

Canadian River near Calvin

Station AT231500 (220600010119-001AT) is a permanent ambient trend monitoring station between the midpoint and the lower end of the Canadian River in Oklahoma. Situated in the central portion of Hughes County, the site was established north of the town of Calvin on US Highway 270. The station is positioned near the upper end of stream segment 220600010119 and is classified within the Lower Canadian River - Walnut Creek 8-digit HUC watershed (11090202). Water enters the stream system from several tributaries including Big Creek, Salt Creek, Spring Creek, Coal Creek, and Gobbler Creek, among others.

This station on the Canadian 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 Canadian River from below the confluence of the Little River (96.3637, 34.9962) downstream to confluence of the Canadian River with Eufaula Lake (95.8391, 35.1899). As per Oklahoma Water Quality Standards, Appendix A, Table 2 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 I 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-seven (27) turbidity samples (Figure 34c), seven (7) samples (or 26%) exceeded the numerical criteria of 50. Dissolved oxygen (Figure 34a), pH (Figure 34b) and toxicant samples met the criteria prescribed in the WWAC beneficial use. The AG beneficial use is not supporting (Figure 34d and Figure 34e). Of the forty-nine (49) total dissolved solids concentrations, fifteen (14) samples (or 31%) exceeded the prescribed sample standard of 777 mg/L. Of the forty-five (45) sulfate concentrations, five (5) samples (or 11%) exceeded the prescribed sample standard of 268.0 mg/L. The PBCR beneficial use is not supported (Table 20). Of the twenty-five (25) enterococci concentrations, four (4) samples exceeded the prescribed screening level of 406 cfu/mL, and the geometric mean (108.2 cfu/mL) exceeded the prescribed mean standard of 33 cfu/mL. This segment of the Canadian 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 34f).

Figure 34a-f. Dissolved Oxygen (a), pH (b), Turbidity (c), Total Dissolved Solids (d), Minerals (e), and Nutrients (f) on the Canadian River at Calvin (AT231500), 1999-2004.



