

Neosho River near Chouteau

Station AT191530 (121600010280-001AT) is a permanent ambient trend monitoring station on the Neosho River in Oklahoma. Situated in the south central portion of Mayes County, the site was established east of the city of Chouteau on US Highway 412. The station is positioned near the terminal end of stream segment 121600010280 and is classified within the Lower Neosho River 8-digit HUC watershed (11070209). Water enters the stream system from Lake Hudson and from several tributaries including Crutchfield Branch Creek, Pryor Creek, and Chouteau Creek, among others.

This station on the Neosho 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. Analysis includes continuous dissolved oxygen data collected during 2007 approximately 2.5 miles below Kerr Dam. For purposes of reporting, this station is representative of the Neosho River from the confluence of Lake Hudson (95.1815, 36.2307) downstream to confluence of the Neosho River with Fort Gibson Lake (95.3005, 36.1540). 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 ten (10) toxicant samples collected, two (2) of the lead concentrations (or 20%) exceeded the prescribed hardness-dependant chronic criterion of 4.64 ug/L. The use is also not supported for dissolved oxygen. Only one (1) of the thirty-seven (37) discreet dissolved oxygen collections made at the US 412 site were below the seasonally based dissolved oxygen criteria. However, continuous dissolved oxygen data collected upstream were below the dissolved oxygen screening limit of 4 mg/L during 674 of 5051 (13.3%) of the averaged hourly readings. Turbidity 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 supporting for fecal coliform, *E. coli* and enterococci. This segment of the Neosho 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. Furthermore, the mean sestonic chlorophyll-a concentration (17.6 mg/M³) produced a TSI of 59, which is below the threshold TSI of 62.