

## Salt Fork of the Arkansas River near Tonkawa

Station AT151000 (621000010010-001AT) is a permanent ambient trend monitoring station located on the Salt Fork of the Arkansas River in Oklahoma. Situated in the southwest portion of Kay County, the site was established south of the town of Tonkawa on US Highway 77. The station is positioned near the midpoint of stream segment 621000010010 and is classified within the Lower Salt Fork – Arkansas River 8 digit HUC watershed (11060004). Water enters the stream system from Sand Creek, Pond Creek, and Deer Creek, among others.

This station on the Salt Fork of the Arkansas 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 May of 2002 through April of 2007. Analysis also includes water quality data collected at a variety of stations throughout the segment. Data were collected in cooperation with the Oklahoma Department of Environmental Quality (ODEQ). For purposes of reporting, this station is representative of the Salt Fork of the Arkansas River from the confluence of Sand Creek (97.9700, 36.7194) downstream to the confluence of the Salt Fork of the Arkansas River with the Chickaskia 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 III Irrigation (AG), and 4) Primary Body Contact—Recreation (PBCR).

The PPWS beneficial use is supported. The WWAC beneficial use is not supported. Of the forty-two (42) turbidity samples, fifteen (15) samples (or 36%) exceeded the numerical criterion of 50. The dissolved oxygen, pH, and toxicant data collected during the same period met the criteria prescribed in the WWAC beneficial use. Fish collected during the summer of 2004 indicate that the segment is supporting a healthy biological community. Based on the Index of Biological Integrity (IBI) outlined in Appendix C of Oklahoma's USAP, the station has a sample composition score of 16 (maximum 30) and fish condition score of 11 (maximum 15) for a total score of 27. This is above the assigned supporting threshold of 22 for Central Great Plains warm water aquatic communities [OAC 46:15-5(m)]. The AG beneficial use is supported for total dissolved solids, chlorides, and sulfates. The PBCR beneficial use is not supported. Of the twenty-seven (27) enterococci concentrations, seventeen (17) samples exceeded the prescribed screening level of 406 cfu/100mL, and the geometric mean (655.1 cfu/100mL) exceeded the prescribed mean standard of 33 cfu/100mL. This segment of the Salt Fork 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.