

Canadian River near Bridgeport

Station AT228500 (520610020150-001AT) is a permanent ambient trend monitoring station located on the Canadian River in Oklahoma. Situated in the northeastern portion of Caddo County, the site was established east of the town of Bridgeport on US Highway 66. The station is positioned near the upper end of stream segment 520610020150 and is classified within the Lower Canadian River - Walnut Creek 8-digit HUC watershed (11090202). Water enters the stream system from several tributaries including Lariat Creek, Canyon View Creek, Powder Face Creek, and Buggy 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 the confluence of Deer Creek (98.4737, 35.5580) downstream to confluence of the Canadian River with Buggy Creek (97.8950, 35.3450). 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) 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 thirty-two (32) turbidity samples (Figure 33c), ten (10) samples (or 31%) exceeded the numerical criterion of 50. Dissolved oxygen (Figure 33a), pH (Figure 33b), and toxicants samples met the criteria prescribed in the WWAC beneficial use. The AG beneficial use is not supported (Figure 33d and Figure 33e). Of the forty-nine (49) total dissolved solids concentrations, thirty-seven (37) of the samples (or 76%) exceeded the minimum sample standard of 750 mg/L (Appendix F sample standard is 700 mg/L), and the geometric mean (1030.4 mg/L) exceeded the yearly mean standard of 700 mg/L. Of the forty-seven (47) sulfate concentrations, thirteen (13) samples (or 28%) exceeded the sample standard of 449.0 mg/L. Chloride values met the prescribed segment-specific criterion. The PBCR beneficial use is not supported (Table 20). Of the twenty-two (22) enterococci concentrations, five (5) samples exceeded the prescribed screening level of 406 cfu/mL, and the geometric mean (172.9 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 33f).

Figure 33a-f. Dissolved Oxygen (a), pH (b), Turbidity (c), Total Dissolved Solids (d), Minerals (e), and Nutrients (f) on the Canadian River at Bridgeport (AT228500), 1999-2004.



