

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 October of 1999 through of September 2004. 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 Oklahoma Water Quality Standards, Appendix A, Table 1 of Oklahoma Administrative Code (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 partially supported. Of the twenty-seven (27) turbidity samples (Figure 24c), five (5) samples (or 19%) exceeded the numerical criterion of 50. Dissolved oxygen (Figure 24a), pH (Figure 24b), and toxicant samples met the criteria prescribed in the WWAC beneficial use. The AG beneficial use is supported for total dissolved solids (TDS), chlorides, and sulfates (Figure 24d and Figure 24e). Although 64% of the TDS concentrations exceeded the sample standard of 206.0 mg/L and the geometric mean (226.6 mg/L) exceeded the prescribed yearly mean standard of 187.0 mg/L, the values are below the minimum standards of 750 and 700 mg/L, respectively. Although 12% of the sulfate concentrations exceeded the sample standard of 96.0 mg/L, the values are below the minimum standards of 250 mg/L. The PBCR beneficial use is supported 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 (Figure 24f).

Figure 24a-f. Dissolved Oxygen (a), pH (b), Turbidity (c), Total Dissolved Solids (d), Minerals (e), and Nutrients (f) for the Neosho River at Connor Bridge (AT185010), 1999-2004.



