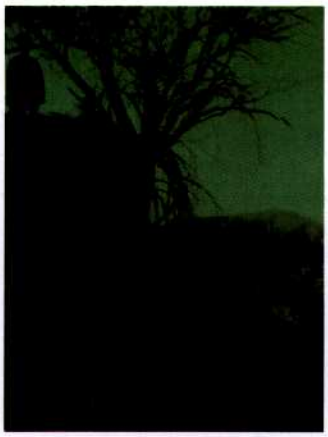
"BEFORE *about 1880, the Gila River channel from Santa Cruz Junction to Yuma was narrow with firm banks bordered by cottonwoods and willows, but by the early 1890s it occupied a sandy waste from one-quarter to one-half mile wide.*"

— J.J. Wagoner, History of the Cattle Industry in Southern Arizona



"...DROUGHT *does not cause desertification. Rather, it exacerbates the problem of management of arid lands for sustained production and exaggerates the impact of mismanagement. Drought is, after all, a normal episodic feature of arid regions, just as dust storms and floods are.*"

— H.E. Dregne, Desertification, Resource and World Development, 1987.

"THE *wells are nearly all dried up and have to be dug deeper. At the present time the prospect for next year is a gloomy one for the farmers, and in fact, all, for when the farmer is affected, all feel the effects. The stock raisers here are preparing to drive their stock to where there is something to eat. This country, which was one of the best ranges for stock in the Territory, is now among the poorest; the myriads of sheep that have been herded here for the past few years, have almost destroyed our range.*"

— Salt Lake City Deseret News, 1879

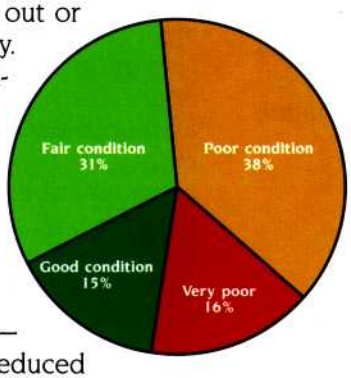
THE extensive deterioration of western riparian areas began with severe overgrazing in the late nineteenth and early twentieth centuries. Native perennial grasses were virtually eliminated from vast areas and replaced by sagebrush, rabbitbrush, mesquite and juniper, and by exotic plants or shallow-rooted native vegetation less suited for holding soils in place. This unleashed natural forces that literally transformed large areas of the western landscape.

Exposed topsoil thousands of years in the making was quickly stripped from the land by wind and water erosion. Runoff was concentrated and accelerated. Unchecked flood flows eroded unprotected streambanks and downcut streambeds. Water tables lowered. Perennial streams became intermittent or dry during most of the year. Formerly productive riparian areas dried out or eroded away. These conditions contributed significantly to desertification — drying out of the land — which has reduced the productivity of an estimated 225 million acres in the West.

In 1980 the United States Department of Agriculture estimated the vegetation on more than half all western rangelands was deteriorated to less than 40% of potential productivity, and to less than 60% of potential on more than 85% of the rangeland.

Rangeland conditions reportedly have significantly improved in many areas since 1980. However, improved upland conditions do not necessarily mean improved riparian conditions. In fact, extensive field observations in the late 1980's suggest riparian areas throughout much of the West were in the worst condition in history.

The deteriorated condition of watersheds represents an enormous economic loss of potential livestock forage forgone. The loss of other values also is high. Many once-productive fish and wildlife populations have been eliminated or greatly reduced over wide areas of land. Degradation of streams and riparian habitats for migratory fish and waterfowl adversely affects economies thousands of miles away.



Rangeland was rated on the difference between the land's present vegetation and the ecological potential of the site. Land rated "good" had vegetation at between 61 and 100 percent of potential; "fair" 41%–60% of potential; "poor" 21%–40% of potential; "very poor" 20% or less of potential. Source: USDA 1981, Resources Planning Act

Erosion-produced sediments reduce the quality and seasonal quantity of water supplies and shorten the economic life of irrigation and hydroelectric reservoirs critical to many western economies.