

## Deep Fork River near Beggs

Station AT243500 (520700020010-001AT) is a permanent ambient trend monitoring station located on the Deep Fork River in Oklahoma. Situated in the west central portion of Okmulgee County, the site was established south of the town of Beggs off State Highway 16 on County Road N3900. The station is positioned near the terminal end of stream segment 520700020010 and is classified within the Deep Fork River 8-digit HUC watershed (11110303). Water enters the stream system from Todd Lake and from several tributaries including Buckeye Creek (Okemah Lake), Nuyaka Creek, Little Deep Fork Creek, and Salt Creek, among others.

This station on the Deep Fork River has been active for all water quality variables since November of 1998. The following assessment of beneficial uses is based on data collected from October of 1999 through September of 2004. For purposes of reporting, this station is representative of the Deep Fork River from the confluence of Buckeye Creek (96.2682, 35.6225) downstream to confluence of Salt Creek with the Deep Fork River (96.0242, 35.5887). As per Oklahoma Water Quality Standards, Appendix A, Table 5 of Oklahoma Administrative Code (OAC) 785:45, this water quality management segment is assigned the following designated beneficial uses: 1) Public and Private Water Supply (PPWS), 2) Warm Water Aquatic Community—Fish and Wildlife Propagation (WWAC), 3) Agriculture—Class II Irrigation (AG), and 4) Primary Body Contact—Recreation (PBCR).

The PPWS beneficial use is supported. The WWAC beneficial use is not supported. Of the twenty-five (25) turbidity samples (Figure 46c), eighteen (18) samples (or 72%) exceeded the numerical criteria of 50. Of the twelve (12) lead samples collected, two (2) of the concentrations (or 18%) exceeded the prescribed, hardness-dependant chronic criterion of 8.26 µg/L (Table 22). Dissolved oxygen (Figure 46a) and pH (Figure 46b) data met the criteria prescribed in the WWAC beneficial use. The AG beneficial use is supported for total dissolved solids, chlorides, and sulfates (Figure 46d and Figure 46e). The PBCR beneficial use is not supported (Table 23). Of the nineteen (19) enterococci concentrations, four (4) samples exceeded the prescribed screening level of 406 cfu/mL, and the geometric mean (201.0 cfu/mL) exceeded the prescribed mean standard of 33 cfu/mL. This segment of the Deep Fork 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 46f).

**Figure 46a-f.** Dissolved Oxygen (a), pH (b), Turbidity (c), Total Dissolved Solids (d), Minerals (e), and Nutrients (f) on the Deep Fork River at Beggs (AT243500), 1999-2004.



