

WEST Rocky Creek — Texas

West Rocky Creek is located at 1,800 feet elevation in the porous limestone Edwards Plateau

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region which covers more than 10 million acres in west Texas. Annual rainfall averages about eighteen inches. Peak runoff usually occurs in late spring and fall as a result of thunderstorms.

Prior to the introduction of livestock in the mid 1800s, the landscape of the West Rocky Creek watershed was dominated by native grasses characteristic of the southern Great Plains. The U.S. Soil Conservation Service estimates vegetation was comprised of 85% grasses, 10% forbs and 5% woody plants. Trees and brush were largely confined to riparian corridors due to thick prairie turf and periodic fires which limited seedling survival on the uplands.

Native grasses such as sideoats grama, buffalo-grass, curly mesquite and tobosa, shielded the soil from the sun and from wind and water erosion. Dense root systems allowed rainfall to soak into the soil to recharge groundwater and keep streams flowing year-long.

Early ranchers didn't understand range ecology and lacked experience in this environment necessary



Representative West Rocky Creek riparian area before upland treatments and improved grazing management.



Representative West Rocky Creek riparian area after upland treatments and improved grazing management.

to predict the effects of overgrazing. By 1885, vegetation within the watershed had been dramatically altered by livestock overgrazing. Removal of the native grasses decreased infiltration of water into the soil. Man's fire suppression activities allowed brush seedlings to establish. The invading brush lowered water tables, accelerated runoff and soil erosion.

Dense stands of mesquite and juniper began to dominate the landscape. These deeper-rooted plants used groundwater below the depth grass roots could reach, depleting water that previously had recharged springs and streams. West Rocky Creek, which once flowed year-round, became intermittent in 1918, and dried up completely in the 1930s. The stream flowed sporadically during periods of above average rainfall. Without the protective cover of