

### *Background*

The Runyon restoration site is located on the south bank of Mill Creek, Tehama County, approximately mid-way between the base of the foothills and Highway 99. Following the January 1997 flood, repairs to an irrigation ditch left the site devoid of vegetation. An AFRP grant was awarded to the Mill Creek Conservancy for restoration at the site, and an initial planting was put in the ground in May of 1998. This planting was successful, but by the spring of 1999, natural revegetation was clearly underway and no additional plantings were done. Monitoring conducted at the site by The Nature Conservancy in October of 1999 found the beginnings of a high-quality riparian thicket, with high densities of all of the desired tree species. Nature Conservancy staff repeated this monitoring in May and August, 2000 to assess the continuing progress of the revegetation. Pursuant to the terms of the AFRP grant, this is the final report in a series of three on the status of the Runyon revegetation.

### *Methods*

Methods were identical to those described in the October 1999 monitoring report. Seven transects were run at the site, with 5 2m<sup>2</sup> plots examined along each transect. Within each plot, all woody species were identified and counted. For this final survey the maximum height of the woody vegetation within each plot was also estimated and recorded.

### *Results*

The eight native riparian tree species first identified in 1999 continue to thrive at the site (Fig. 1). A total of 362 trees were counted in 31 plots, for an average of nearly 12 trees per plot. Maximum tree heights within the plots ranged from white alders (*Alnus rhombifolia*) over 7 meters tall to cottonwood (*Populus fremontii*) and willow (*Salix spp.*) saplings roughly 1 meter in height. Alder dominate at the base of the rip-rap bank. In the middle and creek-side zones of the site, patches of deergrass (*Muhlenbergia rigens*) are found amongst the cottonwood and willow thicket. Sandbar willows in the areas closest to the channel now reach a maximum height of 1 meter.

### *Discussion*

Over the past three years, natural process restoration has proceeded at a rapid pace at the Runyon site. All of the desired riparian tree species are present and thriving. As discussed in the May 2000 report, total numbers of trees at the site continue to decline somewhat as succession takes place and the remaining trees grow larger. Photographic comparisons (Appendix A) bear witness to this fact and display the speed with which the vegetation at the site has recovered.

Because the Runyon site is located within the flood-control levee, natural succession has surpassed anything even an extensive planting effort might have hoped to accomplish. At other sites along Mill Creek, located outside of the levee, thorough planting efforts are necessary. The Runyon, however, has demonstrated the numerous benefits of creating restoration sites within the confines of flood-control levees. With a minimal input of time and money, we have watched the natural dynamics of the creek augment our original plantings and create a thriving, high-quality riparian thicket.

# August 2000 Monitoring of Natural-Process Restoration at the Runyon Site, Mill Creek



A report to the Mill Creek Conservancy and  
the U.S. Fish and Wildlife Service

Prepared by The Nature Conservancy  
August, 2000

Appendix A: Photographic comparisons.



A. View of site. October 1999.



B. May, 2000



C. August 2000



D. White alder stand at base of rip-rap bank (Zone 1). October 1999.



E. May, 2000.



F. August 2000



G. Cottonwood and willow saplings (Zones 2-5). October, 1999.



H. May, 2000.



I. August, 2000