

## 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.

### November 2012: The San Francisco River

The San Francisco River flows through the wildlands of eastern Arizona and western New Mexico, traversing pine forest, narrow canyons, and desert wilderness before joining the Gila River.

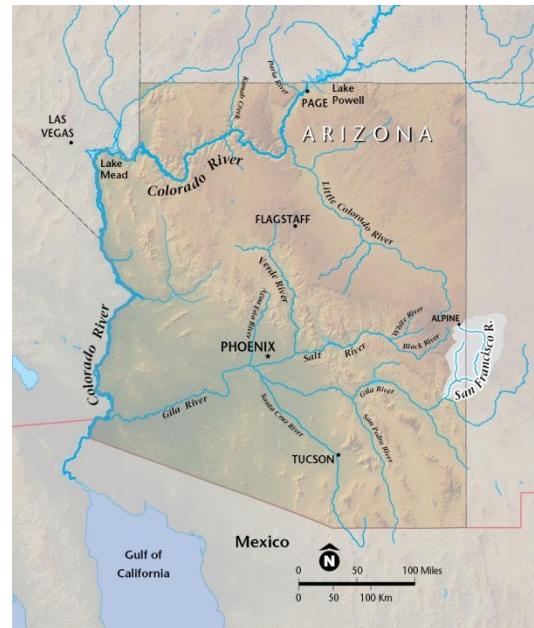
Though it remains remote even today, the San Francisco watershed once supported the Chiricahua Apache people, the fur trappers of the 1800s, and prospectors of all kinds during Arizona's copper boom of the late 1800s. In the mid-1860s, Henry Clifton came seeking gold (small amounts of which can still be found in the San Francisco today) but found rich copper ore instead, leading to the establishment of the town of Clifton, which remains the largest community along the San Francisco.

In a landscape increasingly fragmented by development, the watersheds of the San Francisco and its largest tributary, the Blue River, serve as a biological refuge of largely undisturbed riparian habitat where diverse, rare species of plants and wildlife thrive.

**Geography.** The 160-mile long San Francisco River originates at an elevation of over 8,000 feet in Arizona's White Mountains, just southwest of the town of Alpine, and flows east into New Mexico through the Luna Valley, with Hellroaring Mesa and the Dillon Mountains to the north and the San Francisco Mountains to the south. It continues almost directly east past the town of Luna, NM, before making a 90-degree turn to head south through New Mexico's pine forests and several Inventoried Roadless Areas – indicative of the rugged isolation of this region.

Between Luna and the town of Reserve, NM, the river passes through the remote and inaccessible San Francisco Box Canyon. The San Francisco continues its southern course between the Arizona border to the west and New Mexico's Gila Wilderness to the east, passing the town of Glenwood, NM and the San Francisco Hot Springs, one of many hot springs in this area.

Just south of the San Francisco Hot Springs, the river turns west and flows back into Arizona, where it is soon joined by the 51-mile-long Blue River, which flows south from Alpine. After the confluence with the Blue, the San Francisco flows southwest past the mining town of Clifton, where it is joined by Chase Creek, named for a U.S. Army officer, Captain Chase, who camped here in 1870. The San Francisco joins the Gila River within the 23,000-acre Gila Box Riparian National Conservation Area, which protects the unique habitat and resources of the San Francisco and Gila Rivers and Bonita and Eagle Creeks.



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



The San Francisco River. Photo courtesy of Terry A. Johnson.

**Ecology.** The San Francisco River flows through the mountainous pine forests and meadows of the White Mountains of Arizona and the Mogollon Mountains of New Mexico, then drops into the Sonoran Desert as it approaches its confluence with the Gila River. The river's year-round flows and relatively undisturbed landscape support a large number of unique species, including:

- Many threatened and endangered species, including birds such as the Southwestern willow flycatcher; native fish such as the loach minnow and spinedace; the Chiricahua leopard frog; and the Mexican gray wolf;
- Large stands of Fremont and narrow-leaf cottonwood trees, Arizona sycamore, and mesquite bosque at lower elevations; and
- A population of approximately 80 Rocky Mountain bighorn sheep, transplanted from Banff, Canada, in 1964 after the native desert bighorn sheep had been driven from the area early in the twentieth century.

### Use.

- Water from the San Francisco River and Eagle Creek is used at the Morenci Mine Complex, a large open-pit copper mine southeast of Safford, Arizona.
- The San Francisco and its tributaries provide municipal water to the communities of Morenci and Clifton.
- Recreational activities along the San Francisco include rafting and kayaking, bird- and wildlife-watching, and hiking, though there are not many established trails in the rugged, roadless areas of the San Francisco.

### Threats to the San Francisco include:

- Impacts from off-road vehicles along portions of the San Francisco and Blue Rivers within the Apache-Sitgreaves and Gila National Forests;
- High levels of sediment that negatively impact water quality (portions of the San Francisco are classified as an impaired water by the Arizona Department of Environmental Quality);
- Removal of native riparian vegetation and stream bank destabilization due to a variety of different land uses.

Local stakeholders recognize that the health of the rural communities of this region is directly dependent on the health of the local watershed, and have been taking a variety of creative steps to protect and restore the San Francisco and its tributaries. Efforts include watershed mapping, re-introduction of native fish populations, increased enforcement of off-road vehicle regulations, fencing and stream protection efforts, invasive species removal, and volunteer tree-planting and river clean-up events.

**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

