

## Canadian River near Konawa

Station AT229400 (520600010010-001AT) is a permanent ambient trend monitoring station located on the Canadian River in Oklahoma. Situated in the southeastern portion of Seminole County, the site was established east of the town of Konawa on US Highway 377. The station is positioned near the upper end of stream segment 520600010010 and is classified within the Lower Canadian River - Walnut Creek 8 digit HUC watershed (11090202). Water enters the stream system from and from several tributaries including Canadian Sandy Creek, Jumper Creek, and the Little River, 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 May of 2002 through April of 2007. For purposes of reporting, this station is representative of the Canadian River from the confluence of Canadian Sandy Creek (96.7007, 34.8651) downstream to confluence of the Little River with the Canadian River (96.3637, 34.9962). As per Appendix A, Table 5 of 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 thirty-one (31) turbidity samples, samples (7) samples (or 23%) exceeded the numerical criterion of 50. Of the twelve (12) toxicant samples collected, three (3) of the lead concentrations (or 25%) exceeded the prescribed, hardness-dependent chronic criteria of 14.65 ug/L. Furthermore, of the forty-eight (48) visual site observations, six (6) samples (or 13%) exceeded the median observation value for oil and grease. Dissolved oxygen and pH samples met the criteria prescribed in the WWAC beneficial use. The AG beneficial use is supported for total dissolved solids, chlorides, and sulfates. The PBCR beneficial use is not supported. Of the twenty-nine (29) enterococci concentrations, seven (7) samples exceeded the prescribed screening level of 406 cfu/100mL, and the geometric mean (120.0 cfu/100mL) exceeded the prescribed mean standard of 33 cfu/100mL. This segment of the Canadian River is nutrient-threatened. The mean sestonic chlorophyll-a concentration (32.4 mg/M<sup>3</sup>) produced a TSI of 65, which is above the threshold TSI of 62. However, the total phosphorus and nitrate/nitrite median values were below the threshold medians of 0.36 mg/L and 5.0 mg/L, respectively.

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