

## Neosho River near Commerce

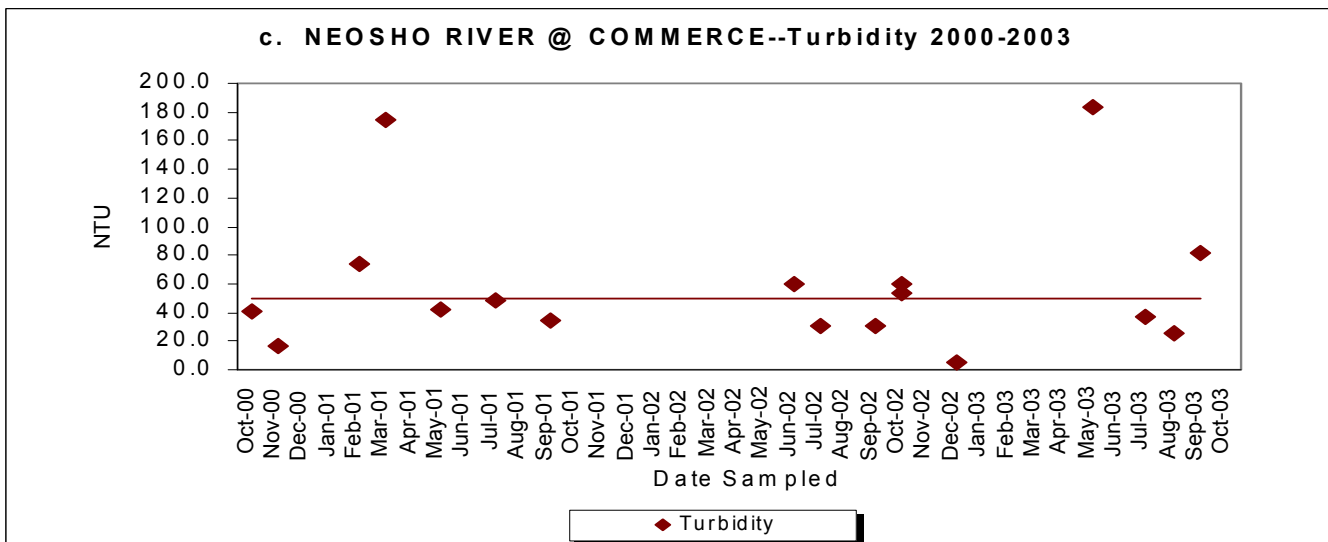
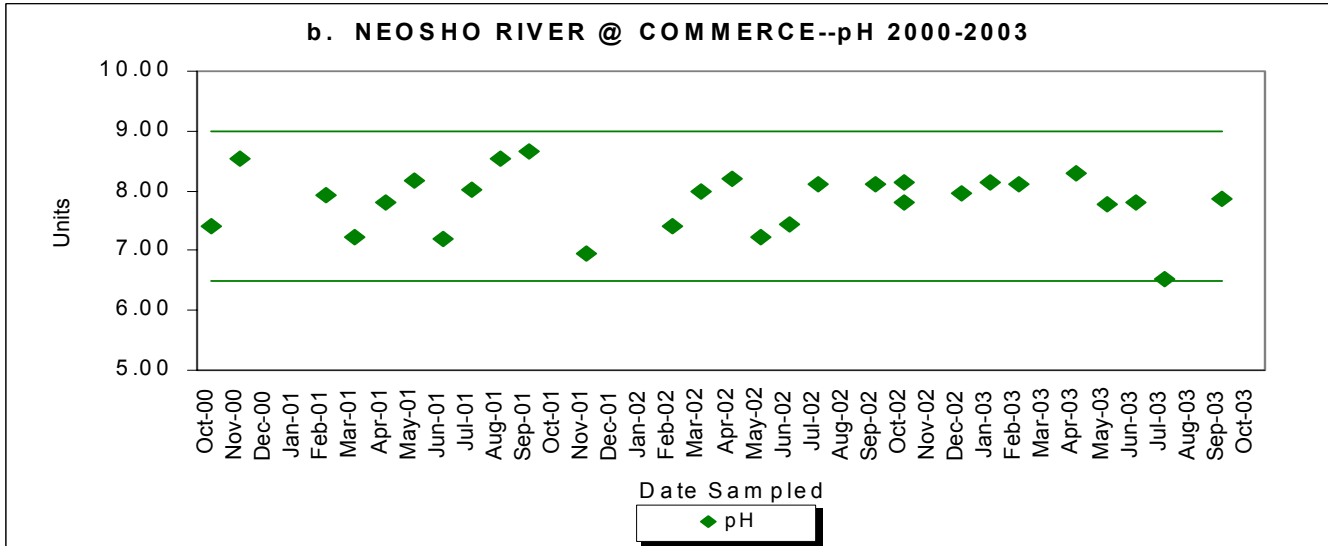
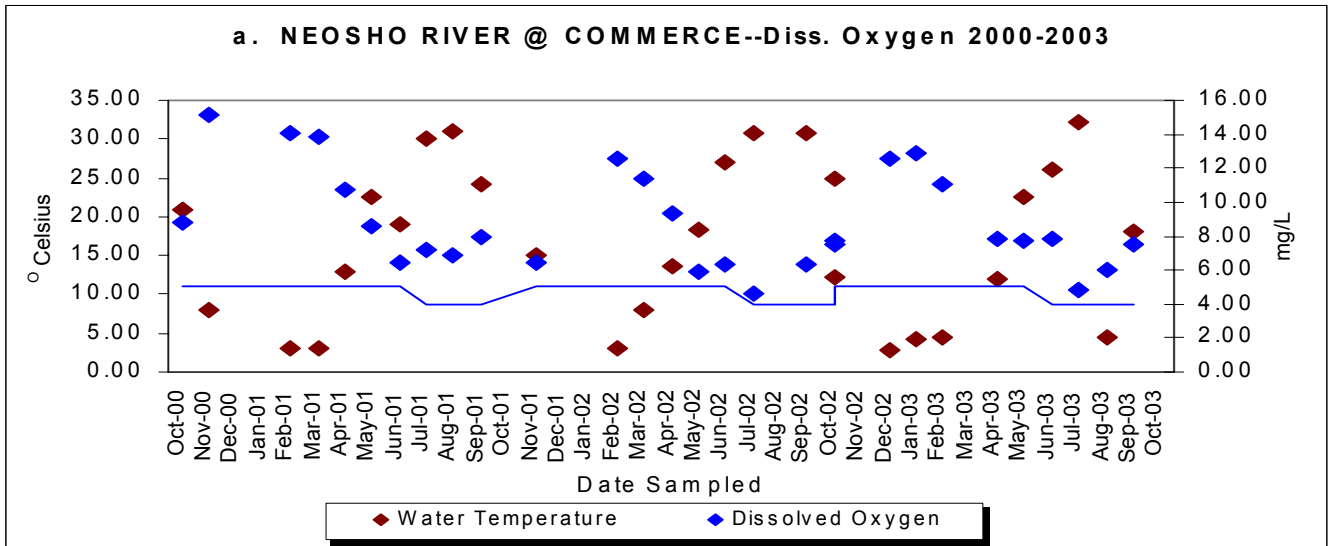
Station AT185000 (121600040220-001AT) is a permanent ambient trend monitoring station located on the Neosho River in Oklahoma. Situated in the northwest portion of Ottawa County, the site was established west of the Town of Commerce off of US Highway 66 on County Road. The station is positioned near the midpoint of stream segment 121600040220 and is classified within the Lower Verdigris River 8-digit HUC watershed (11070206). Water enters the stream system from Bird Creek, Spunky Creek, Chambers Creek, Dog Creek (Claremore Lake), and Salt Creek, among others.



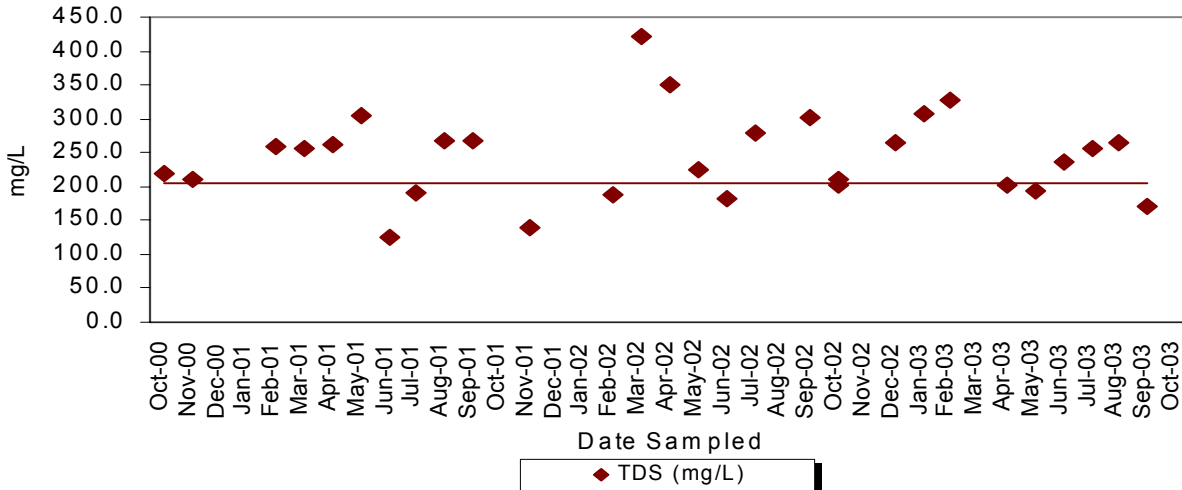
This station on the Neosho River has been active for all water quality variables since October of 2000. The following assessment of beneficial uses is based on data collected from October of 2000 through September of 2003. For purposes of reporting, this station is representative of the Neosho River from its entrance into the Oklahoma (95.0352, 36.9995) downstream to the confluence of the Neosho River with Elm Creek (94.9286, 36.8907). 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), 4) Primary Body Contact—Recreation (PBCR), and 5) Aesthetics.

The PPWS beneficial use is supported. The WWAC beneficial use is not supported. Of the 17 turbidity samples (Figure 27c), 7 samples (or 41%) exceeded the numerical criterion of 50. Dissolved oxygen (Figure 27a), pH (Figure 27b), 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 27d and Figure 27e). Although 69% of the TDS concentrations exceeded the sample standard of 206.0 mg/L and the geometric mean (239.5 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. 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 1.0 mg/L and 4.65 mg/L, respectively (Figure 27f).

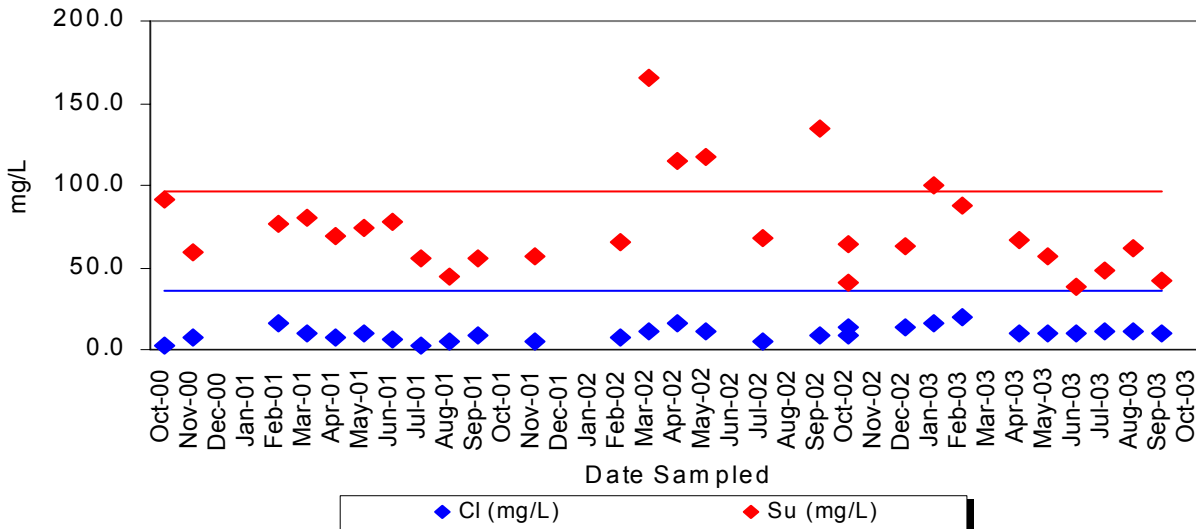
**Figure 27a-f.** Dissolved Oxygen (a), pH (b), Turbidity (c), Total Dissolved Solids (d), Minerals (e), and Nutrients (f) for the Neosho River at Commerce (AT185000), 2000-2003.



**d. NEOSHO RIVER @ COMMERCE--TDS 2000-2003**



**e. NEOSHO RIVER @ COMMERCE--Minerals 2000-2003**



**f. NEOSHO RIVER @ COMMERCE--Nutrients 2000-2003**

