

Kerber Creek Restoration Project

Sustaining the health of the Kerber Creek watershed through collaborative restoration projects and community education

Introduction

The Kerber Creek Restoration Project represents a partnership among government, landowners, and local non-profit organizations all with a common vision: to restore the Kerber Creek watershed through collaborative efforts and community involvement. Our partners' combination of scientific knowledge, restoration experience, and interest in the Saguache County community has produced a unique project based on the participation of all sectors of society. This rare opportunity for the integration of environmental conservation, economic development, youth education, and citizen participation both produces on-the-ground results and improves the experience of residents of and visitors to Saguache county.

Geography

The Kerber Creek watershed is located in northeastern Saguache County, one of the largest counties (land-wise) in the state of Colorado. The county is situated in south-central Colorado at the northernmost end of the San Luis Valley, home to the cities of Monte Vista and Alamosa and the famous Great Sand Dunes National Park. The watershed is bordered by the San Juan Mountains to the west and the Sangre de Cristo Mountains to the east. Within its boundaries are the cities of Villa Grove and Bonanza, the smallest incorporated town in Colorado with a population that fluctuates between 10 and 15.



• City — Highway — Stream — Kerber Creek watershed boundaries

Kerber Creek Watershed Restoration: Why & How

Legacy mining activities in the upper Kerber Creek watershed introduced harmful contaminants, including acid mine drainage, into the stream system, limiting the ability of aquatic organisms to survive. The deposition of mine wastes along Kerber Creek during flood events rendered the soils toxic, killing riparian vegetation necessary for terrestrial habitat and stream bank stability. Since 2007, the Kerber Creek Restoration Project has implemented restoration methods that improve fish habitat, stabilize stream banks, and remediate soils, addressing all of the environmental issues that resulted from legacy mining activities. In addition to active restoration, project staff monitor water quality, vegetation cover, and other environmental variables to document the effectiveness of these methods. Check out the before and after pictures on the back of this sheet!





History of the Kerber Creek watershed

In the late nineteenth century, rich silver ore worth \$200 a ton was discovered in the western mountains of the Kerber Creek watershed, and miners flocked to the area, establishing the town of Bonanza to support the mining operation and the miners' families. The town boomed in the 1880s, boasting saloons, dance halls, a school, a town hall, plank sidewalks, and even a town baseball team. Their success proved temporary, however, and most of the mines failed by the early twentieth century. Although new construction companies attempted to revive the mining operations in the 1910s and 1920s, most failed by 1930.

Though the mines were small by Colorado standards, they left a devastating environmental legacy; by the 1970s, toxic water and sediment had stripped the stream banks of nearly all of their vegetation and killed almost all of the fish and other aquatic creatures that once thrived in Kerber Creek. One Bureau of Land Management (BLM) staff member described the area in 1975 as follows: "The stream is a mess! Pollution...turns the water orange. No aquatic life was found."

Cleanup efforts led by the American Smelting and Refining Company began in the 1990s and focused mainly on relocating polluted material in the western portion of the watershed and plugging the Rawley 12 draining adit, which once served as the entrance to the largest mine in the Bonanza Mining District. Though these efforts were very effective, even permitting the establishment of a self-sustaining brook trout fishery in Kerber Creek, the eastern portion of the watershed—where the majority of private citizens live—remained nearly untouched. Thus, when the Kerber Creek Restoration Project began in 2007, its primary focus was on the restoration of this portion of the watershed.



Awards and Accomplishments

Since 2007, the Kerber Creek Restoration Project has:

- ◇ Treated 80 acres of contaminated soils
- ◇ Installed 348 in-stream rock structures
- ◇ Restored 6000 feet of stream bank
- ◇ Attracted over 16,000 hours of volunteer work
- ◇ Secured over \$2,000,000 of funding through grants

Since 2009, the Kerber Creek Restoration Project has received six awards:

- ◇ U.S. Forest Service – Rocky Mountain Region: Water Emphasis of the Year Honor Award (2009)
- ◇ Bureau of Land Management: Hardrock Mineral Environmental Award (2010)
- ◇ Colorado Riparian Association: Excellence in Riparian Area Management Agency Award (2010)
- ◇ U.S. Forest Service – Rocky Mountain Region: Forest and Grassland Health Partner of the Year (2010)
- ◇ American Fisheries Society – Western Division: Riparian Challenge Award (2011)
- ◇ Public Lands Foundation: Landscape Stewardship Award (2011)