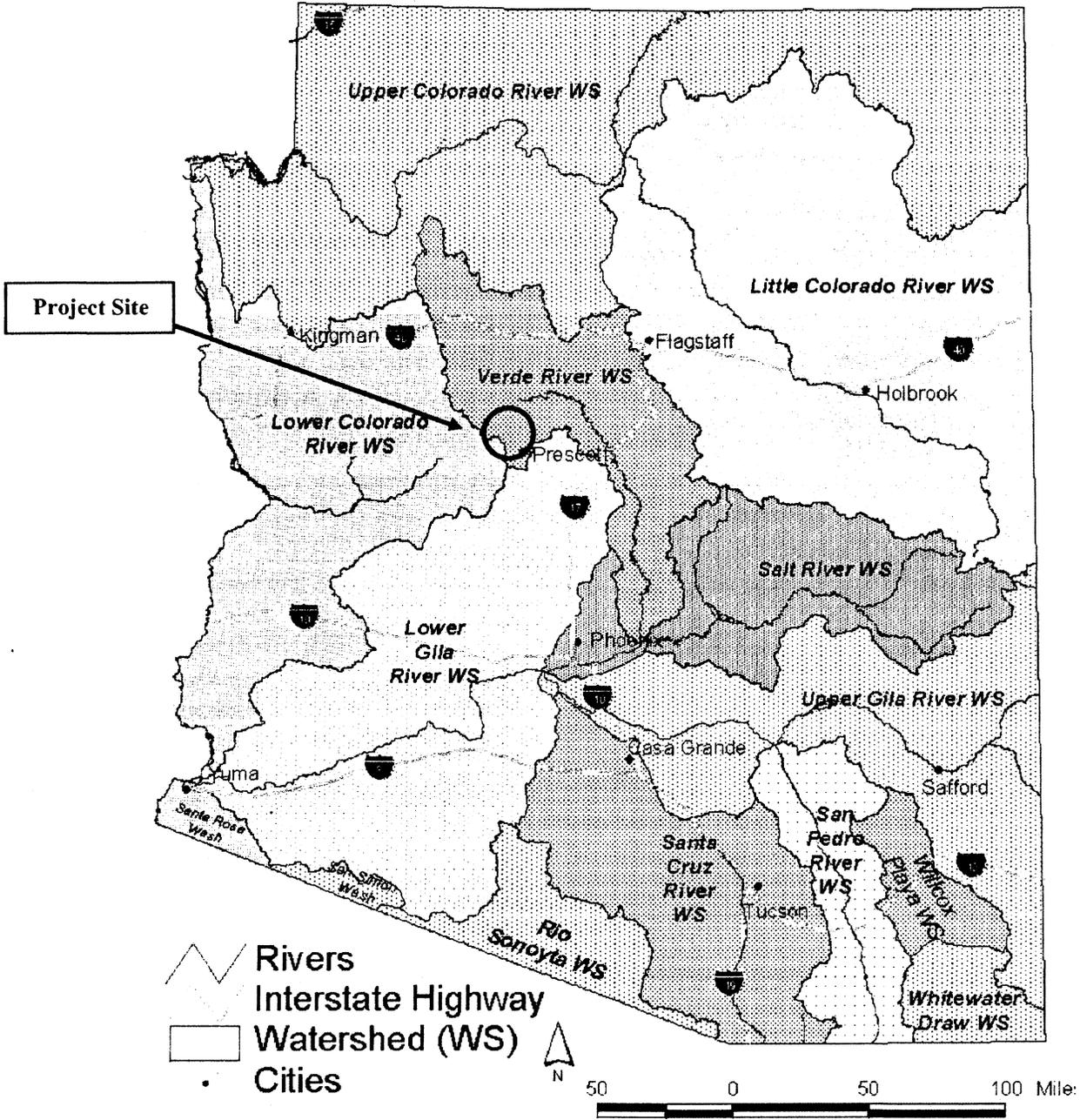


# Arizona Watershed Map FY 2008



Title of Project: Watson Woods Riparian Preserve Restoration Project

## Executive Summary

The goals of this project are to enhance and restore the Granite Creek channel function and existing riparian habitats, to (re)create riparian habitats within Watson Woods Riparian Preserve, and to educate and involve the community in the restoration process. While significantly degraded, this unique riparian ecosystem in the Verde River Watershed represents the best remaining riparian habitat along Granite Creek. The project will substantially restore hydrologic function, proper stream geomorphology, improve floodplain function, and (re)create wetland/backwater areas associated with Granite Creek. The enhancements to this reach are expected to directly benefit wildlife resources dependent upon proper stream function and riparian resources (such as bald eagle (*Haliaeetus leucocephalus*), black-hawk (*Buteogallus anthracinus*), zone-tailed hawk (*Buteo albonotatus*), southwestern willow flycatcher (*Empidonax trailii extimus*), yellow-billed cuckoo (*Coccyzus americanus*), southwestern toad (*Bufo microscaphus*), narrow-headed garter snake (*Thamnophis rufipunctatus*), Mexican garter snake (*Thamnophis eques*), lowland leopard frog (*Rana yavapaiensis*), and Sonoran mud-turtle (*Kinosternon sonoriense*)). Providing community members with direct, meaningful interactions with the land will foster a sense of stewardship and will help individuals understand why this, and other, restored riparian ecosystems and their dependent wildlife are important.

Prescott Creeks, a community-based, grassroots 501(c)(3) non-profit organization, will build upon over ten years of research and planning to restore this degraded ecosystem. A management plan (grant #95-012WPF), and subsequent baseline inventories (grants #96-0008WPF, #96-0009WPF, #99-076WPF), led to a restoration feasibility project (grant #04-122WPF) for the Watson Woods Riparian Preserve project area. The project inventoried and characterized existing conditions of channel morphology, hydrology, and riparian plant communities along Granite Creek within the Preserve. A survey of regional stream sites identified reference conditions representing the potential, or optimum condition, for these resources. To evaluate the need and feasibility for restoration at the Preserve, existing conditions were evaluated against the reference conditions. The evaluation confirmed the potential for restoration within the Preserve and appropriate design components were identified. They can be found in the Watson Woods Riparian Preserve Restoration Plan which was released as the final report from the feasibility project. It was completed in May 2007.

Due to physical alterations by mid-twentieth century gravel mining operations in what is now Watson Woods Riparian Preserve, existing channel/floodplain morphology is unable to effectively transport sediment and water. Neither can it support the once present and robust native riparian plant community expected to be found in this and other areas with similar physical characteristics (valley width, soils, depth to groundwater, etc.). The extensive historic mining effectively lowered the valley floor approximately 10 feet and completely altered the channel/floodplain morphology of Granite Creek in the Preserve. The restoration design includes reshaping of the channel and floodplain, realignment where beneficial, stabilizing banks where appropriate, and establishment of native plant communities along the river where they are now absent.

Additional features of the project include the education and involvement of community members in the restoration process, and in subsequent project monitoring. This will provide a positive example of government, non-profit and community members working together to restore a severely degraded stream reach and its riparian habitat. An educated and involved community ideally will become long-term stewards of this and other riparian areas in Arizona and the Southwest.

Monitoring of the biota and abiotic environment, along with other inventories, are useful in judging the degree to which goals have been achieved.<sup>1</sup> Monitoring data will be essential to evaluation and communication of project performance to the Arizona Water Protection Fund Commission, Project Managers and the public at large. Monitoring will also add to the deficient scientific record for riparian areas in the southwest.

*This project will build upon the Arizona Water Protection Fund's past investments by implementing ecological restoration activities at Watson Woods Riparian Preserve.*

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<sup>1</sup> Society for Ecological Restoration International Science & Policy Working Group, 2004. *The SER International Primer on Ecological Restoration*. www.ser.org & Tucson: Society for Ecological Restoration International.