



Data Summary

Shepherd Creek, Steele Creek, and Lampasas River

September 2011

The Texas Institute for Applied Environmental Research (TIAER) collected *Escherichia coli* (*E. coli*) data for three segments over two years to support water quality assessment activities. For each segment, there was one assessment unit (AU) of interest, and there was one station monitored in each AU (Table 1). Figure 1 shows the locations of the segments and AUs.

Table 1. Segments and AUs

Segment Number	Segment Name	AU of Interest	AU Description	Station
1209J	Shepherd Creek	1209J_01	Entire water body	11790
1209K	Steele Creek	1209K_02	Portion of Steele Creek from confluence with Willow Creek upstream to headwaters in Limestone County.	16384
1217	Lampasas River Above Stillhouse Hollow Lake	1217_04	Portion of Lampasas River from confluence with Simms Creek upstream to confluence with Bennett Creek in Lampasas County.	15770

Table 2 summarizes the data collected for this report. The collection period – September 2009 through August 2011 – is not entirely confined to one assessment period as defined by the Surface Water Quality Monitoring program. For this reason, summaries are provided for the entire data set as well as for those data falling within the 2012 assessment period (12/01/03 through 11/30/10). The primary contact recreation use is not supported when the geometric mean of all *E. coli* samples exceeds 126 Most Probable Number (MPN) per 100 milliliter (mL).

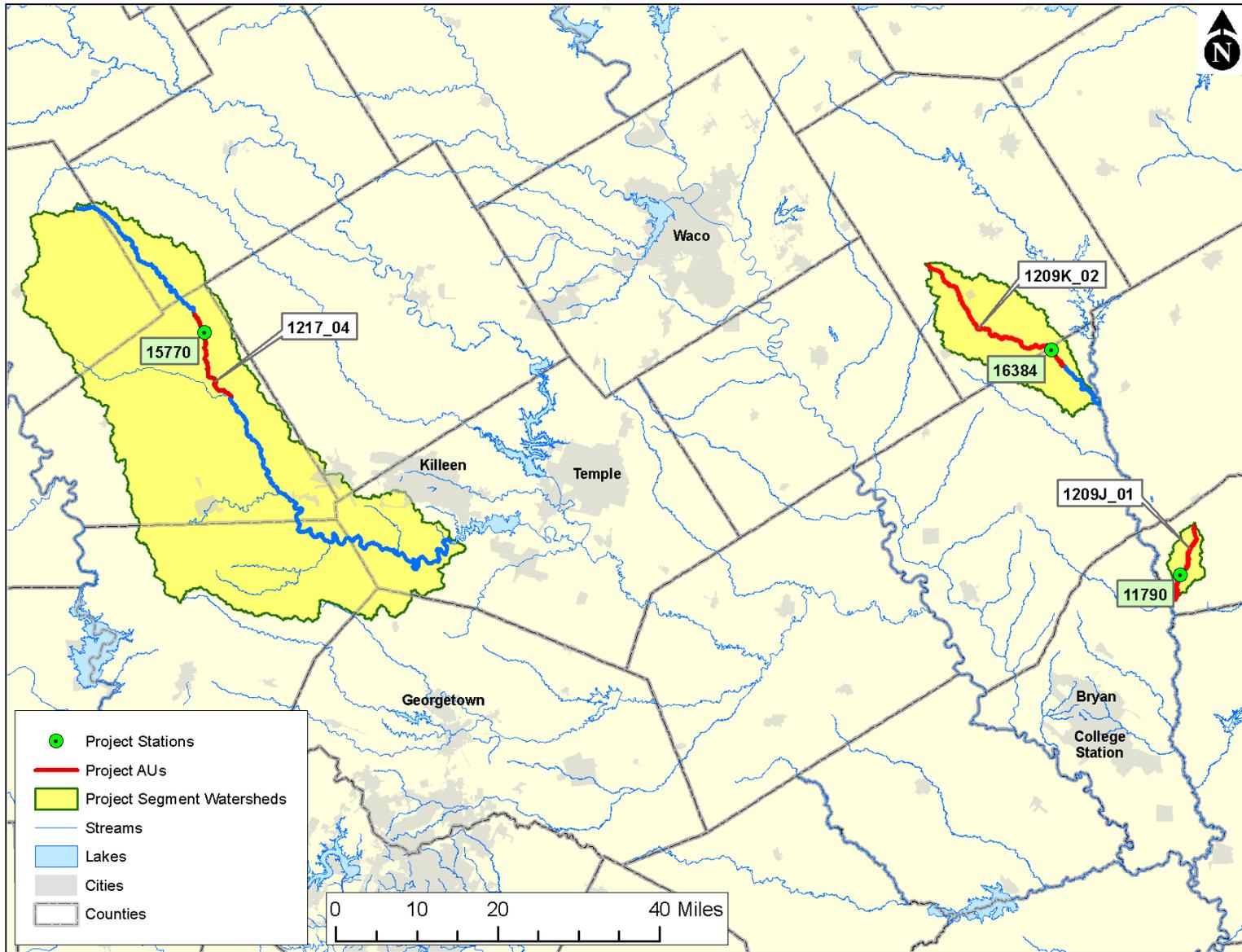


Figure 1. Project Area

Table 2. *E. coli* Data Summary (numbers in red exceed the criterion)

Segment/AU	Station	Geomean of All Data (MPN/100 mL)	Total # of Samples	Geomean of Data Within 2012 Assessment Period (MPN/100 mL)	# Samples Within 2012 Assessment Period
1209J_01	11790	410.8	12	637.3	10
1209K_02	16384	218.4	24	320.7	15
1217_04	15770	114.8	24	119.3	15

Figures 2 through 4 show the individual data points for each station. Both Table 2 and Figure 2 indicate that only half as many samples were taken at station 11790. This occurred because Shepherd Creek was completely dry at Station 11790 on 12 of the 24 scheduled sampling days. Almost all of those events were during the second half of the sampling schedule, which coincided with a severe, statewide drought.

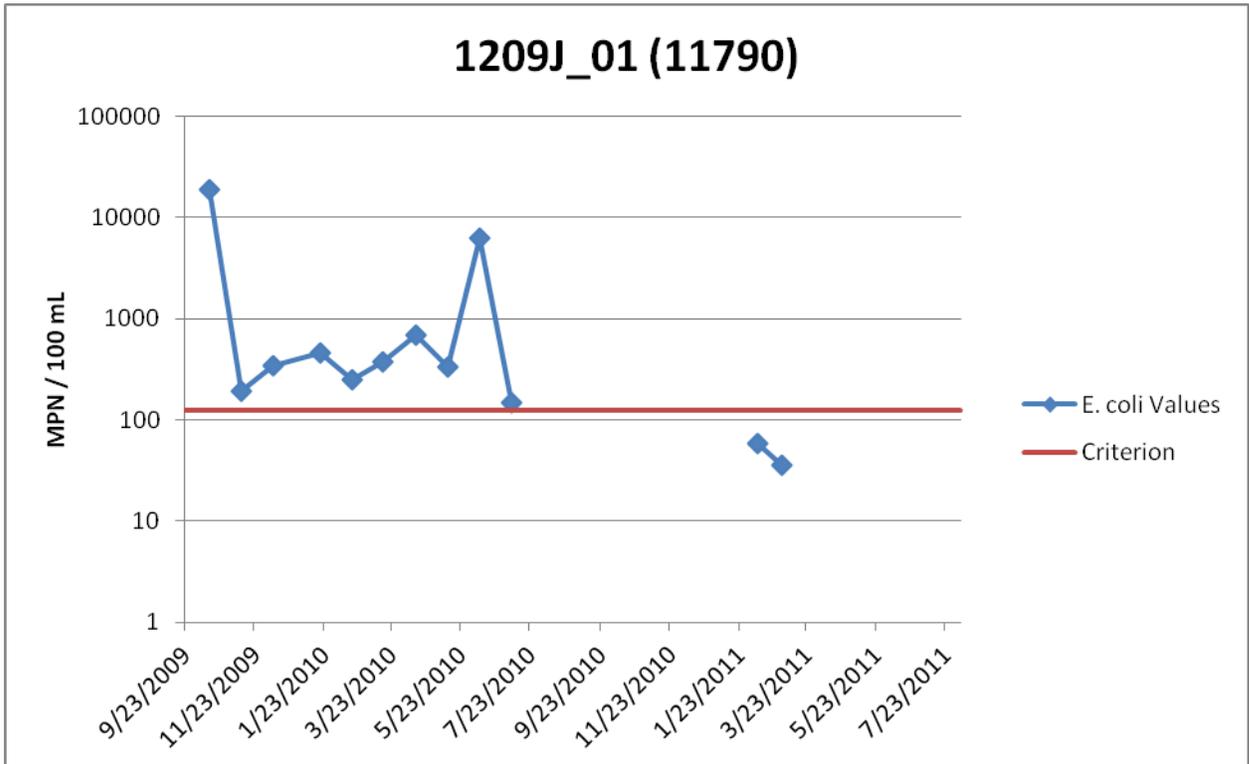


Figure 2. *E. coli* Data for Station 11790

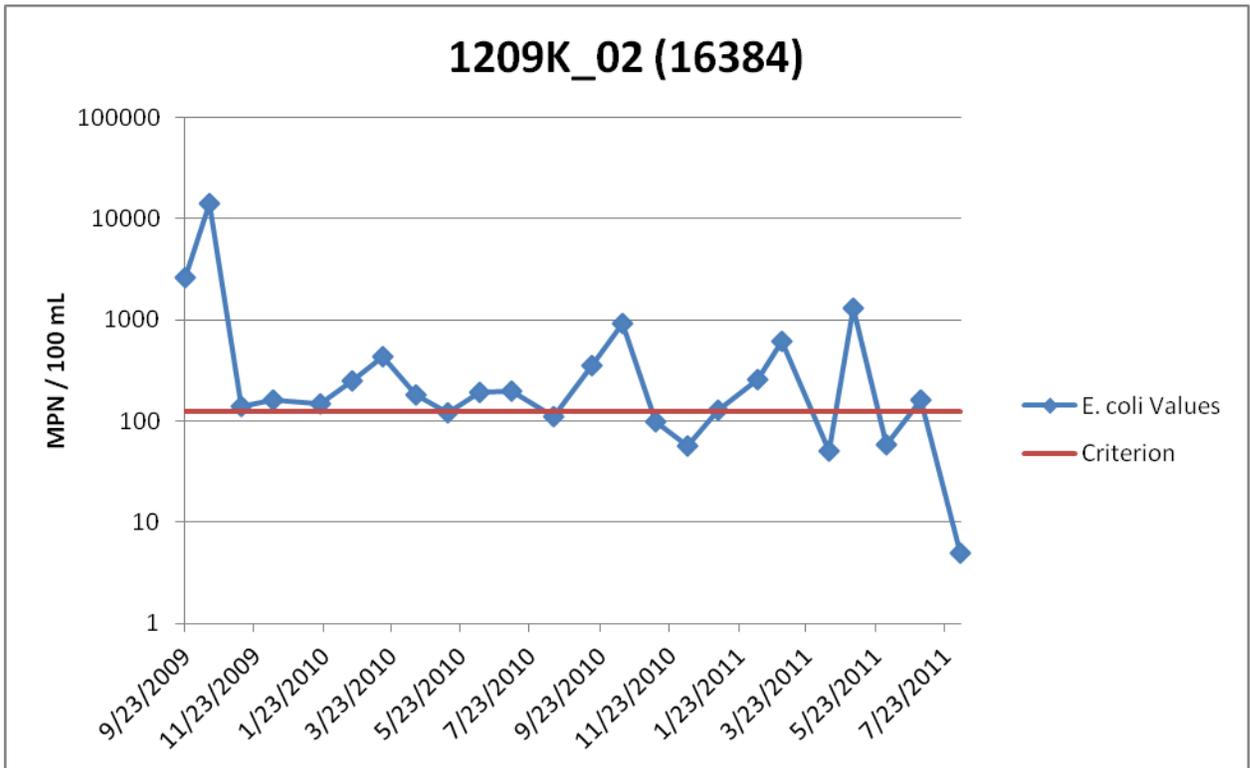


Figure 3. *E. coli* Data for Station 16384

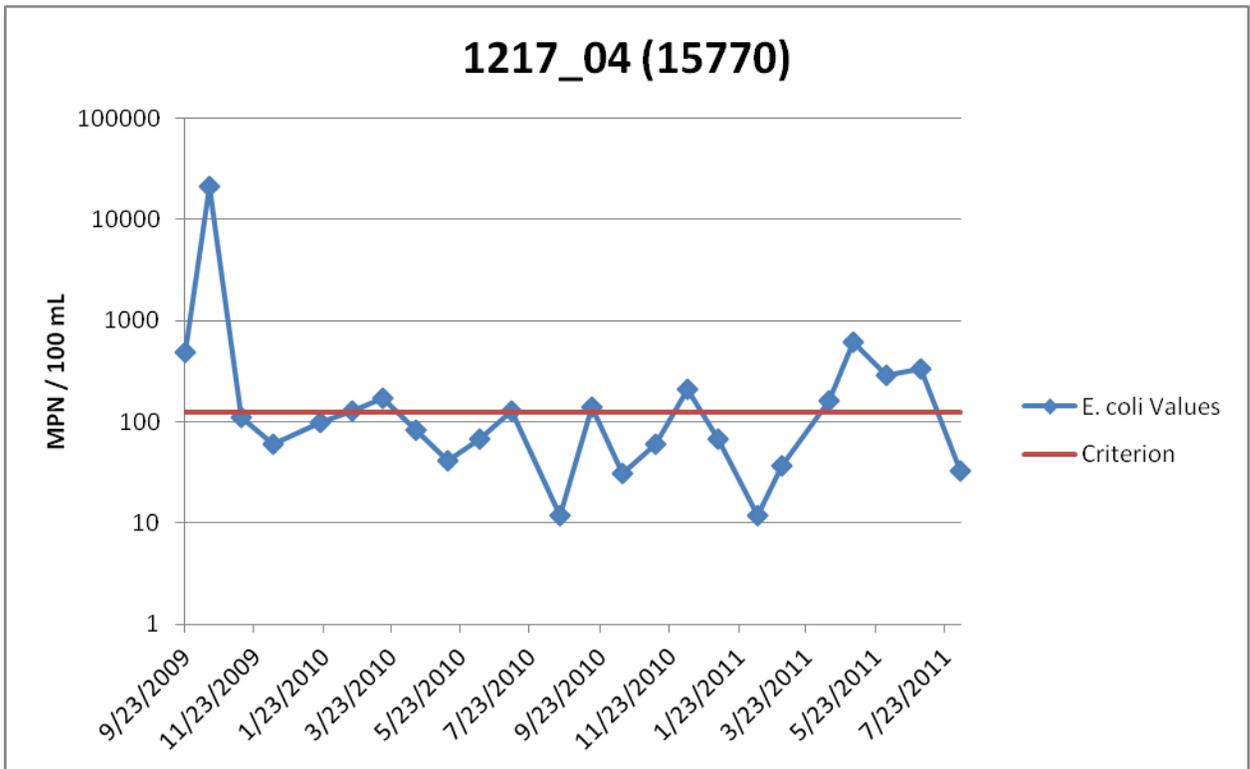


Figure 4. *E. coli* Data for Station 15770