

## Cimarron River near Dover

Station AT159100 (620910020010-001AT) is a permanent ambient trend monitoring station located on the Cimarron River in Oklahoma. Situated in the central portion of Kingfisher County, the site was established south of the town of Dover on US Highway 81. The station is positioned near the midpoint of stream segment 620910020010 and is classified within the Lower Cimarron River - Skeleton Creek 8 digit HUC watershed (11050002). Water enters the stream system from and from several tributaries including Indian Creek, Deep Creek, Hoyle Creek, Salt Creek, Cooper Creek, Turkey Creek, and Kingfisher Creek, among others.

This station on the Cimarron 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 Cimarron River from the confluence of Indian Creek (98.2968, 36.2762) downstream to confluence of the Cimarron River with Kingfisher Creek (97.8787, 35.9308). 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), and 4) Primary Body Contact—Recreation (PBCR).

The WWAC beneficial use is supported. Dissolved oxygen, pH, turbidity, and toxicant samples met the criteria prescribed in the WWAC beneficial use. The AG beneficial use is not supported. Of the fifty-two (52) total dissolved solids concentrations, nineteen (19) samples (or 37%) exceeded the prescribed sample standard of 10028 mg/L, and the mean (9287.4 mg/L) exceeded the yearly mean standard (7437 mg/L). Of the forty-three (43) chloride concentrations, ten (10) samples (or 23%) exceeded the prescribed sample standard of 10028 mg/L, and the mean (4296.6 mg/L) exceeded the yearly mean standard (4218 mg/L). Sulfate concentrations met the prescribed segment-specific criteria. The PBCR beneficial use is not supported. Of the twenty-seven (27) *E. coli* concentrations, fourteen samples exceeded the prescribed screening level of 406 cfu/100mL, and the geometric mean (488.6 cfu/100mL) exceeded the prescribed mean standard of 126 cfu/100mL. Of the 27 enterococci concentrations, eight (8) samples exceeded the prescribed screening level of 406 cfu/100mL, and the geometric mean (114 cfu/100mL) exceeded the prescribed mean standard of 33 cfu/100mL. 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.

HUC 1105