

Beaver River near Beaver

Station AT234000 (720500020290-001AT) is a permanent ambient trend monitoring station located on the Beaver River in Oklahoma. Situated in the north central portion of Beaver County, the site was established north of the city of Beaver on state highway 23. The station is positioned near the midpoint of stream segment 720500020290 and is classified within the Middle Beaver River 8-digit HUC watershed (11100102). Water enters the stream system from several tributaries including Willow Creek, Sixmile Creek, Home Creek, and Clear Creek, among others.

This station on the Beaver 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 1999 through September of 2004. For purposes of reporting, this station is representative of the Beaver River from below the confluence of Sharp Creek (100.8064, 36.7972) downstream to below the confluence of Clear Creek with the Beaver River (100.4400, 36.8169). As per Oklahoma Water Quality Standards, Appendix A, Table 7 of Oklahoma Administrative Code (OAC) 785:45, this water quality management segment is assigned the following designated beneficial uses: 1) Warm Water Aquatic Community—Fish and Wildlife Propagation (WWAC), 2) Agriculture—Class III Irrigation (AG), and 3) Primary Body Contact—Recreation (PBCR).

The WWAC beneficial use is supported. Dissolved oxygen (Figure 40a), pH (Figure 40b), turbidity (Figure 40c), and toxicant data met the criteria prescribed in the WWAC beneficial use. The AG beneficial use is not supported (Figure 40d and Figure 40e). Of the thirty-three (33) total dissolved solids concentrations, thirty-one (31) samples (or 94%) exceeded the sample standard of 3275.0 mg/L, and the geometric mean (4006.7 mg/L) exceeded the yearly mean standard (2575 mg/L). Of the 31 chloride concentrations, twenty-eight (28) samples (or 90%) exceeded the sample standard of 1118.0 mg/L, and the geometric mean (1442.5 mg/L) exceeded the yearly mean standard (868 mg/L). Sulfate values met the segment-specific criterion. The PBCR beneficial use is not supported (Table 23). Of the seventeen (17) fecal coliform concentrations, eight (8) samples (or 47%) exceeded the prescribed screening level of 400 cfu/mL, however the geometric mean (195.3 cfu/mL) did not exceed the prescribed mean standard of 400 cfu/mL. Of the nineteen (19) enterococci concentrations, ten (10) samples exceeded the prescribed screening level of 406 cfu/mL, and the geometric mean (281.9 cfu/mL) exceeded the prescribed mean standard of 33 cfu/mL. This segment of the Beaver 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 40f).

Figure 40a-f. Dissolved Oxygen (a), pH (b), Turbidity (c), Total Dissolved Solids (d), Minerals (e), and Nutrients (f) on the Beaver River at Beaver (AT234000), 1999-2004.



