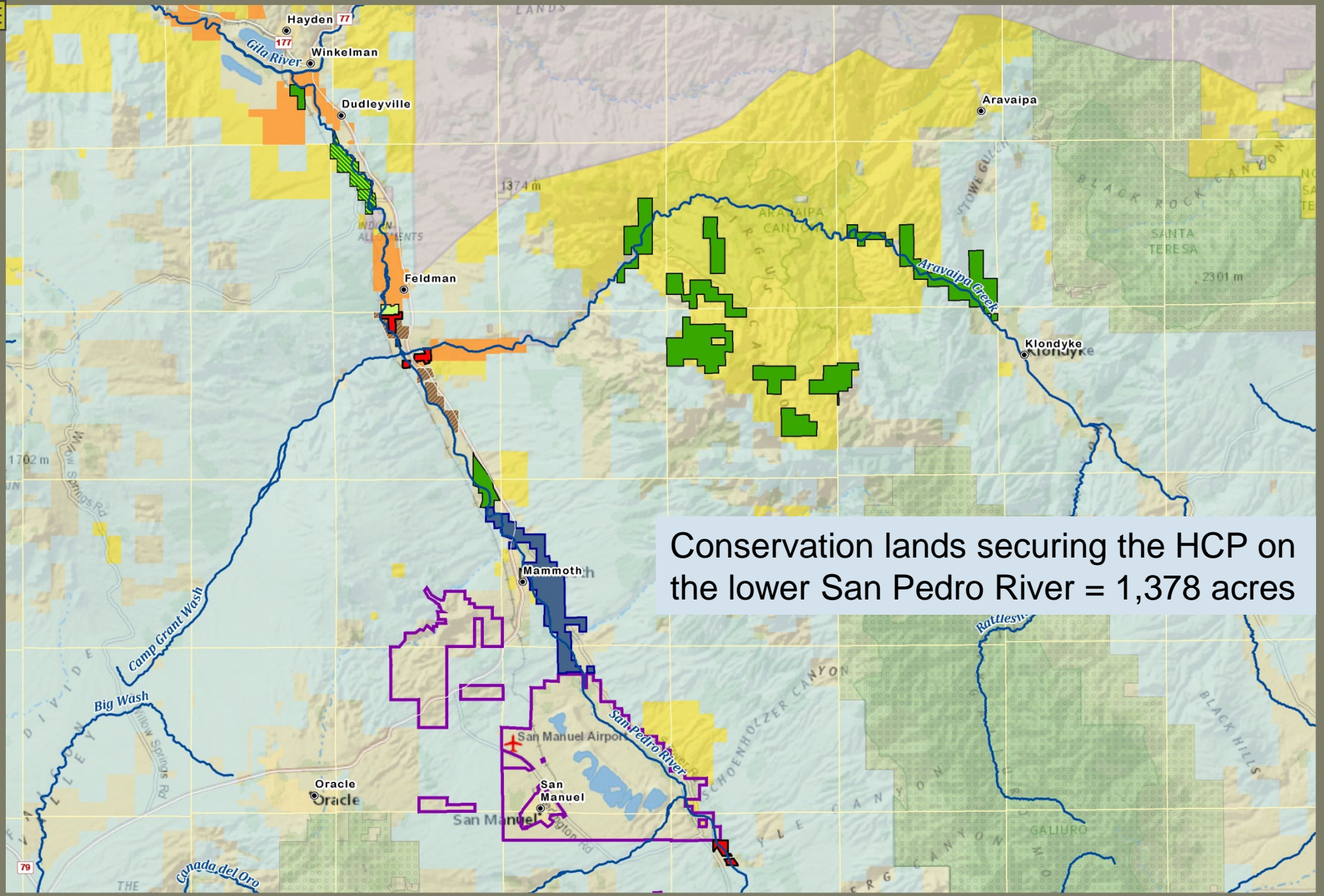
The need for an Incidental Take Permit



Mitigation Obligations (acre-credits)

	Riparian Habitat (minimum)	OTHER Surface Water Rights (max)	Total 3:1 ratio
Phase 1 (by 2/26/03)	500	250	750
Phase 2 (by 8/26/05)	500	250	750
Phase 3 (by 2/26/06)	500	250	750
Totals	1,500	750	2,250
Actual Totals	1,862	729	2,591
Actual Land Acreage	2,361		





Conservation lands securing the HCP on the lower San Pedro River = 1,378 acres

- ASARCO
 - AZGF Proposed
 - BHP Copper Co
 - BOR Cooks Lake
- The Nature Conservancy
 - The Nature Conservancy -Roosevelt Mitigation
 - Resolution Copper Co
 - SRP Mitigation Properties
- BLM
 - Forest Service
 - Indian Reservation
 - State Trust



Lower San Pedro River Land Ownership / Land Management

Management and Monitoring

- Management, in perpetuity
 - ▣ Conservation plans developed & implemented
 - ▣ Conservation easements prior to permit expiration
 - ▣ “Aggressively asserting & defending all water rights associated with properties
 - ▣ Vegetation/habitat monitoring
 - ▣ Flycatcher and cuckoo surveys



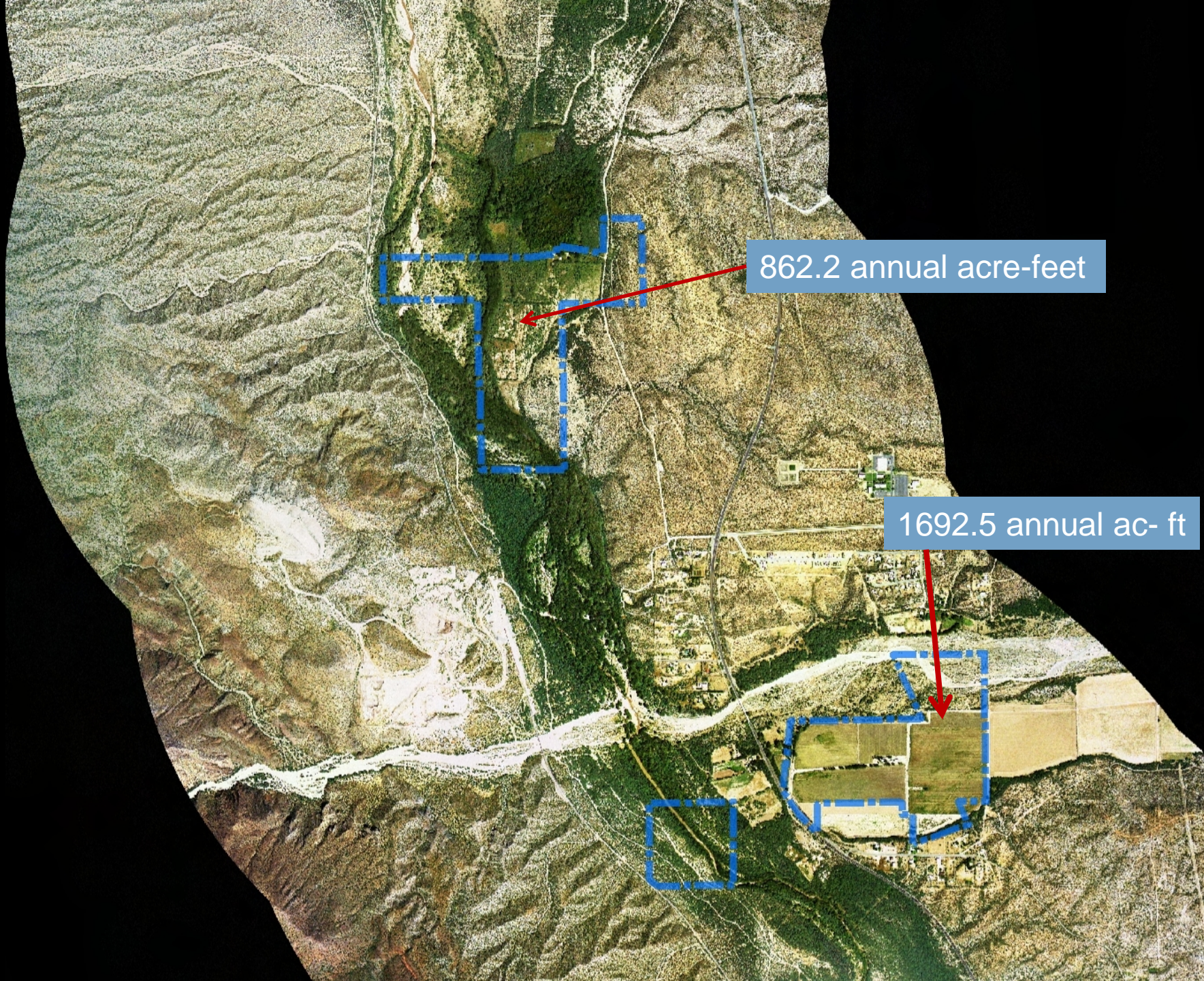
Protection of Streamflows on the Lower San Pedro River

- SRP receives mitigation credit under the Roosevelt HCP for acquiring and retiring surface water rights

Goal: Increase water supply to improve the extent and quality of riparian habitat

Process: Sever & transfer water rights from agricultural use to instream flow for the benefit of wildlife.





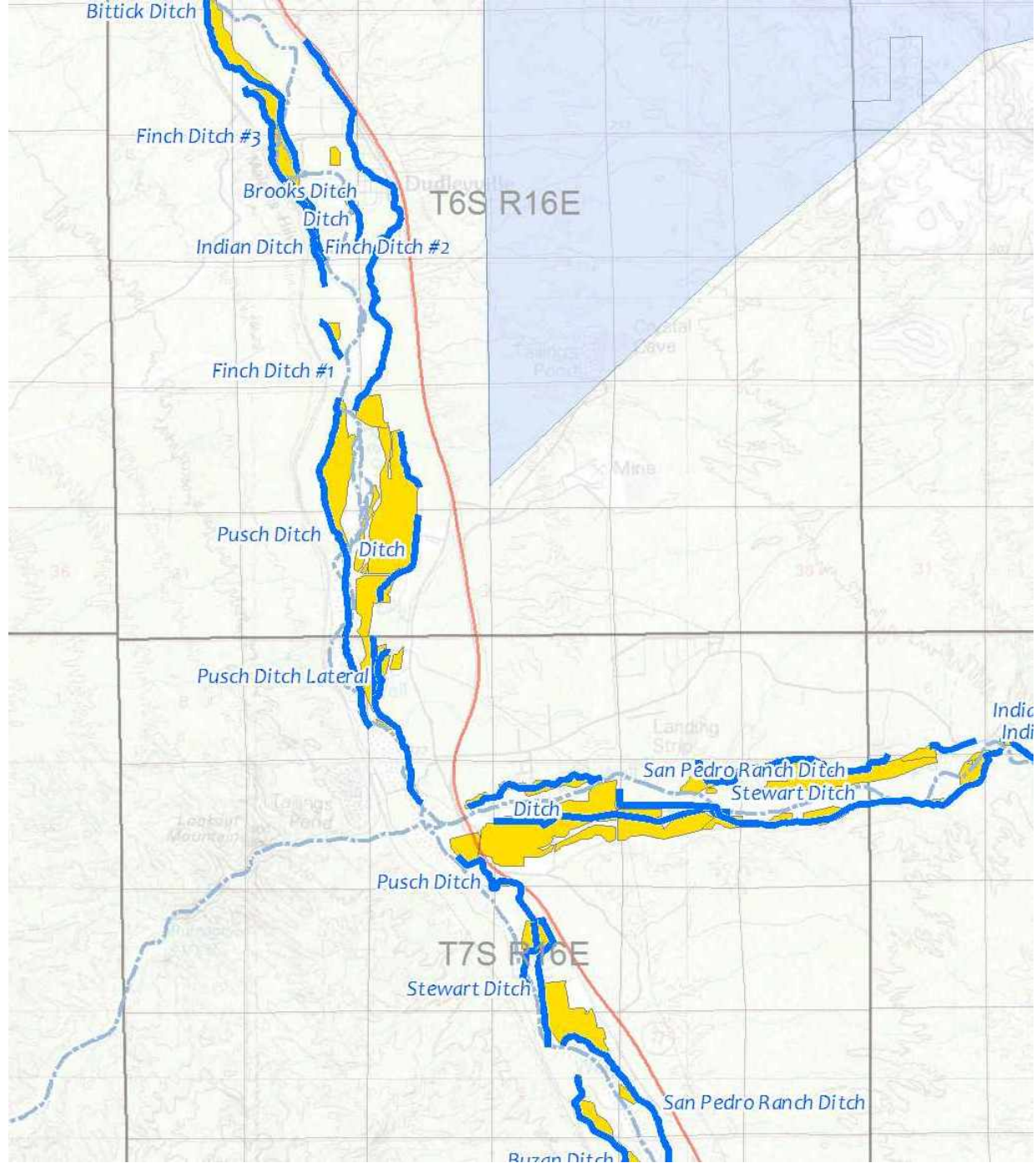
862.2 annual acre-feet

1692.5 annual ac- ft



Severance & Transfer Application

- Applicant Information
- \$500 fee (increased substantially)
- Information regarding right or claim
 - ▣ Type of water source and name
 - ▣ Location of point of water diversion
 - ▣ Location of places of water use
 - ▣ Types, amount and timing of use
 - ▣ Priority dates
 - ▣ Legal basis for claim





Status of Applications

- S&T applications filed in 2005 for Adobe, Black Farm
- ADWR requested additional info for Adobe in 2010
- SRP responded in 2011
- Notice of application was advertised according to state law late 2011
- Notice of application for the Black Farm Preserve was advertised in January 2013
- Received objections filed by several interested parties
- SRP in process of resolving those objections

The Power of Partnerships

Additive value of cooperative actions

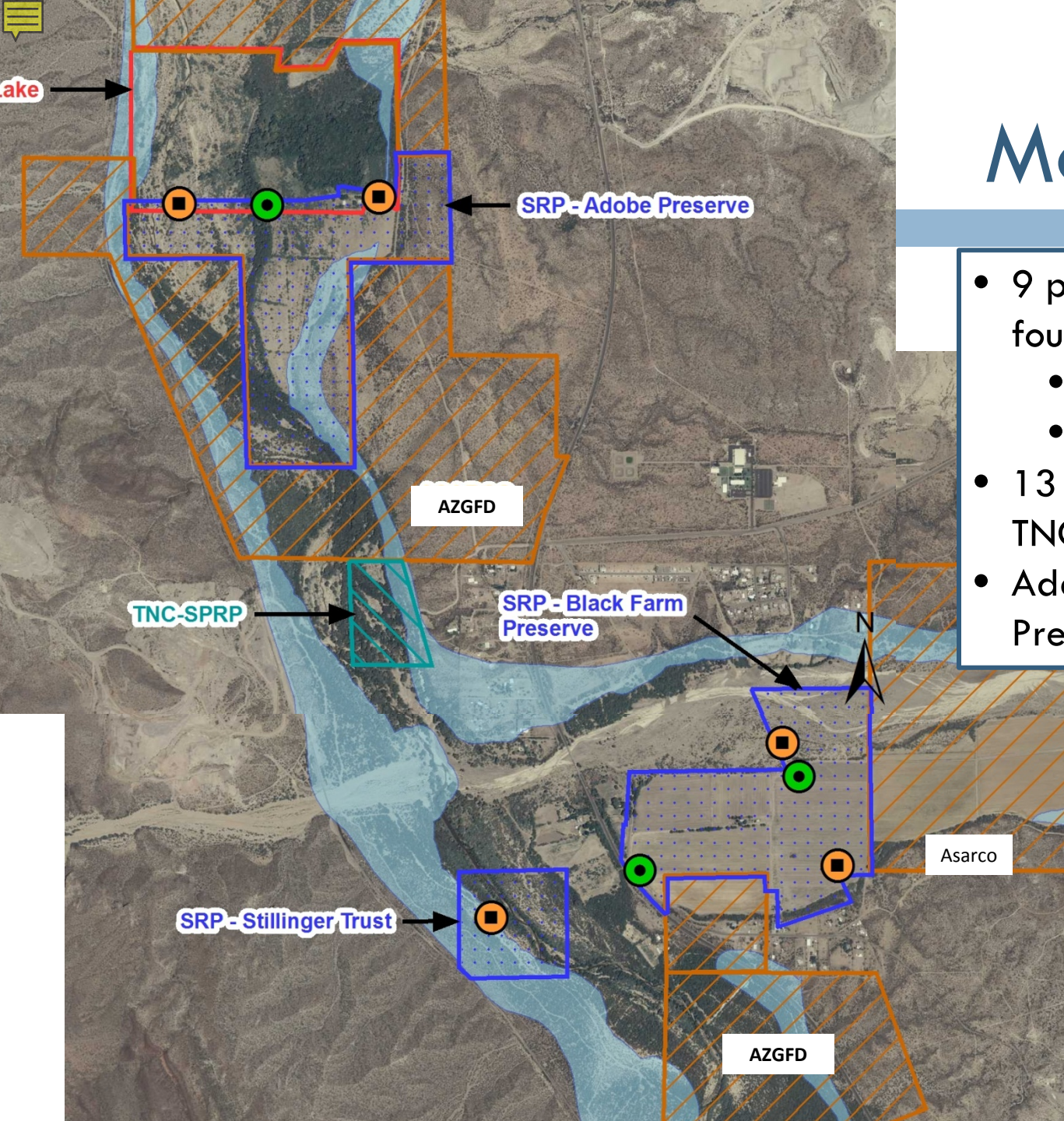
- SRP + TNC + USBR + Asarco = 10,555+ acre-feet/year
- Three Links Farm* ~3500 afa
 - ▣ Application filed in 2007; no action
- San Pedro Riparian Preserve* ~ 2500 afa (440 in RHCP)
- H&E Farm ~ 2100 afa
 - Fee increase has delayed applications
- ASARCO 404 permit mitigation

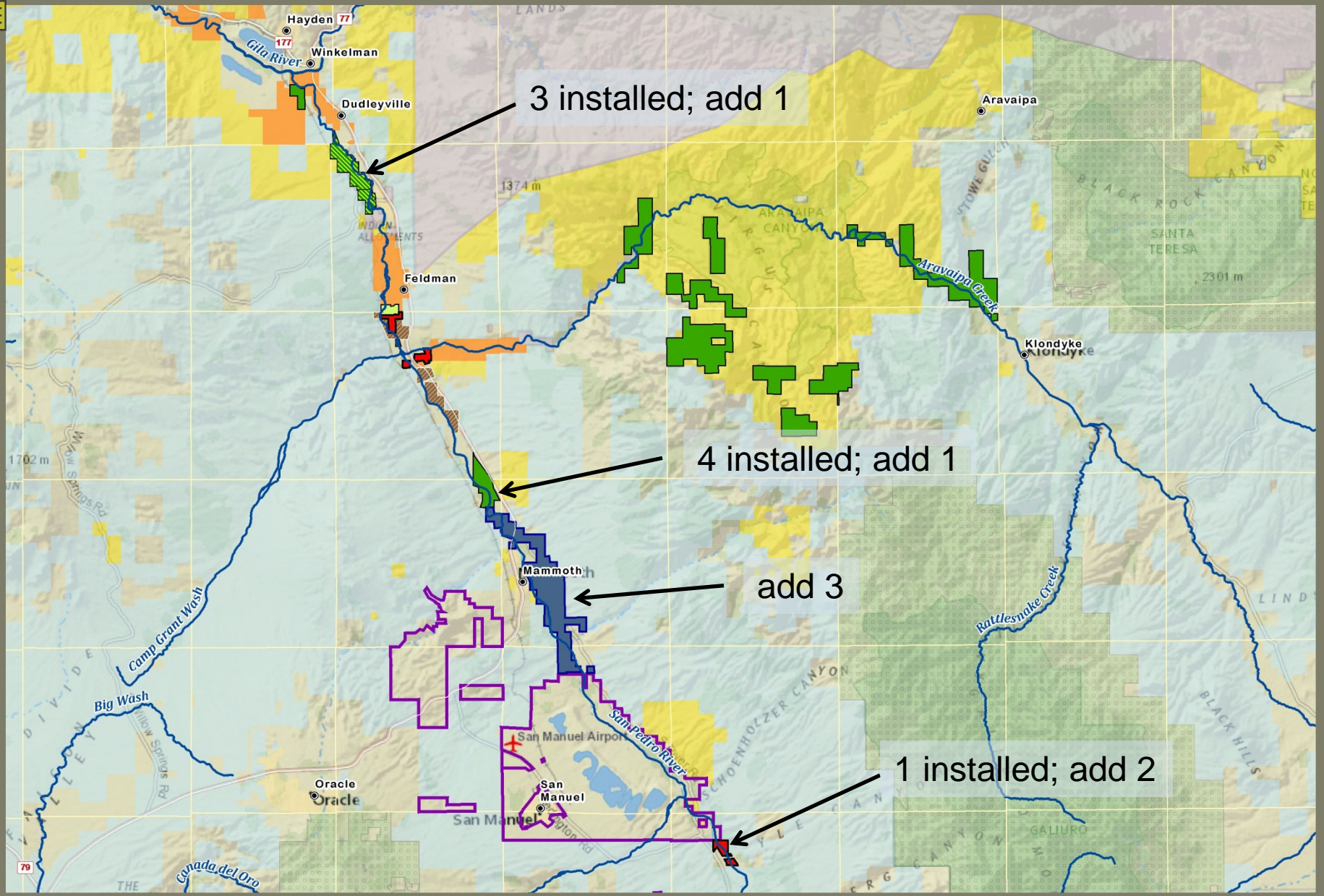
*SRP, as a subdivision of the state, can retain the original first use date of water rights.



Monitoring:

- 9 piezometers installed on four mitigation properties
 - 5 shallow @ ~30 ft
 - 4 deeper @ 80-90 ft
- 13 existing piezometers on TNC, RCC
- Add 2 more at Spirit Hollow Preserve (San Manuel)





SPLandManage.MXD 03-08-12

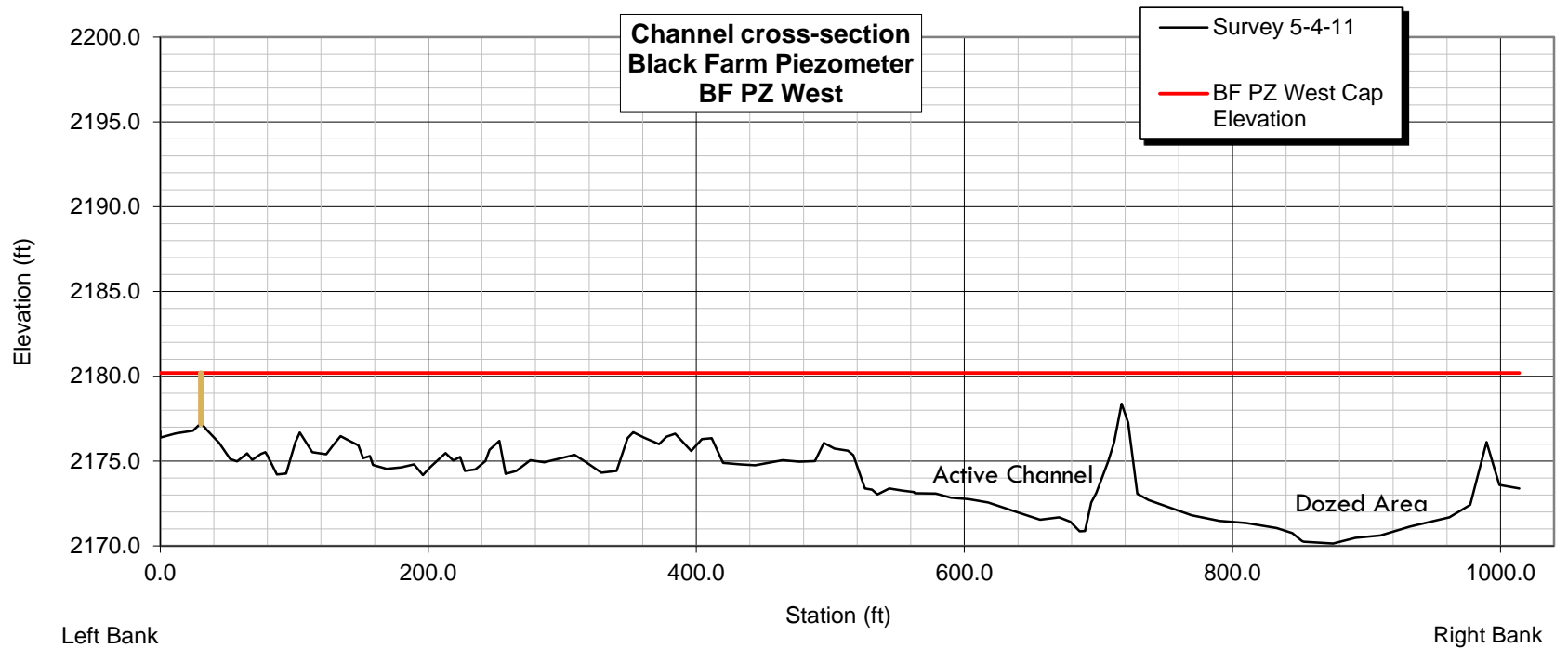
- | | | |
|----------------|--|--------------------|
| ASARCO | The Nature Conservancy | BLM |
| AZGF Proposed | The Nature Conservancy -Roosevelt Mitigation | Forest Service |
| BHP Copper Co | Resolution Copper Co | Indian Reservation |
| BOR Cooks Lake | SRP Mitigation Properties | State Trust |



**Lower San Pedro River
Land Ownership / Land Management**



Looking downstream towards the cross section





Why we care about the San Pedro



Photo courtesy of Liz Grove



What We Have to Lose

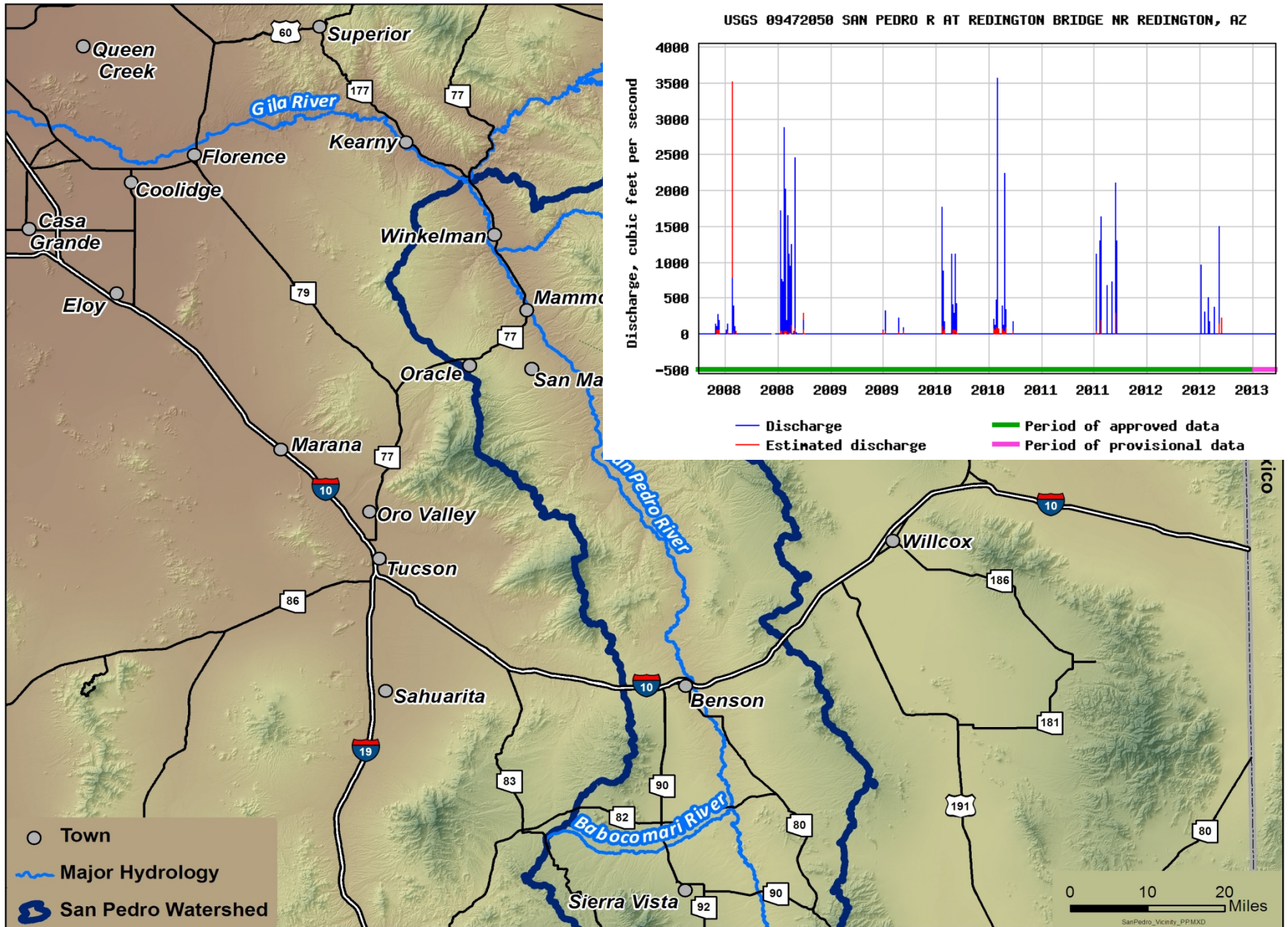


Santa Cruz River flowing



Santa Cruz River Dry

San Pedro Watershed





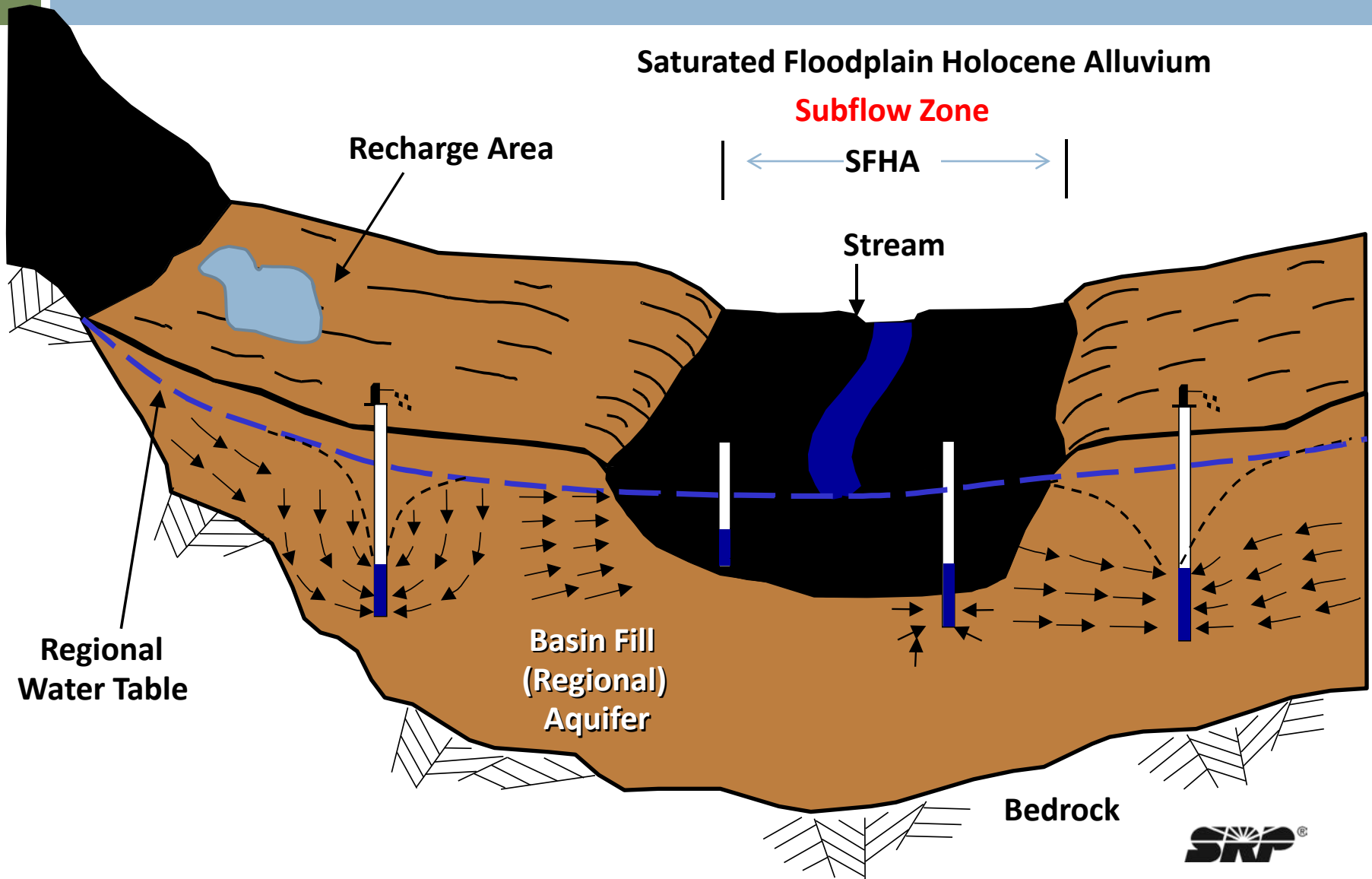
Arizona Water Law - Bifurcated

- **Surface water**
 - Doctrine of prior appropriation
 - First in time, first in right

- **Groundwater**
 - Regulated in AMA to mitigate overdraft
 - Doctrine of reasonable use (non AMA)

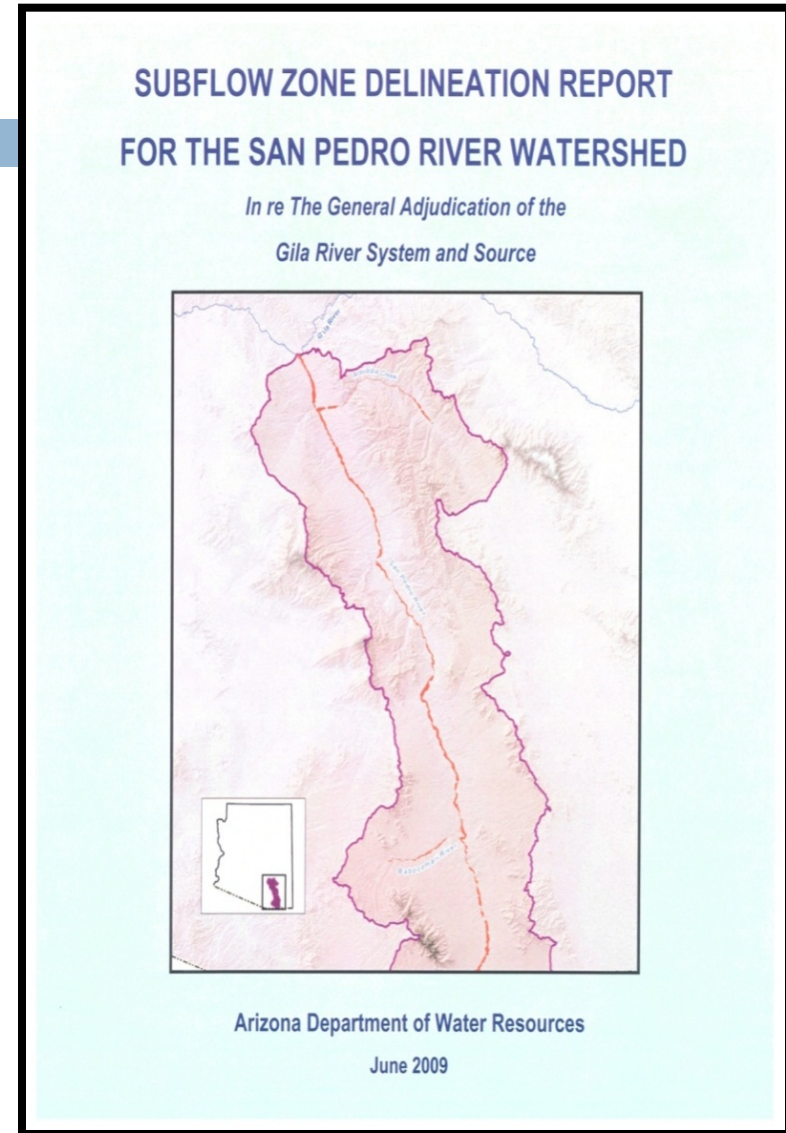
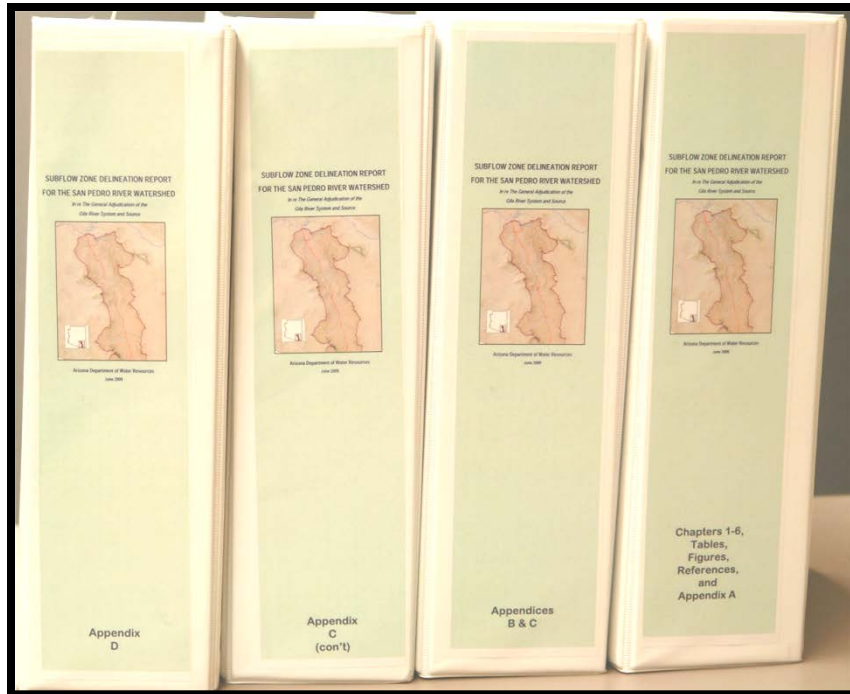
- Appropriable water includes surface water and certain subsurface water known as **Subflow**

Subflow Evolution



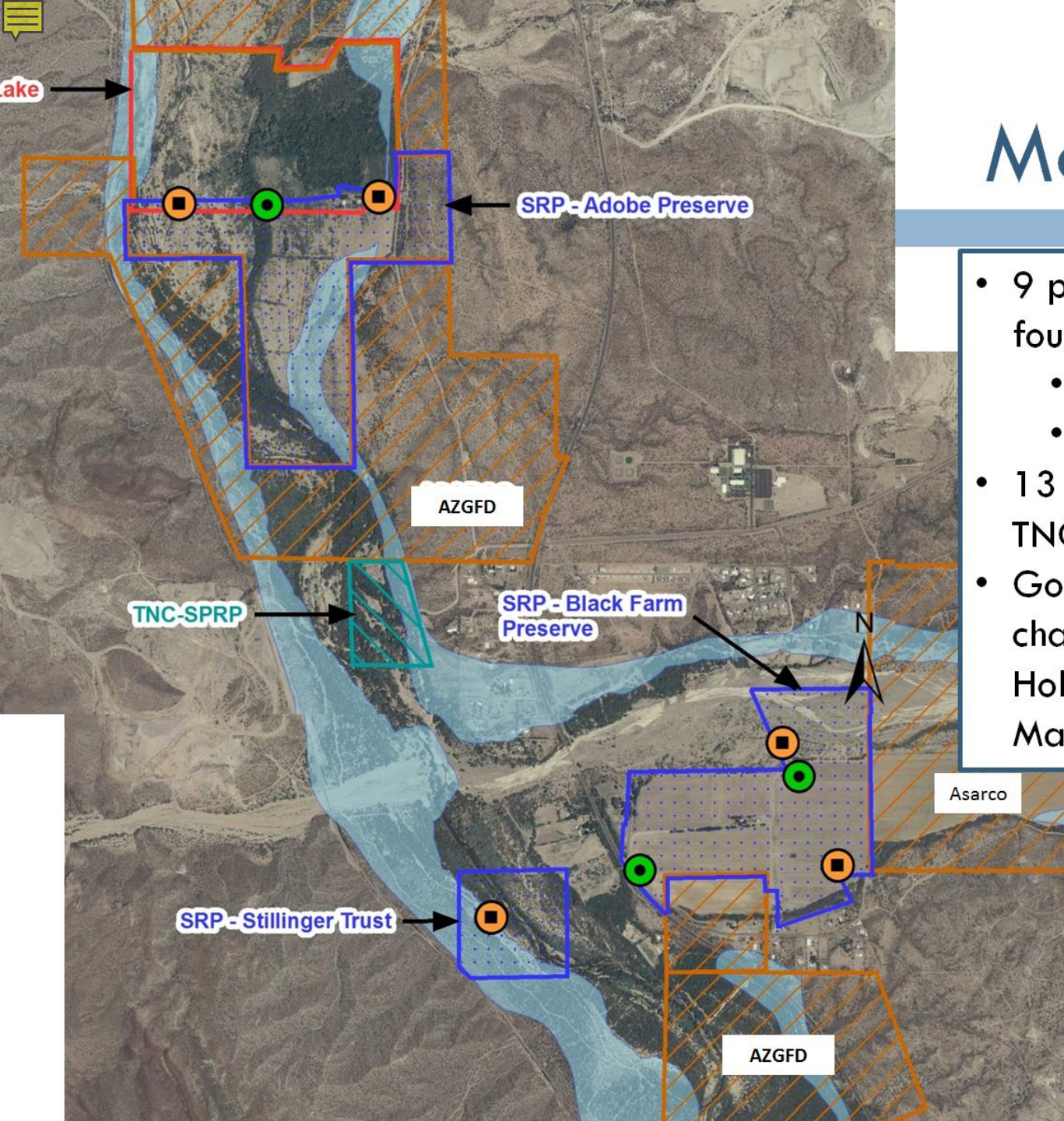
ADWR Technical Reports

- ADWR directed by Court
- Recommend methodology
- Intensive effort



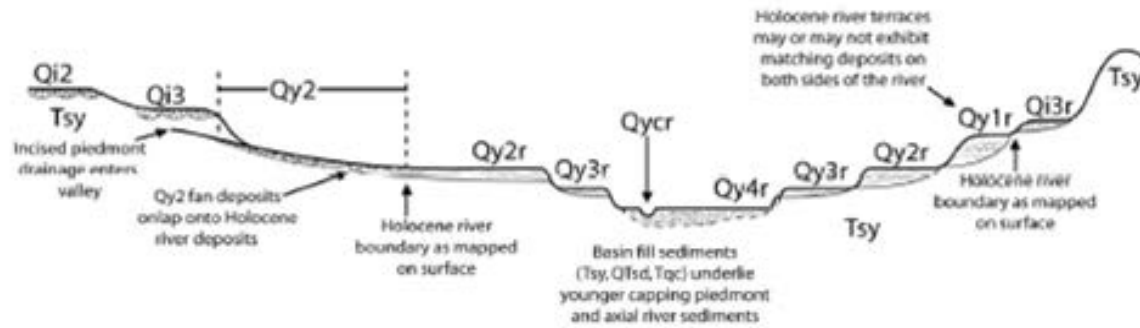
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- Goal: Add 2 more for cross-channel data at Spirit Hollow Preserve (San Manuel)



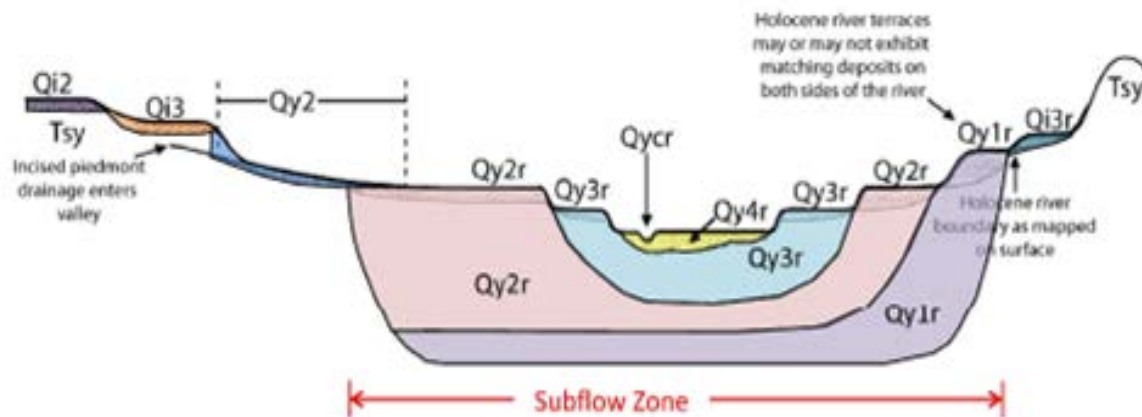
Surficial Geology and Interpretation

ADWR/AGS View of Quaternary Stratigraphy



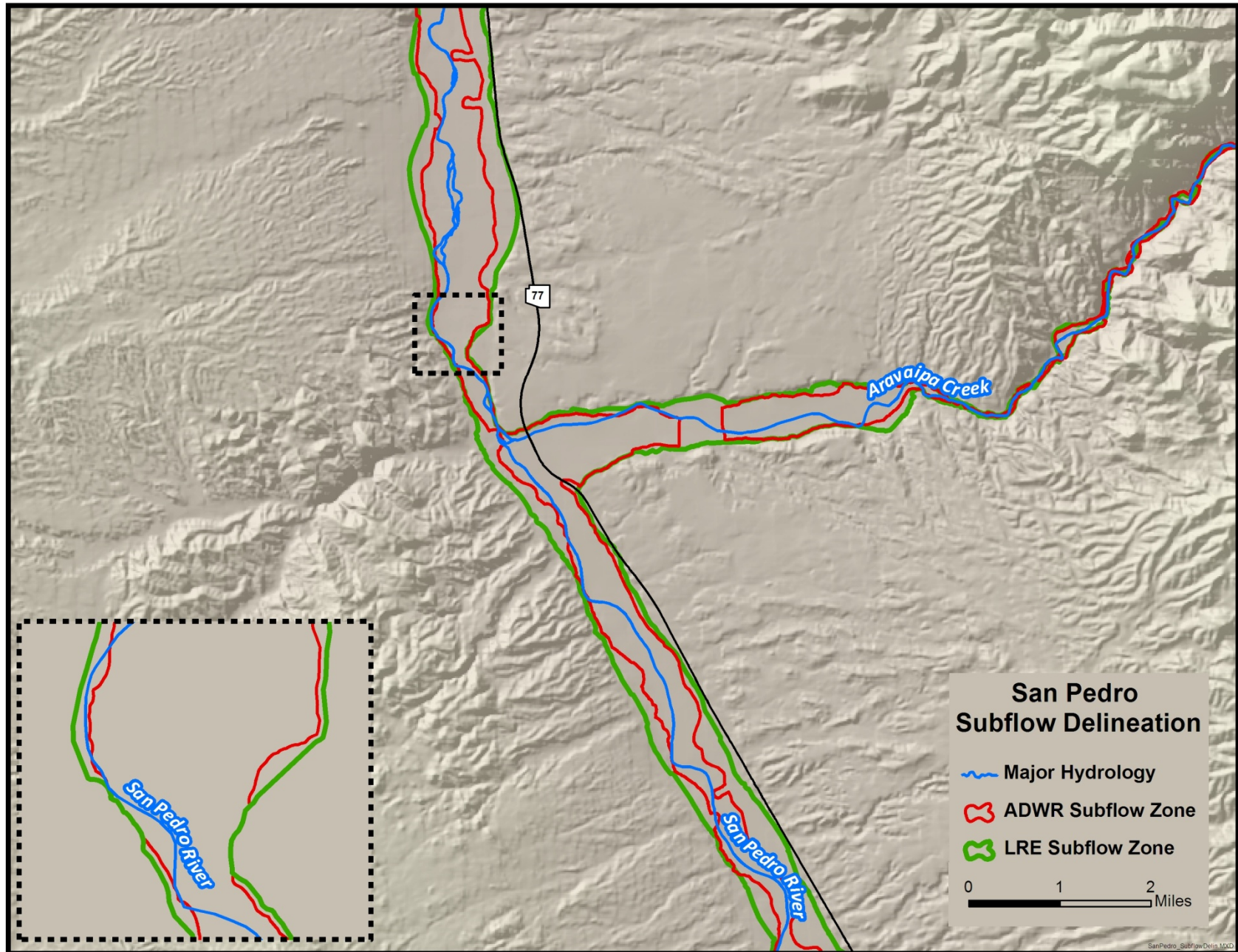
Generalized cross section of geomorphic relationships between Tertiary basin fill (Tsy), Pleistocene piedmont and river (Qi_n and Qi_{n,r} units), and Holocene piedmont and river (Qy_n and Qy_{n,r} units) deposits (from ADWR Figure 4.1, 2009, and AGS Figure 3, 2008).

Corrected Quaternary Stratigraphy



Corrected generalized cross section based upon subsurface interpretation of driller's logs.

Plan View of Subflow Zones



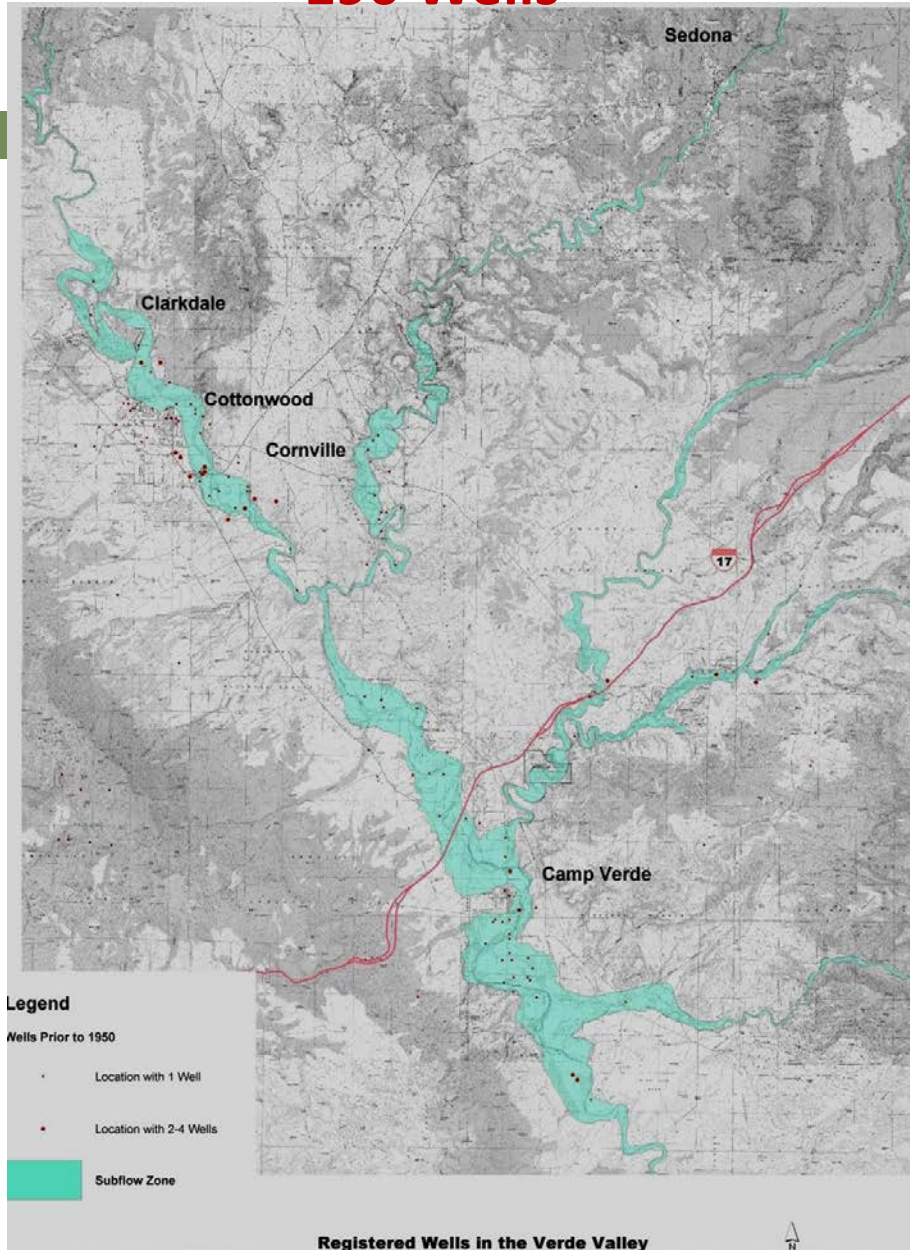
Broad Legal Implications

Precedent on Salt and Verde Rivers

- Presumption and Burden of Proof
- Methodology for determining the subflow zone
- New Adjudication Judges
- Decision latency
- Cost

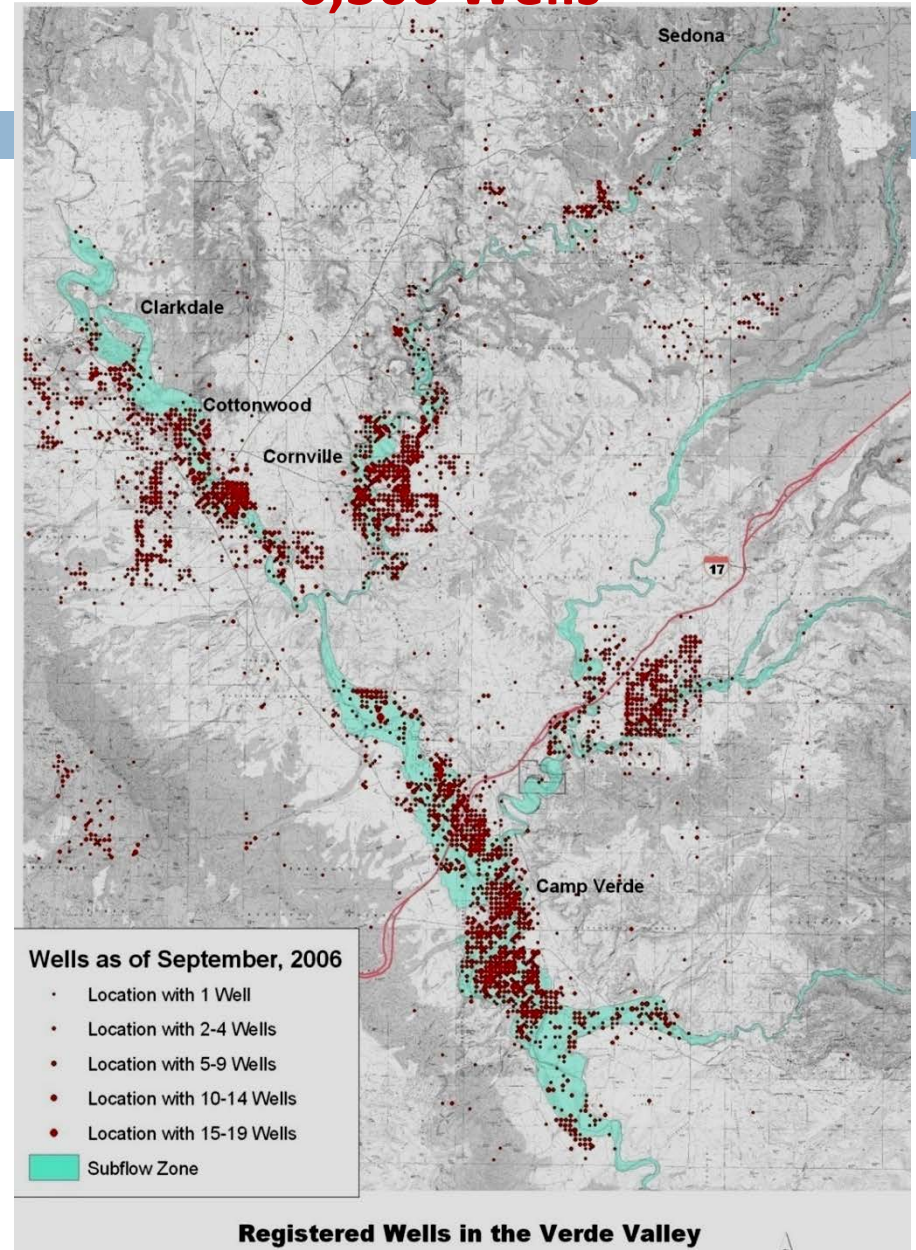
Verde Valley Wells in 1950:

190 Wells



Verde Valley Wells in 2006:

6,300 Wells



On-Going Data Needs

- Fortify the culture of data and information sharing and re-use.
- Be kind to data be good stewards
- Manage it and treat it like an asset.
- Partnerships and collaboration
- Transparency and availability
- Caveat... when prudent!

Data Sharing

- ❑ Centralized in TNC database
- ❑ Establish process for entering & accessing data
- ❑ Sensitive issue
- ❑ Work in progress
- ❑ Staffing changes



Partnership Activities

- Conservation Landowner Working Group
 - ▣ Active coordination on land management issues, needs
 - Fencing, equipment, labor
 - Wildlife surveys, research, hydrologic data
 - Restoration experiences
 - Wildfire planning, coordination
- Lower San Pedro Partnership*
- Upcoming Events
 - ▣ EcoFest – Saturday, April 13
 - ▣ Wet-dry Mapping, mid-June





Questions?

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Steve.Westwood@srpnet.com
602-236- 3027

Ruth Valencia
Biological & Cultural Resources, SRP
Ruth.Valencia@srpnet.com
602-236-2830



Stabilizing Retired Agricultural Lands



Black Farm



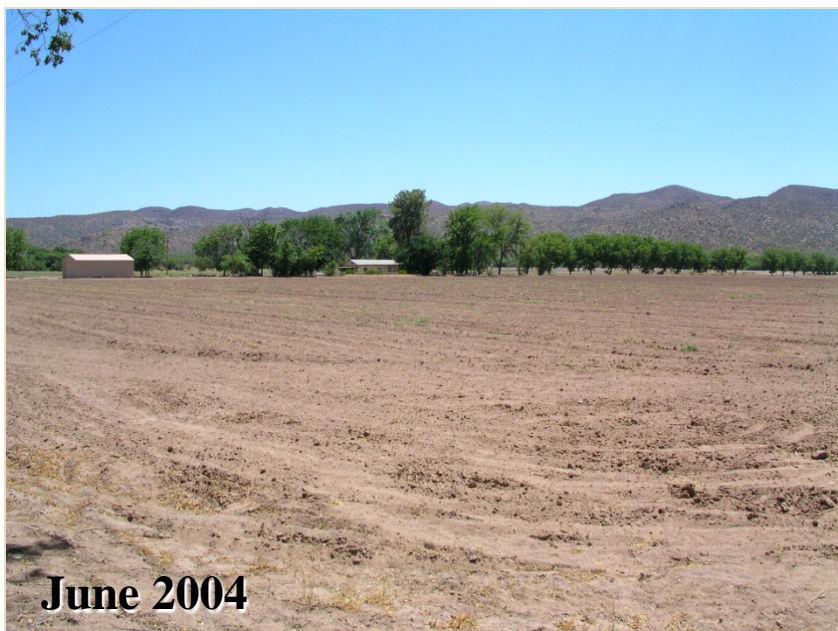
Native Grass Seed Planting



First Planting- June 2004



October 2004



June 2004



Second Planting- June 2005