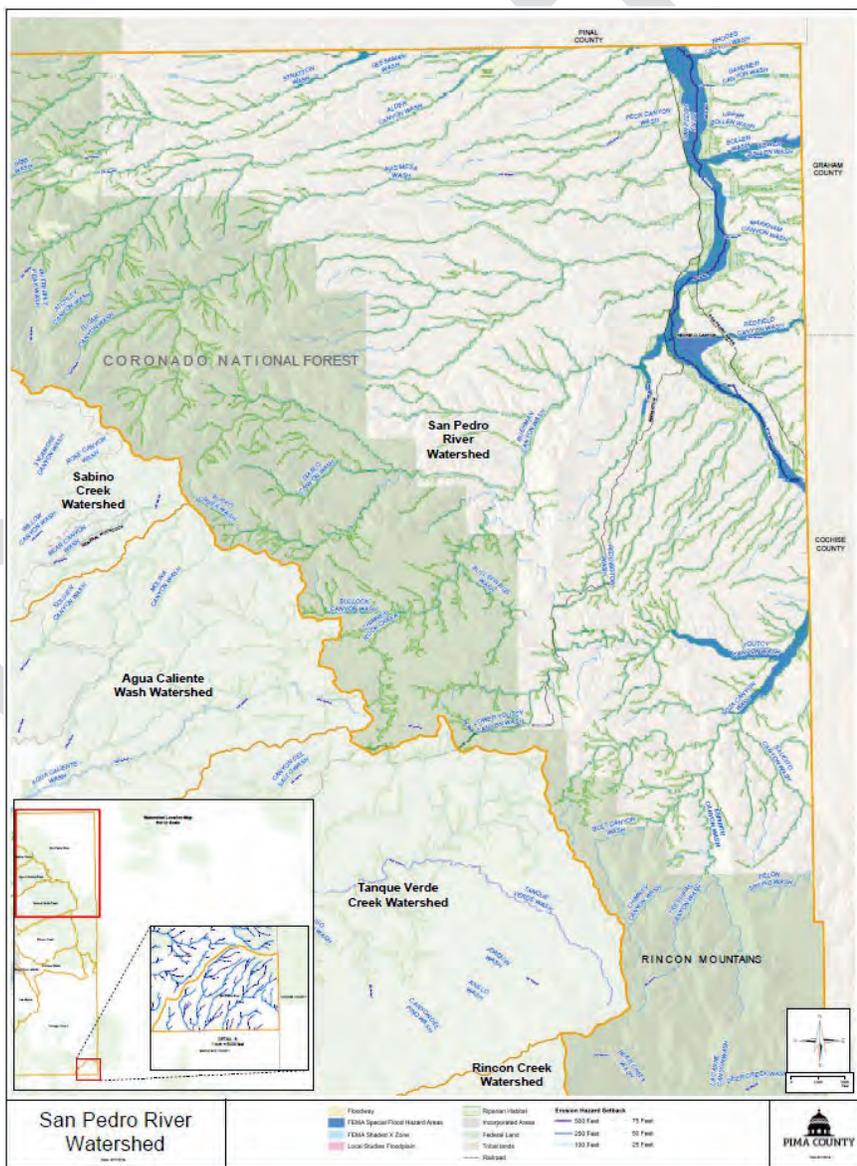


### 5.5.5 San Pedro River

The River originates in Mexico south of the community of Palominas in Cochise County. It drains the eastern slopes of the Huachuca Mountains, and the western slopes of the Mule Mountains. Within this broad basin, the San Pedro passes the City of Sierra Vista and Tombstone, and drains the eastern slopes of the Whetstone Mountains, and the western slopes of the Dragoon Mountain range before passing under Interstate 10 at the Town of Benson. Running northward, it eventually enters Pima County south of Redington. Numerous tributaries contribute substantial flows from in the Santa Catalina, Rincon, Galiuro and Winchester Mountains. It exits Pima County into Pinal County south of the community of San Manuel. Within Pima County, it is comprised of 181,808 acres (284 square miles), while approximately 3100 square miles drain from the upstream watershed to Pima County.

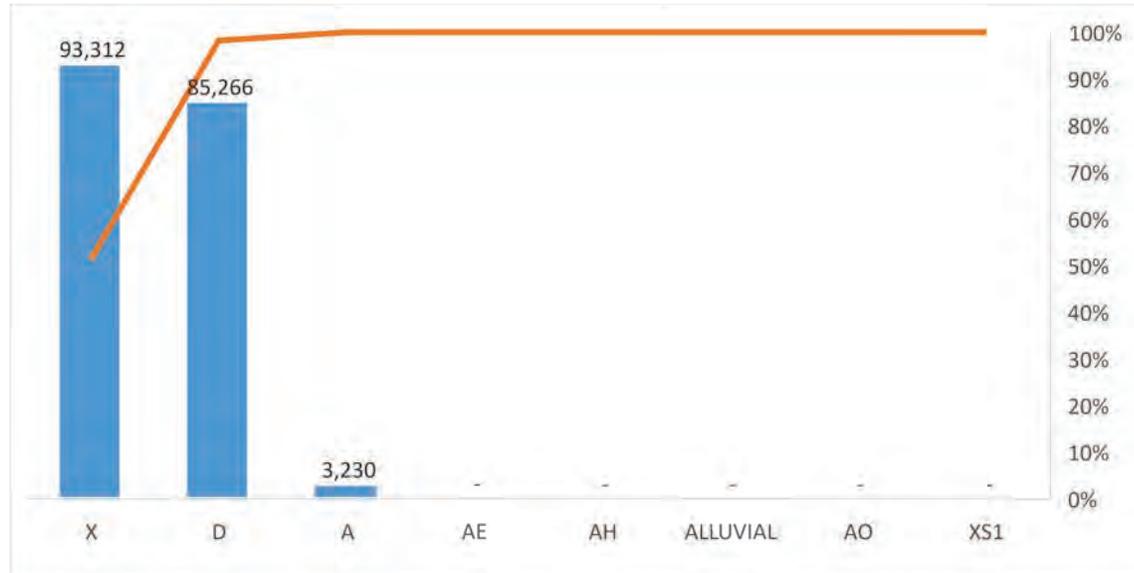
Figure 218 - San Pedro River Watershed Map



### 5.5.5.1 Flood Characteristics

In addition to 3,229 acres of SFHA Zone A, there are also 1,674 acres of sheet flood area in this watershed.

Figure 219 - Sand Pedro River Watershed Federal Floodplain Designations



The San Pedro River Watershed delineated encompasses a portion of the San Pedro River and numerous named washes including, Alder Canyon Wash, Bollen Wash, Buehman Wash, Edgar Canyon Wash, Redfield Canyon Wash, Redington Wash and Stratton Wash. The watershed is predominately undeveloped; the valley adjacent to the San Pedro River consists of farms and scattered residential uses. There is over 5000 ft. of overall elevation change in the watershed and watercourses are predominately natural.

The watershed contains the County owned 285-acre Bingham Cienega Natural Preserve, 6,258 acres of the A7 Ranch, and 3,330 acres of the Six Bar Ranch. Bingham Cienega consists of a spring-fed marsh, with perennial flow. The watershed lies within flood control jurisdiction of Pima County. Storms that would trigger flooding in the watershed include intense localized summer storms in the mountain tributaries and long duration winter storms within the upstream reaches of the San Pedro. The table below provides a summary of historic USGS gaging station records.

Table 63 - San Pedro River Watershed USGS Gages

USGS Gaging Station	San Pedro River at Redington Bridge near Redington, AZ 09472050	Peck Canyon Tributary near Redington, AZ 09472100
Period of Record	1998-07-21 to current	1968-08-09 to 1981-07-20
Watershed Area (sq. m)	3096	8.02
Flood Peak of Record (cfs)	19600	4340
Date	9-20-2014	08-12-1972

There are no ALERT gauges in this watershed. The table below summarizes regulatory discharge locations within the watershed. The locations are from the District's Table of Regulatory Discharges (Revised October 28, 2014).

Table 64 - San Pedro River Watershed Regulatory Discharges

Watercourse	Regulatory Discharge, cfs 1% Return Frequency	Drainage Area, sq. miles	Source of Discharge Information
San Pedro River @ Redington Rd.	50,000		From Previous Discharge Table

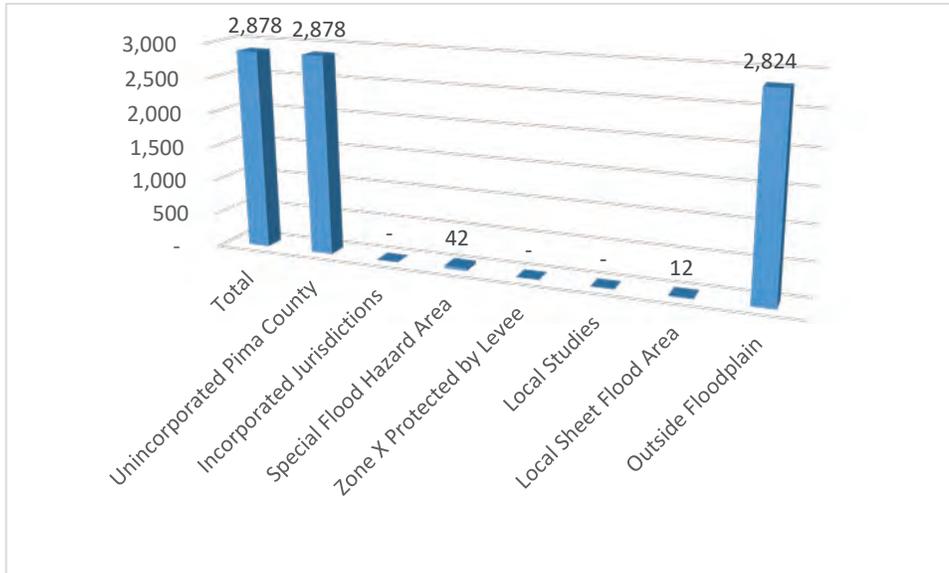
The approximately 12,000 acres of County owned designated open space areas preserve habitat and reduce peak storm flows in the watershed.

Federal Insurance Rate Maps delineate Zone A for Alder Canyon Wash, Bollen Wash, Buehman Canyon Wash, Redfield Canyon Wash, Redington Wash, Rhodes Canyon Wash, Soza Canyon Wash, Stratton Wash, and Youtcy Canyon Wash.

### 5.5.5.2 Existing Development & Infrastructure Trends

The chart below shows population distribution between incorporated and unincorporated areas. This chart also shows the distribution of residents within known floodplains.

Figure 220 - San Pedro River Watershed Population Distribution



While this watershed includes many pristine tributaries within the Catalina and Rincon Mountains to the west, there is rural private and state land located along the river corridor. The County manages much of this state land as part of the Sonoran Desert Conservation Plan in order to preserve habitat, ranching heritage and water.

Figure 221 - San Pedro River Watershed Ownership in Acres

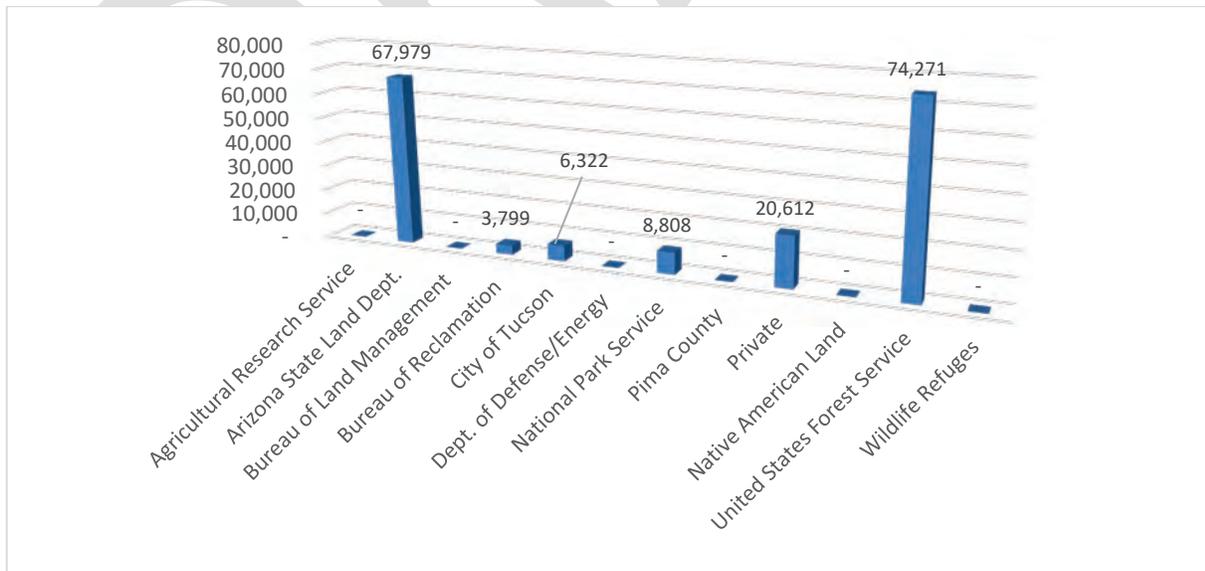


Figure 222 - San Pedro River Watershed Land Use in Acres

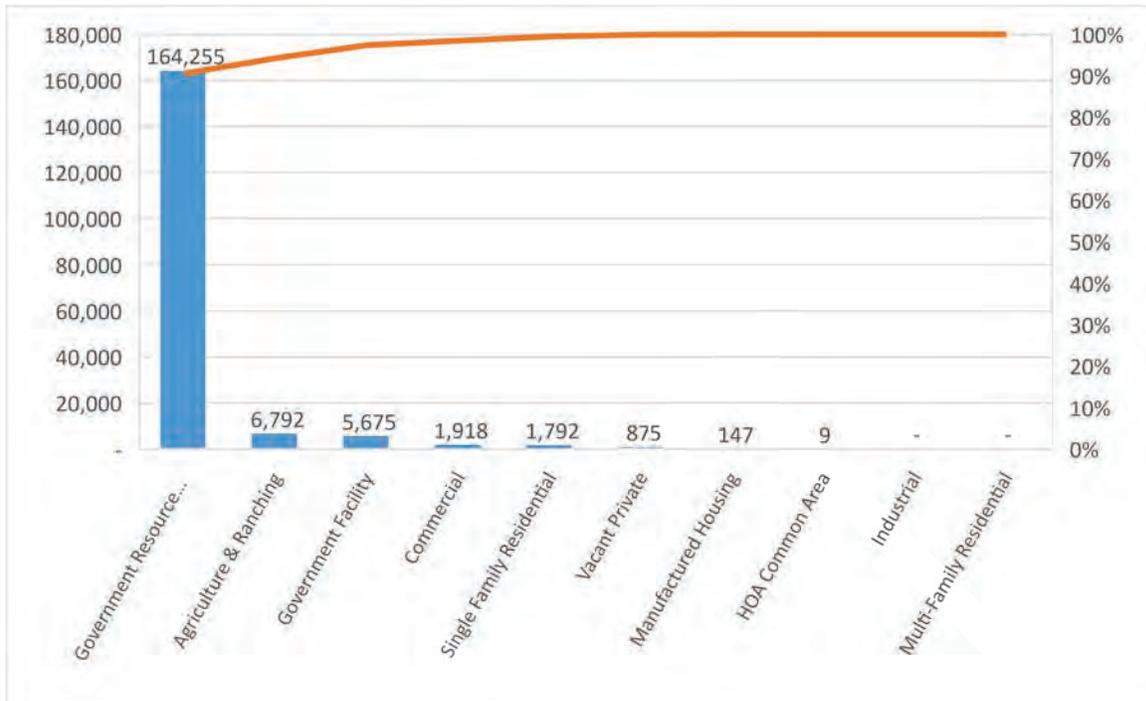
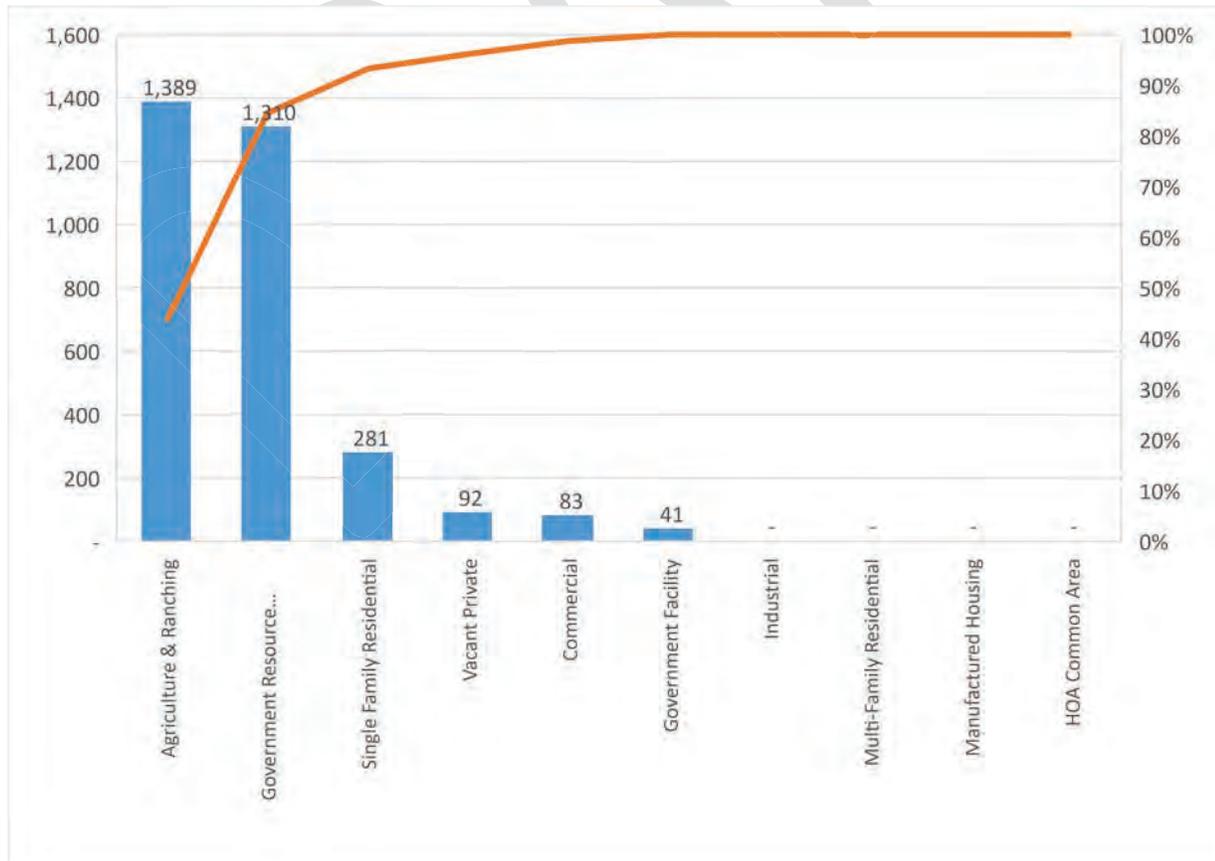


Figure 223 - San Pedro River Floodplain Land Use

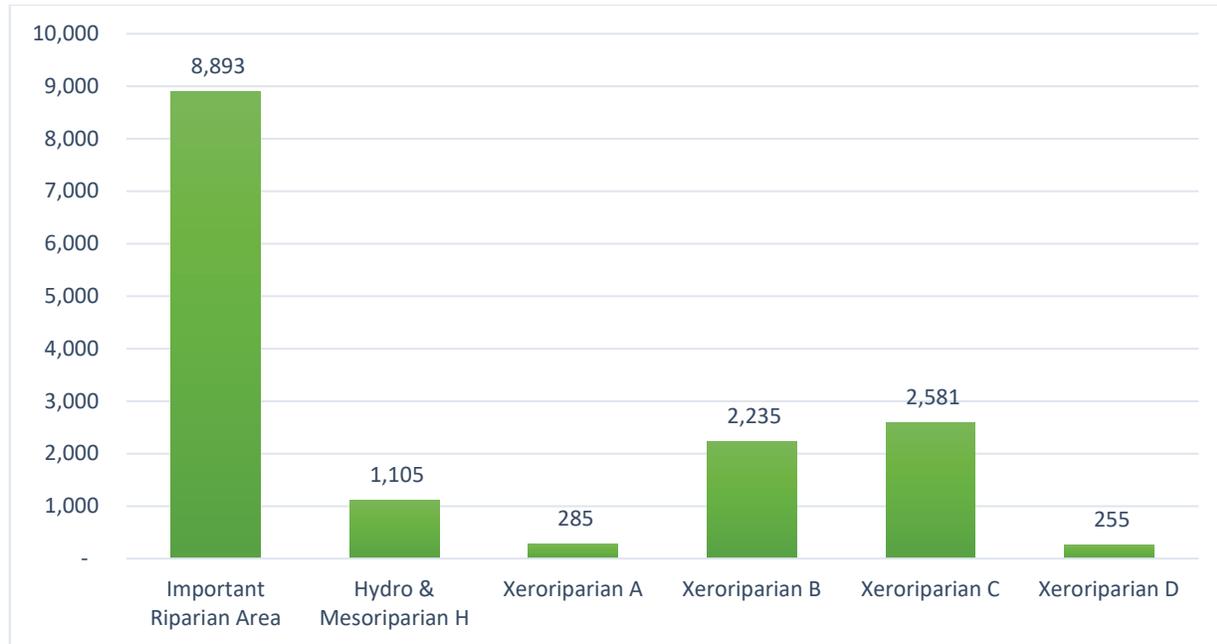




### 5.5.5.3 Riparian Habitat and Natural Areas

As shown on the bar chart below there are 6,480 acres of Pima County Regulated Riparian Habitat in this watershed, and 8,874 acres of IRA. There are also 148,744 preserved acres in this watershed, including 854 in regulatory floodplain.

Figure 225 - San Pedro River Watershed Riparian Habitat in Acres



One of the earliest ecosystem restoration projects done by the District is located on the Bingham Cienega Natural Preserve, located in the San Pedro floodplain north of Redington. Over the past 20 years, the natural spring on the property has gone dry and the water table continues to decline. The rich bosque and ash-cottonwood forests are collapsing. The District has recently invested in creating defensible fire lanes and fire preparedness amenities. Research undertaken by the District and others indicated that the spring was primarily fed by Edgar and Buehman Canyon recharge mixed with adjacent San Pedro River sub-flow. The Bingham Cienega Natural Preserve and adjacent District and County owned properties were the first lands set aside as compensatory mitigation credit for Pima County's Section 10 permit and Multi-species Conservation Plan approved by the U.S. Fish and Wildlife Service.



Bingham Cienega

#### ***5.5.5.4 Historic Floodplain Management Approach***

There are 303.8 acres of natural drainageways in this watershed all in unincorporated Pima County.

#### ***5.5.5.5 Needs – Capital Improvement***

The District completed no projects during the prior five years, and none planned for the next five years. The 2019 Flood Response Manual identifies no specific items of concern in this watershed.

#### ***5.5.5.6 Floodplain Management***

Future needs identified by District staff include:

- Access
- FLAP/Habitat Management
- Riparian disturbances rural uses
- Utility Corridor

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