

Verdigris River near Lenapah

Station AT171000 (121510020010-001AT) is a permanent ambient trend monitoring station near the upper end of the Verdigris River in Oklahoma. Situated in the north central portion of Nowata County, the site was established east of the town of Lenapah on State Highway 10. The station is positioned near the terminal end of stream segment 121510020010 and is classified within the Middle Verdigris River 8 digit HUC watershed (11070103). Water enters the stream system from Kansas and from several tributaries including Onion Creek, Snow Creek, and California Creek, among others.

This station on the Verdigris 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 Verdigris River from entrance into Oklahoma near Coffeyville, Kansas (95.5890, 36.9993) downstream to confluence of the Verdigris River with California Creek (95.6142, 36.7567). As per Appendix A, Table 1 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 thirteen (13) toxicant samples collected, two (2) of the lead concentrations (or 15%) exceeded the prescribed hardness-dependant chronic criteria of 5.84 ug/L. Of the twenty-nine (29) turbidity samples, seven (7) samples (or 24%) exceeded the numerical criterion of 50. 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 sixteen (16) enterococci concentrations, two (2) samples exceeded the prescribed screening level of 406 cfu/100mL, and the geometric mean (395.6 cfu/mL) exceeded the prescribed mean standard of 33 cfu/mL. This segment of the Verdigris 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. Furthermore, the mean sestonic chlorophyll-a concentration (11.5 mg/M³) produced a TSI of 55, which is below the threshold TSI of 62.