Celebrating Arizona's Rivers

Each month during Arizona's centennial year, we will profile a different river in celebration of the state's precious natural resources. From the mighty Colorado to the smallest ephemeral streams, these waterways have supported Arizona's people and places for thousands of years. With good stewardship and thoughtful planning, they will continue to flow into Arizona's next 100 years.
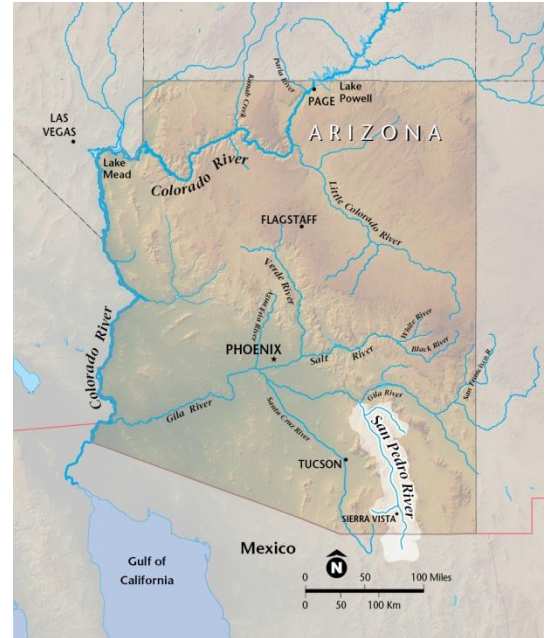
October 2012: The San Pedro River

The last undammed desert river in the American Southwest, the San Pedro – once known as "Beaver River" due to the abundance of those now-rare creatures – serves a vital ecological role. Just fifty miles from Tucson, the river's lush riparian corridor provides an essential migration stopover for millions of birds each year as they journey from Canada and the northern United States to the tropical climates of Latin America. Thus, the San Pedro is a refuge not only for local wildlife, but for bird populations across North America – a status that is reflected in its designation as a "globally important bird area" by the American Bird Conservancy.

In 1988, Congress created the San Pedro Riparian National Conservation Area (SPRNCA) "in order to protect the riparian area and the aquatic, wildlife, archeological, paleontological, scientific, cultural, educational and recreational resources of the public lands surrounding the San Pedro River."

In addition to its ecological significance, the San Pedro holds tremendous archeological value. The Upper San Pedro River Valley contains the highest concentration of Clovis sites in North America – evidence of people who hunted mammoths and other large game animals approximately 13,000 years ago.

Geography. The San Pedro River originates in Sonora, Mexico, north of the town of Cananea. As it flows toward the U.S.-Mexico border, the river travels through desert grasslands and a broad valley surrounded by mountain ranges. It flows into the United States near Palominas, where it enters the SPRNCA, which encompasses 40 river miles with year-round flow and nearly 57,000 acres of river corridor and surrounding riparian forest. Along the way, the river passes east of Sierra Vista and Fort Huachuca, and is joined by many small tributaries draining from the Huachuca Mountains to the west and the Mule Mountains to the east.

Top image: Watershed of the San Pedro River in relation to other Arizona Rivers. **Bottom image:** Detail of the San Pedro watershed.

Just north of Sierra Vista, the Babocamari River joins the San Pedro as it continues northward to St. David, where the SPRNCA ends. North of the Babocamari, the river is typically dry, with some short stretches of year-round flow. At the town of Benson, the San Pedro crosses under Interstate 10 and continues through a broad, largely undeveloped valley, flanked by the Santa Catalina Mountains to the west and the Galiuro Mountains to the east, and passes the small towns of Cascabel and Mammoth. While primarily dry, some sections in this area flow year-round, in part due to recent reductions in groundwater pumping.

The San Pedro River near Hereford Bridge. Photo courtesy of Tory Syracuse.

In this lower section, the San Pedro is joined by many tributaries, including Aravaipa Creek at its northern end. The San Pedro joins the Gila River at the community of Winkelman, just over 150 miles from its origin.

Ecology. The San Pedro watershed represents one of the largest healthy riparian woodland ecosystems in the Southwest – an ecosystem type that has rapidly declined in the region over the past 100 years. The river valley is an essential wildlife corridor and is surrounded by mountains known as "Sky Islands," where wide ranges in elevation result in enormous biodiversity. Species supported by the San Pedro watershed include:

- Over 80 species of mammals, including the endangered jaguar and Mexican grey wolf, black bears at higher elevations in the watershed, black-tailed prairie dogs, beaver, bats, and coatamundi;
- 14 species of native fish, such as the Gila chub, longfin dace, and desert sucker; and
- More than 250 species of migratory and over 100 species of resident birds. By some estimates, nearly 45% of the 900 total bird species in North America use the San Pedro at some point in their lives.

Uses throughout the San Pedro basin include:

- Municipal and industrial uses of surface and groundwater in and near Sierra Vista, the U.S. Army's Fort Huachuca, Benson, Tombstone, San Manuel, and Bisbee;
- Municipal, agricultural, and mining use in Mexico;
- Diversion of surface water and pumping of groundwater for agricultural use, primarily near the town of Benson; and
- Many recreational uses, including hiking and bird- and wildlife-watching in the San Pedro Riparian National Conservation Area.

What You Can Do For Arizona's Rivers
- Join a local watershed group
- Participate in restoration, monitoring, or advocacy activities
- Visit our organizations' websites for information and action alerts
- Enjoy an Arizona river—and tell your state legislator about it

Threats.

- As the population has grown throughout the San Pedro watershed, increased demand for municipal water has resulted in a significant increase in groundwater pumping, which has lowered the water table. This has reduced flows in the San Pedro and its tributaries, increasing potential threats to endangered species and the ecosystem as a whole. Parts of the San Pedro that previously flowed year-round have stopped flowing during the driest months or periods of drought.
- Invasive species, such as tamarisk, have deeper root systems than many native plant species, and thrive in areas where river flows have been reduced and the water table has dropped.
- Prolonged drought reduces seasonal rainfall and surface flows and can contribute to severe wildfires.

Over the last twenty years, the challenges of sustaining the San Pedro have inspired controversy and litigation, but also many collaborative restoration and conservation efforts to preserve what is not only one of Arizona's last free-flowing rivers, but a resource of both local and continental importance.