

Neosho River near Connor Bridge

Station AT185010 (121600040010-001AT) is a permanent ambient trend monitoring station located on the Neosho River in Oklahoma. Situated in the central portion of Ottawa County, the site was established south southeast of the city of Miami off of State Highway 137 on County Road E0145 at Connor Bridge. The station is positioned near the terminal end of stream segment 121600040010 and is classified within the Grand Lake 8 digit HUC watershed (11070206). Water enters the stream system from several tributaries including Tar Creek and Hudson 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. For purposes of reporting, this station is representative of the Neosho River from the confluence of an unnamed tributary above the city of Miami, Oklahoma (94.9116, 36.8757) downstream to confluence of the Neosho River with Grand Lake (-94.7866, 36.7919). 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 thirty (30) turbidity samples, five (5) samples (or 17%) 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-dependant chronic criterion of 6.45 ug/L. Of the sixteen (16) zinc samples collected, two (2) concentrations (or 13%) exceeded the prescribed hardness-dependant acute criterion of 187.24 ug/L. Dissolved oxygen and pH samples met the criteria prescribed in the WWAC beneficial use. The AG beneficial use is supported for total dissolved solids (TDS), chlorides, and sulfates. Although several TDS and sulfate concentrations exceeded the sample standards, no values were above the minimum standards of 700 mg/L and 250 mg/L. The PBCR beneficial use is supported fecal coliform, enterococci, and *E. coli*. 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 (11.7 mg/M³) produced a TSI of 55, which is below the threshold TSI of 62.