

Stream Assessment training group discovers pristine “reference area”

In his introductory talk on the Rapid Stream Riparian Assessment (RSRA) method on October 21, our trainer Pete Stacey spoke of what he called a “reference area.” This is a portion of a stream that can serve as an example of what that stream might have been like before human-caused degradation. He said that such degradation has become so widespread that the concept of a reference area has become largely hypothetical. Imagine our surprise when we discovered such a “reference area” just above our study reach on Sonoita Creek upstream from Patagonia Lake.

Twelve people began the two-day RSRA training at the Nature Conservancy Sonoita Creek Preserve on Saturday October 22. As attractive as the stream in this sanctuary may appear, it is deeply entrenched and no longer flows out over the entire floodplain as it once did. This restricts the potential of the creek to nourish the entire area and replenish the water table. The great old cottonwoods that make this area so attractive are dying off without young ones growing up to replace them.

On Monday October 24 nine of the trainees moved their assessment activities to Patagonia Lake State Park to put their new skills to the test without guidance from their teacher. Starting in the birding area where the creek flows into the lake they noticed extensive deposition of sediment that is filling in the lake. They had to hike quite a ways upstream to begin their study reach above the backwaters. From this point they laid out a kilometer long reach of creek within which to do their assessment. Some members of the team had visited this area for over eight years and remembered when there was a low waterfall close to the lake. Stream assessors call this a headcut. Although it may be only a few feet high, it erodes its way upstream turning a reference area stream into a deeply entrenched and eroded stream, cutting it off from its floodplain. This is what has happened to this part of Sonoita Creek in the last eight years. The headcut that used to be close to the lake is now well over a kilometer upstream. If left to continue this way it will reach the fence of the Circle Z ranch in a few years.

Due to the recent upward erosion of the headcut the stream is severely entrenched. Ninety one percent of the bank in the study area is unstable and crumbling into the stream. The resulting sediment is being moved down to Patagonia Lake. This sedimentation threatens the future use of the lake for fishing and boating and, thereby, the economic viability of the state park. The heavy grazing of cattle in the area aggravates this situation. Cattle break down the banks even more quickly and browse away riparian vegetation, both forbs and shrubs, that might otherwise help stabilize the banks.

Finding the relatively pristine “reference area” above the headcut inspired some members of the team to start a campaign to see what can be done to stop the headcut and save this area as an example of what a stream can be. The photos below show how devastating a small waterfall can be. For more information or to join the campaign to save this precious area contact Andy Gould at <mailto:gould226@hotmail.com>.