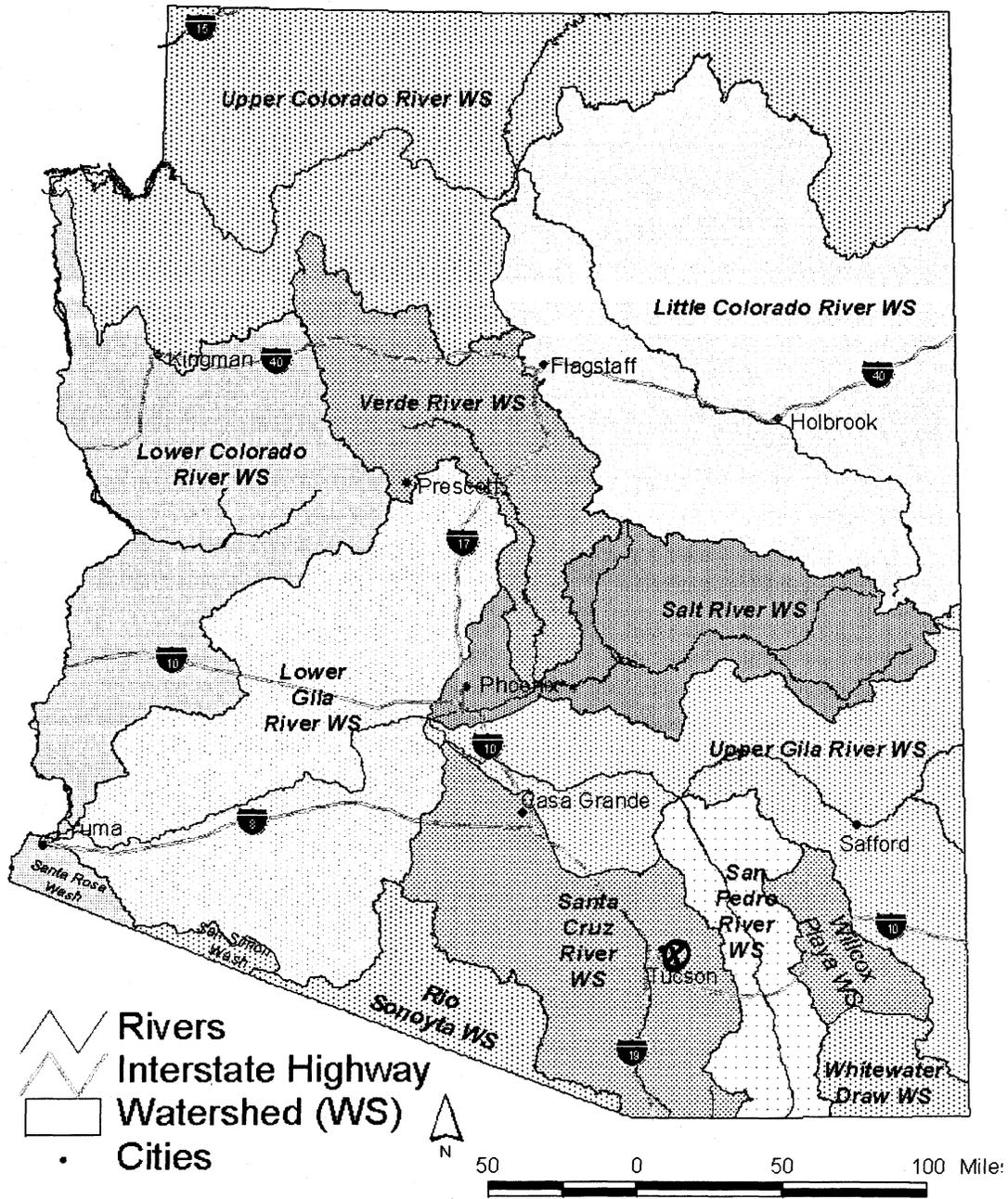


Arizona Watershed Map FY 2008



Title of Project: Atturbury Wash Riparian Stewardship Project

Executive Summary

The purpose of this project is to conduct riparian restoration on the Atturbury Wash at Abraham Lincoln Regional Park. Atturbury Wash, a tributary of the Pantano Wash, runs northwest through the southeast Tucson region. The park is located east of South Pantano Road and south of East Escalante Road (see Figures 1-4). Atturbury Wash is recognized as a sanctuary for birds and other wildlife by local residents, the City of Tucson, and Tucson Audubon Society. Riparian trees along this half-mile reach of the wash consist of canyon hackberries, velvet mesquites, whitethorn acacias and blue palo verdes. Shrub understory includes catclaw acacia, condalia, wolfberry, graythorn and desert hackberry.

In recent years many riparian trees and shrubs along the wash have died. Canyon hackberry trees, which formerly provided nesting sites for great horned owls and other birds, have declined dramatically. On the east side of the wash, two patches of approximately 0.35 and 0.65 acre are almost completely devoid of woody vegetation. In other areas tree die-off has opened the tree canopy and reduced cover, forage and nesting opportunities for birds.

Two factors likely have contributed to degradation of riparian wildlife habitat along the wash. One is the ongoing drought cycle currently being experienced in the Southwest, resulting in lower-than-normal rainfall for several years. The other is wash incision, which has decreased overbank flows. In this ephemeral wash, riparian vegetation is highly dependent on flood flows that inundate the floodplain and recharge moisture to floodplain sediments. With the erosion of a deeper channel in the floodplain, flood flows rarely exceed the capacity of the channel, and overbank flooding has decreased. Meandering of the incised wash also is undercutting and felling trees in the floodplain.

The Atturbury Wash Riparian Stewardship Project will take a two-pronged approach. First, it will address the current plant die-off through revegetation. Tree and shrub species already found on the floodplain will be used for revegetation. Plants will be grown from seed collected in this region and, when possible, from existing vegetation at the site. A source of water for a drip irrigation system is available at lower Lincoln Park (a small turf and playground area near the wash). Revegetation plantings will be installed in rainwater harvesting microbasins and swales. These earthen structures will increase available moisture to plantings by intercepting rainfall and runoff and increasing the infiltration of rainwater into the floodplain (Figure 7). Seeding with appropriate native wildflower, forb and grass species will augment planting.

Second, a system of gabions will be installed in the wash bed to address incision and restore overbank flows on the wash floodplain. Structures will be designed to slow water flows in the wash, reducing energy and allowing sediments and organic matter to be deposited behind them (Figure 8). The restoration of sediment behind the structures will reverse wash incision, and make it more likely that stormwater will flow out over the floodplain. This will enhance floodplain recharge of flood flows, making more moisture available to floodplain vegetation. The combination of short-term revegetation and longer-term restoration of normal floodplain function will make Atturbury Wash capable of sustaining healthy riparian vegetation. During the period before grade control structures reverse wash incision, the irrigation system will supply supplemental water to some existing trees and shrubs exhibiting drought stress.

Thirty-five acres of low ridges and tributary washes to the west of Atturbury Wash are part of the wash's watershed. Wildcat bicycle and ORV trails have caused localized erosion in this area. This project will work to close unnecessary trails and address erosion problems they have caused. This will help improve upland-floodplain connectivity of habitat, and increase infiltration above the floodplain.

The potential for public outreach in this project is enormous. Groves-Lincoln Park Neighborhood Association volunteers already work to protect the wash and promote enjoyment of wildlife. They hire high school students to work on trails and water a pollinator garden. Santa Rita High School and Pima Community College's East Campus are located within 0.5 mile of the wash. As an additional outreach effort, Tucson Audubon will contact land owners and managers upstream along the wash to start a dialogue about the entire Atturbury Wash watershed.