

Illinois River near Tahlequah

Station AT196500 (121700030010-001AT) is a permanent ambient trend monitoring station located on the Illinois River in Oklahoma. Situated in the east central portion of Cherokee County, the site was established east of the city of Tahlequah on US Highway 62. The station is positioned near the upper end of stream segment 121700030010 and is classified within the Illinois River 8 digit HUC watershed (11110103). Water enters the stream system from several tributaries including Tahlequah Creek, among others.

This station on the Illinois 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 also includes water quality data collected by the United States Geological Survey's Oklahoma Water Science Center. For purposes of reporting, this station is representative of the Illinois River from the confluence of an unlisted tributary near Ellerville, Oklahoma (94.9221, 36.0094) downstream to confluence of Tahlequah Creek with the Illinois River (94.9445, 35.8860). 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) Cool Water Aquatic Community—Fish and Wildlife Propagation (CWAC), 3) Agriculture—Class I Irrigation (AG), and 4) Primary Body Contact—Recreation (PBCR), and 5) Aesthetics. The Illinois River is also designated as a scenic river.

The PPWS beneficial use is supported. The CWAC beneficial use is supported. Dissolved oxygen, pH, turbidity, and toxicant data met the criteria prescribed in the WWAC beneficial use. The AG beneficial use is supported for total dissolved solids (TDS), chlorides, and sulfates. The PBCR beneficial use is not supported. Of the forty-five (45) enterococci concentrations, sixteen (16) samples exceeded the prescribed screening level of 61 cfu/100mL, and the geometric mean (44.0 cfu/100mL) exceeded the prescribed mean standard of 33 cfu/100mL. The aesthetics beneficial use is impaired for total phosphorus. Of the fifty-three (53) 3-month rolling geometric means calculated from total phosphorus samples, fifty (50) geometric means (or 94%) exceeded the prescribed scenic river total phosphorus criterion of 0.037mg/L.