

Cimarron River near Ripley

Station AT161450 (620900030010-001AT) is a permanent ambient trend monitoring station located on the Cimarron River in Oklahoma. Situated in the south central portion of Payne County, the site was established south of the Town of Ripley on State Highway 33. The station is positioned near the terminal end of stream segment 620900030010 and is classified within the Lower Cimarron River 8-digit HUC watershed (11050003). Water enters the stream system from Skeleton Creek, Beaver Creek, Fitzgerald Creek (Langston Lake), Dugout Creek, and Sand Creek, among others.



This station on the Cimarron River has been active for all water quality variables since October of 2000. The following assessment of beneficial uses is based on data collected from October of 2000 through September of 2003. For purposes of reporting, this station is representative of the Cimarron River from the confluence of Skeleton Creek (97.3975, 35.9875) downstream to the confluence of the Cimarron River with Stillwater Creek (-96.9149, 36.0230). As per Appendix A, Table 6 of 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 III Irrigation (AG), 4) Primary Body Contact—Recreation (PBCR), and 5) Aesthetics.

The WWAC beneficial use is not supported. Of the 15 turbidity samples (Figure 12c), 6 samples (or 40%) exceeded the numerical criteria of 50. Dissolved oxygen (Figure 12a), pH (Figure 12b), and toxicant samples met the criteria prescribed in the WWAC beneficial use. The AG beneficial use is supported for total dissolved solids, chlorides, and sulfates (Figure 12d and Figure 12e). The PBCR beneficial use is not supported (Table 11). Of the 20 enterococci concentrations, 5 samples exceeded the prescribed screening level of 406 cfu/mL, and the geometric mean (67.8 cfu/mL) exceeded the prescribed mean standard of 33 cfu/mL. This segment of the Cimarron River is not nutrient-threatened. The total phosphorus and nitrate/nitrite median values were below the threshold medians of 1.0 mg/L and 4.65 mg/L, respectively (Figure 12f).

Figure 12a-f. Dissolved Oxygen (a), pH (b), Turbidity (c), Total Dissolved Solids (d), Minerals (e), and Nutrients (f) for the Cimarron River at Ripley (AT161450), 2000-2003.



