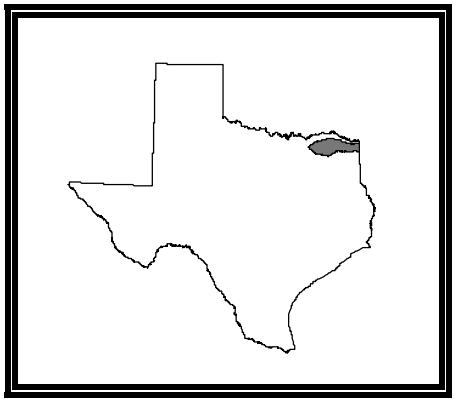
Basin 03

Sulphur River



Sulphur River Basin Narrative Summary

The Sulphur River Basin lies within 11 northeast Texas counties and drains an area of 3,558 square miles in Texas. The South Sulphur River originates in southeastern Fannin County and flows eastward, joining the Middle Sulphur and North Sulphur Rivers. From this confluence, the Sulphur River flows eastward into Lake Wright Patman. Downstream of Lake Wright Patman, the Sulphur River exits Texas and converges with the Red River in Arkansas. White Oak Bayou and Days Creek are the major tributaries to the Sulphur River.

Wright Patman Lake and Cooper Reservoir, covering 20,314 and 10,305 acres, respectively, are the only major main stem reservoirs presently existing on the Sulphur River. The riverine portion of the Sulphur River Basin has been divided into five segments that comprise 308 miles. Data from 32 routine surface water monitoring stations in the basin were used in the assessment.

Wright Patman Lake, Cooper Reservoir, and the Upper South Sulphur have pH levels that are sometimes higher than the criterion established. This may be reflective of natural conditions in East Texas. Sluggish flow, coupled with municipal wastewater discharges, contributes to elevated temperatures, levels of nutrients, and fecal coliform, as well as the periodically depressed dissolved oxygen concentrations that occur in the reservoirs and in some streams in the basin. There is a concern for aluminum (acute) in water in White Oak Creek. Atrazine (a widely used herbicide) contamination in finished drinking water has been observed in Big Creek Lake.