

Arkansas River near Muskogee (at US 62)

Station AT194500 (121400010260-001AT) is a permanent ambient trend monitoring station located on the Arkansas River (McClellan-Kerr Navigational System) in Oklahoma. Situated in the east central portion of Muskogee County, the site was established east of the city of Muskogee on US Highway 62. The station is positioned near the upper end of stream segment 121400010260 and is classified within the Dirty-Greenleaf Creek 8-digit HUC watershed (11110102). Water enters the stream system from several tributaries including the Verdigris River, the Neosho River (Fort Gibson Reservoir), Coody Creek, and Bayou Manard, among others.

This station on the Arkansas River has been active for all water quality variables since September of 1999. The following assessment of beneficial uses is based on data collected from October of 1999 through August of 2004. For purposes of reporting, this station is representative of the Arkansas River from the confluence of the Verdigris River (-95.3073, 35.7983) downstream to the Arkansas River's confluence with Webber's Falls Reservoir (-95.2275, 35.7036). As per Oklahoma Water Quality Standards, Appendix A, Table 1 of Oklahoma Administrative Code (OAC) 785:45, this water quality management segment is assigned the following designated beneficial uses: 1) Emergency Water Supply (EWS), 2) Warm Water Aquatic Community—Fish and Wildlife Propagation (WWAC), 3) Agriculture—Class I Irrigation (AG), and 4) Primary Body Contact—Recreation (PBCR). The WWAC beneficial use is not supported. Of the eight (8) lead samples collected, two (2) of the concentrations (or 25%) exceeded the prescribed hardness-dependant chronic criteria of 6.76 µg/L (Table 25). Dissolved oxygen (Figure 60a), pH (Figure 60b), and turbidity (Figure 60c) samples met the criteria prescribed in the WWAC beneficial use. The AG beneficial use is supported for total dissolved solids, chlorides, and sulfates (Figure 60d and Figure 60e). The PBCR beneficial use is not supported (Table 26). Of the eighteen (18) enterococci concentrations, 2 samples exceeded the prescribed screening level of 406 cfu/mL, and the geometric mean (39.0 cfu/mL) exceeded the prescribed mean standard of 33 cfu/mL. This segment of the Arkansas River is not nutrient-threatened. The total phosphorus and nitrate/nitrite median values were below the threshold medians of 0.36 mg/L and 5.0 mg/L, respectively (Figure 60f).

Figure 60a-f. Dissolved Oxygen (a), pH (b), Turbidity (c), Total Dissolved Solids (d), Minerals (e), and Nutrients (f) the Arkansas River at Muskogee (AT194500), 1999-2004.



