

Verdigris River near Inola

Station AT178600 (121500020260-001AT) is a permanent ambient trend monitoring station located on the Verdigris River (McClellan-Kerr Situated in the extreme south central portion of Rogers County, the site was established west of the town of Inola on US Highway 412. The station is positioned near the midpoint of stream segment 121500020260 and is classified within the Lower Verdigris River 8 digit HUC watershed (11070105). Water enters the stream system from Bird Creek, Spunky Creek, Chambers Creek, Dog Creek (Claremore Lake), and Salt Creek, among others.

This station on the Verdigris River has been active for all water quality variables since November of 2000. 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 the confluence of Bird Creek (95.7261, 36.2210) downstream to the confluence of the Verdigris River with Adams Creek (95.5510, 36.0673). 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 eleven (11) toxicant samples collected, six (6) of the lead concentrations (or 55%) exceeded the prescribed hardness-dependant chronic criteria of 5.25 ug/L. Of the twenty-nine (29) turbidity samples, six (6) samples (or 21%) 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 eighteen (18) enterococci concentrations, four (4) samples exceeded the prescribed screening level of 406 cfu/100mL, and the geometric mean (130.3 cfu/100mL) exceeded the prescribed mean standard of 33 cfu/100mL. This segment of the Verdigris River is not nutrient-threatened. The total phosphorus and nitrate/nitrite median values were below the threshold medians of 1.00 mg/L and 4.65 mg/L, respectively. Furthermore, the mean sestonic chlorophyll-a concentration (8.0 mg/M³) produced a TSI of 51, which is below the threshold TSI of 62.