

Spring Creek near Murphy

Station AT191558 is a permanent ambient trend monitoring station located on Spring Creek. Situated in the south central portion of Mayes County, the site was established east-southeast of the town of Murphy off US Highway 412 near County Road E0610. The station is positioned near the terminal end of stream segment 121600010290 and is classified within the Lower Neosho River 8-digit HUC watershed (11070209). Water enters the stream system from several tributaries including Double Spring Creek and Snake Creek, among others.



This station on Spring Creek has been active for all water quality variables since November of 1998. The following assessment of beneficial uses is based on data collected from January of 1999 through September of 2001. For purposes of reporting, this station is representative of Spring Creek from the confluence of Double Spring Creek (94.9929, 36.1043) downstream to confluence of Spring Creek River with Cedar Crest Lake (95.2250, 36.1181). 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).

The PPWS beneficial use is supported. The CWAC beneficial use is partially supported. Of the twenty-seven (27) dissolved oxygen samples (Figure 104a), three (3) samples (or 11%) were below the prescribed screening level. Turbidity (Figure 104c), pH (Figure 104b), and toxicants data collected during the same period met the criteria prescribed in the CWAC beneficial use. The AG beneficial use is supported for total dissolved solids, chlorides, and sulfates (Figure 104d and Figure 104e). The PBCR beneficial use is supported for fecal coliform, *E. coli* and enterococci samples. This segment of Spring Creek 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 104f).

Figure 104 a-f. Dissolved Oxygen (a), pH (b), Turbidity (c), Total Dissolved Solids (d), Minerals (e), and Nutrients (f) for Spring Creek at Murphy (AT191558), 1999-2001.



