

Beaver River near Laverne

Station AT234400 is a permanent ambient trend monitoring station located on the Beaver River in Oklahoma. Situated in the west central portion of Harper County, the site was established north of the town of Laverne on US Highway 283. The station is positioned near the upper end of stream segment 720500020010 and is classified within the Lower Beaver River 8 digit HUC watershed (11100201). Water enters the stream system from several tributaries including Kiowa Creek, among others.

This station on the Beaver River became active for all water quality variables in November of 1998. The station was discontinued in September of 2000 and replaced with another station, the Beaver River at Fort Supply (AT234450). Because the Fort Supply station may not be representative of this section of the Beaver River, the Laverne station has been reactivated. The following assessment of beneficial uses is based on data collected from July of 2003 through March of 2007. For purposes of reporting, this station is representative of the Beaver River from the confluence of Kiowa Creek (99.9060, 36.7591) downstream to confluence of Wolf Creek with the Beaver River (99.5019, 36.5886). As per Appendix A, Table 7 of OAC 785:45, this water quality management segment is assigned the following designated beneficial uses: 1) Warm Water Aquatic Community—Fish and Wildlife Propagation (WWAC), 2) Agriculture—Class III Irrigation (AG), and 3) Primary Body Contact—Recreation (PBCR).

The WWAC beneficial use is supported. Dissolved oxygen, pH, turbidity, and toxicant data collected during the same period met the criteria prescribed in the WWAC beneficial use. Fish were collected during the summer of 2006. 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. However, because biocriteria have not been developed for the Southwestern Tablelands ecoregion, no assessment of community biological health can be made at this time. The AG beneficial use is supported for total dissolved solids, chlorides, and sulfates. The PBCR beneficial use is not supported. Of the seventeen (17) fecal coliform concentrations, eight (8) samples (or 47%) exceeded the prescribed screening level of 400 cfu/100mL. Of the 17 *E. coli* concentrations, four (4) samples exceeded the prescribed screening level of 406 cfu/100mL, and the geometric mean (150.2 cfu/100mL) exceeded the prescribed mean standard of 126 cfu/100mL. Of the 17 Enterococci concentrations, two (2) samples exceeded the prescribed screening level of 406 cfu/100mL, and the geometric mean (116.4 cfu/100mL) exceeded the prescribed mean standard of 33 cfu/100mL. This segment of the Beaver 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.