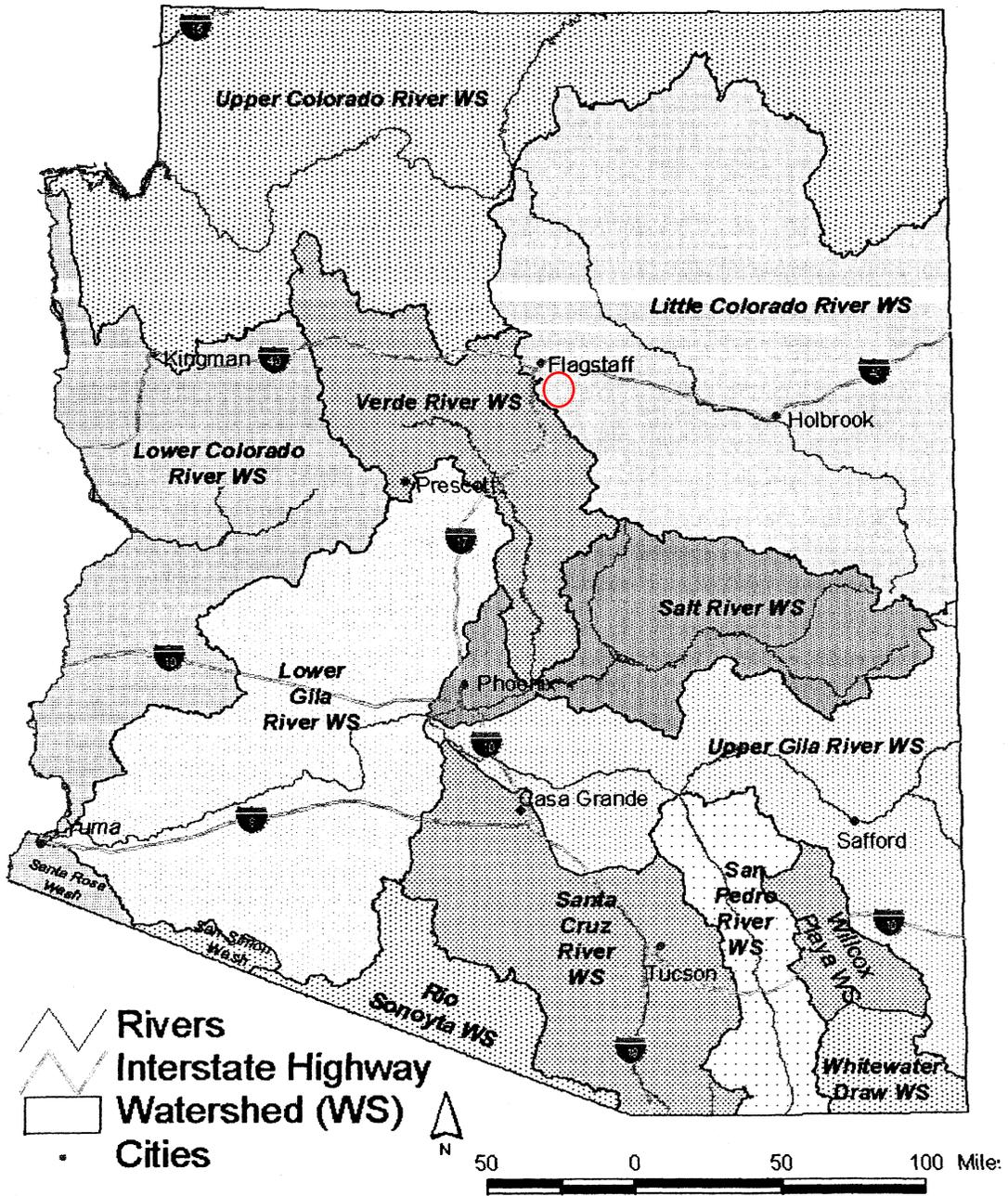


Arizona Watershed Map FY 2008



Title of Project: Hoxworth Springs Stream Channel Restoration Project

Executive Summary

The Hoxworth Springs drainage basin lies within the Lake Mary watershed in the Coconino National Forest, approximately 15 miles south of Flagstaff. The main goal of the project is to restore the riparian function of approximately .4 miles of degraded stream channel and the associated meadow around the stream channel. The benefits of goal achievement include improved water storage capacity on the meadow and stream; an improved riparian plant community; and reduced erosion and sediment production.

The proposed Hoxworth Springs Stream Channel Restoration Project is a continuation of work previously completed within the Hoxworth Spring Stream Channel designed to alleviate the headcutting and reduction of riparian conditions in a riparian meadow system. The first channel restoration in the reach was successfully completed under a grant from the Arizona Water Protection Fund in 1996 titled "Hoxworth Spring Riparian Restoration" (grant # 96-0003WPF). In this project, scientist from Northern Arizona University worked with Coconino National Forest personnel to restore a downcut portion of perennial stream just below Hoxworth Springs using earth moving equipment and revegetation. In 1998 and 2002, the Coconino National Forest undertook additional channel restoration activities within the stream channel, leaving a reach of approximately .4 miles in need of restoration activities.

Funding for restoration efforts for the remaining .4 miles of the Hoxworth Springs stream reach is being sought from the Arizona Water Protection Fund (AWPF). The stream reach in question occurs within a montane meadow and is characterized by low gradient system, with high silt content in the banks and bed, and riparian vegetation consisting primarily of baltic rush and nebraska sedge. The current amount of riparian vegetation has been decreased from the potential through downcutting and the subsequent de-watering of the meadow.

The assessment and design approach that will be used is similar to the channel design and construction work accomplished through a two previous AWPF grants, one the "Hoxworth Spring Riparian Restoration Project" (grant #96-0003WPF) that is located upstream from the current project and the "Verde Headwaters Riparian Restoration Demonstration Project" (grant #98-0059WPF) located at Clover Springs in the headwaters of West Clear Creek in the Verde Watershed, as well as three other Forest Service funded restoration projects in the Hoxworth Springs drainage. Monitoring at the Hoxworth Springs and Clover Springs site has verified that streams can successfully be restored with designs that focus on appropriate gradient and channel shape for the setting, with an aggressive revegetation plan. Design and construction of the designed channel will depend on detailed channel characteristics gained from topographic survey and previous reference reach data that will include gradient, width, mean and maximum depth, sinuosity, bed material size and entrenchment measurements. Previous design, construction, revegetation and the subsequent protection of the revegetation from elk grazing, has displayed a high degree of success for the restoration of high elevation montane, riparian meadow systems; and this process is expected to provide for successful restoration efforts on this reach of the Hoxworth Springs stream channel.