Protecting our Heritage Waters

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SANTA CRUZ VALLEYS AND SAN PEDRO RIVER, ARIZONA
Comparison of Aquatic and Semi-aquatic Habitats before 1890 and Today
(after Hendrickson and Minckley, 1984)

Source: Water Resources and the Sonoran Desert Conservation Plan, 1999
Protecting and Enhancing Our Heritage Waters

• Riparian and Aquatic Systems
  • Perennial and intermittent streams and springs supporting riparian vegetation (*PAG 2000 and City/County 2009*)
  • Areas of historic and current shallow groundwater (*PAG 2000 and 2012*)

*Figure 4. SONORAN DESERT CONSERVATION PLAN Shallow Groundwater Areas in Eastern Pima County GIS Coverage*

- Suspected Shallow Groundwater Areas (based on well data and aerial imagery)
- Possible Shallow Groundwater Area (based on vegetation assemblages)
- Wells with Depth to Water less than 50 feet (ADWR Well 55-Registry and GWIS databases)
- Major Street or Highway

*January 2000*
Figure 1. Shallow groundwater regions of eastern Pima County.

Note: SGWA = Shallow groundwater area
Riparian and Aquatic Benefits

• Slow flood flows
• Reduce and prevent erosion
• Improve water quality
• Conserve wildlife habitat
• Provide recreational opportunities
• Enhance scenic values
• Secure long-term groundwater resources

Valuation Studies:

Policies in place

- Sonoran Desert Conservation Plan – Riparian Protection and Restoration Element
- Pima County’s water resources policy for proposed new developments in sensitive riparian areas
- Tucson’s M&C 1998 Water Policy Resolution to incentivize conservation in sensitive riparian areas
- Conservation Effluent Pool
- Purchasing of strategic lands with water rights
- Tucson Water wheeling agreements
- PAG’s Green Infrastructure Resolution
Working Groups

• Cienega Watershed Partnership
• Sabino Creek Advisory Committee
• Community Water Coalition
  • CEP Taskforce 2013-2014
  • Restoration Subcommittee
Cienega Creek - Shallow Wells-1995-2015 (Winter)

\[ y = 0.2551x + 13.269 \quad R^2 = 0.5507 \]

\[ y = 0.7516x + 25.338 \quad R^2 = 0.6196 \]

\[ y = 0.5972x + 75.161 \quad R^2 = 0.7502 \]
Sabino & Tanque Verde Water levels and flows 1991-2015


PCRFCD 2015
Exhibit B  St. Gregory H.S. well (55-801050), located about 1/4 mile north of Adobes Del Bosque subdivision (D-13-14-26DDC)
Exhibit C  City of Tucson Well (55-619967), located about 1/2 mile east of Isabella Lee Conservation Area (D-14-15-02DDA1)
What is needed to preserve and enhance our Heritage Waters?

• Continued emphasis on regional coordination
• Active engagement to provide the water necessary to maintain and enhance riparian and aquatic system
• New opportunities to enhance and monitor
• Establishment of a dynamic water budget to inform goal setting of conservation and restoration targets