

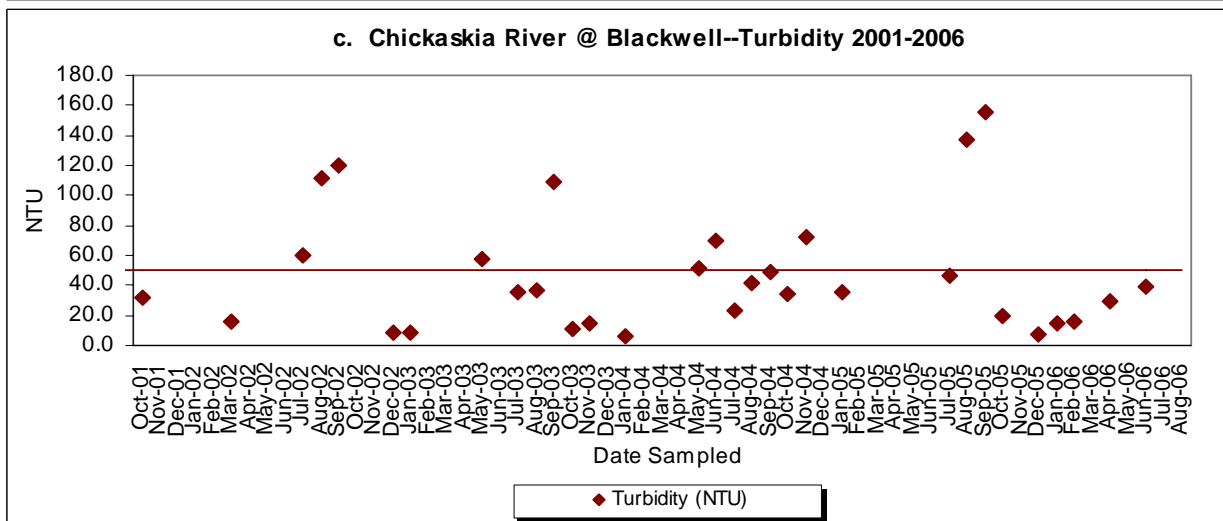
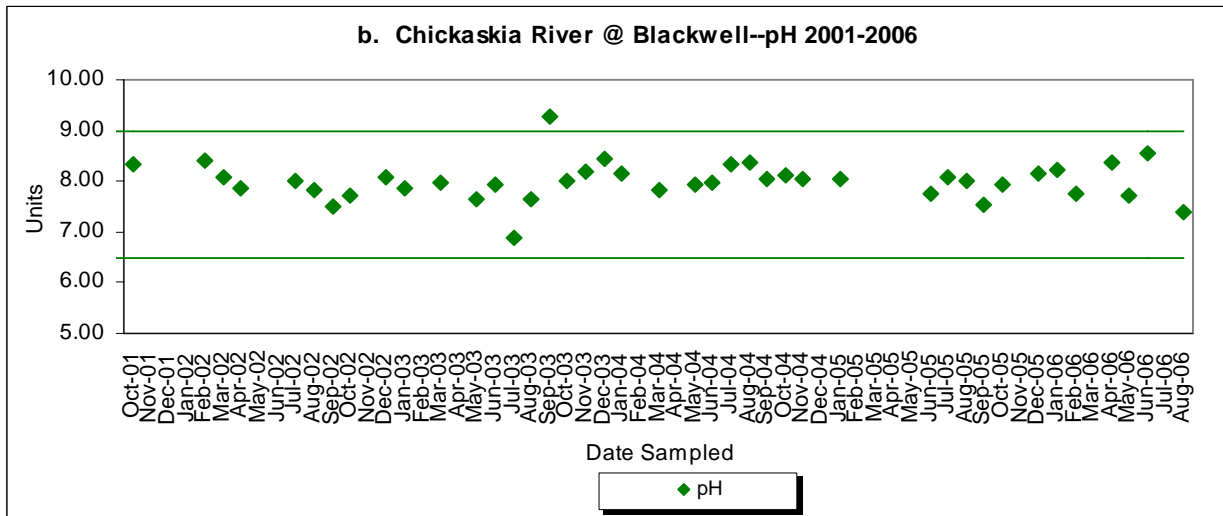
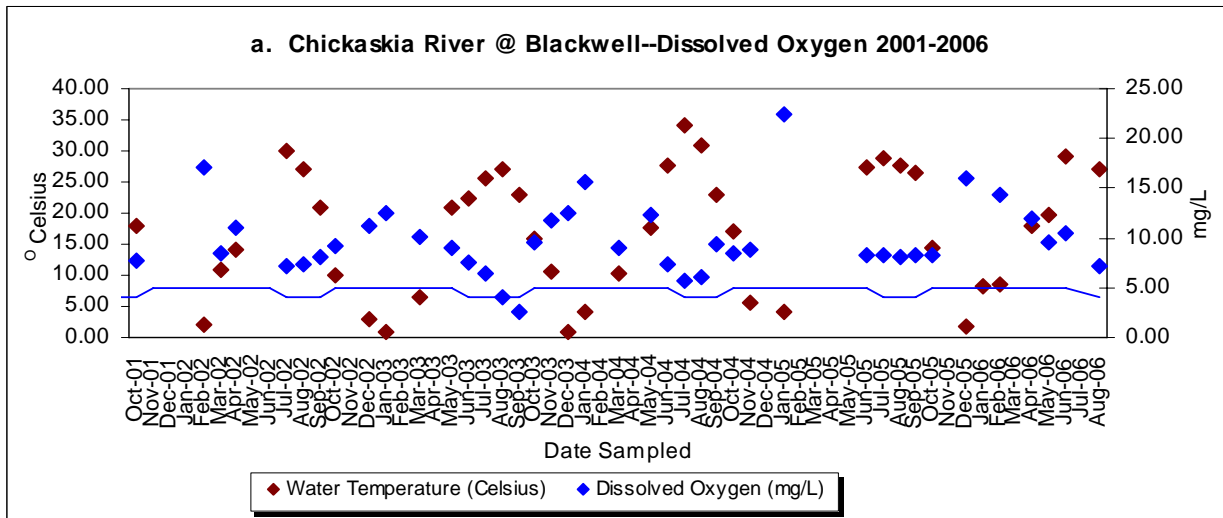
Chickaskia River near Blackwell

Station AT152000 (621100000010-001AT) is a permanent ambient trend monitoring station located on the Chickaskia River in Oklahoma. Situated in the west central portion of Kay County, the site was established north of the city of Blackwell on US Highway 177. The station is positioned near the midpoint of stream segment 621100000010 and is classified within the Chickaskia River 8 digit HUC watershed (11060005). Water enters the stream system from Lake Blackwell and from several tributaries including Bluff Creek, Shoo Fly Creek, Doe Creek, Bitter Creek, Stink Creek, and Duck Creek, among others.

This station on the Chickaskia 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 2001 through August of 2006. For purposes of reporting, this station is representative of the Chickaskia River from the confluence of Bluff Creek (97.3276, 36.9679) downstream to confluence of the Chickaskia River with the Salt Fork of the Arkansas River (97.2442, 36.6233). As per Appendix A, Table 6 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-one (31) turbidity samples (Figure 15c), ten (10) samples (or 32%) exceeded the numerical criterion of 50 NTU. Of the nineteen (19) toxicant samples collected, three (3) of the lead concentrations (or 16%) exceeded the prescribed, hardness-dependent chronic criteria of 11.91 ug/L (Table 11). Dissolved oxygen (Figure 15a) and pH (Figure 15b) data met the criteria prescribed in the WWAC beneficial use. The AG beneficial use is not supported (Figure 15d and e). Of the forty-two (42) total dissolved solids concentrations, 10 samples (or 23%) exceeded the minimum sample standard of 700.0 mg/L. Chloride and sulfate values met the prescribed segment-specific criteria. The PBCR beneficial use is not supported (Table 12). Of the nineteen (19) fecal coliform concentrations, seven (7) samples (or 37%) exceeded the prescribed screening level of 400 cfu/mL. Of the 19 enterococci concentrations, ten (10) samples exceeded the prescribed screening level of 406 cfu/mL, and the geometric mean (295.6 cfu/mL) exceeded the prescribed mean standard of 33 cfu/mL. This segment of the Chickaskia 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 15f). Furthermore, the mean sestonic chlorophyll-a concentration (19.6 mg/M³) produced a TSI of 60, which is below the threshold TSI of 62.

Figure 15 a-f. Dissolved Oxygen (a), pH (b), Turbidity (c), Total Dissolved Solids (d), Minerals (e), and Nutrients (f) for the Chickaskia River at Blackwell (AT152000), 2001-2006



HUC 1106

