

Caston Creek: CR 149
SW SW NW
Section 26-6n-24E
LeFlore County
N 94° 45' 58.62" (34.96628)
W 94° 45' 6.78" (-94.75188)
WBID#: OK220100-01-0180C

Caston Creek is located in the Southeastern part of Oklahoma in LeFlore County. The site is at the low water bridge on Harmon Road in Wister, Oklahoma. It is in the Arkansas Valley ecoregion. This site is surrounded by farms, housing, cattle, and a road. The land that drains into Caston Creek at the monitoring site is about 25 square miles.

Caston Creek is very wide and deep. From a fish's perspective there are lots of places to hide in the water. The water in this creek is fairly muddy, but it has a very relaxing flow. There are lots of trees on the banks that shade the edges of the water. The creek is surrounded by fields full of cattle and a house on a hill. The habitat at Caston Creek is not quite as good as the high quality reference sites for the ecoregion.

A fish collection was performed at Caston Creek and found a total of 73 fish of all different types and sizes (17 different species.) There were six kinds of sunfish which included Bluegill sunfish, Longear sunfish, Redear sunfish, Spotted bass, White crappie, and a sunfish hybrid. There were two kinds of darter/benthic fish which include Orangethroat darter and a Log perch. There are several long-lived fish which are a Longnose gar and Redhorse sucker. There are two intolerant species; Bigeye shiner and Redhorse sucker. The fish collection at Caston Creek is 73% as good as the average high quality stream in the Arkansas Valley ecoregion which gives it a C on the grade scale. The C means that the intolerant and sensitive species of fish are rare or absent.

A summer bug collection was also performed at Caston Creek in 2007. When compared with the high quality reference streams, it is missing one sensitive taxon. The biggest difference is that 16% of the sample in Caston is sensitive while 60% of the bugs in the reference streams were sensitive. In addition 54% of the sample was made up of one taxon of caddisfly so the sample was not as diverse as the reference streams. The bug collection from Caston Creek is 71% as good as the average of the best creeks in the Arkansas Valley. It was graded a B.

Caston Creek has been tested chemically once a month since October 25, 2006. It is tested for water temperature, dissolved oxygen, oxygen saturation, pH, nitrate, ammonia, orthophosphate, and chloride. The oxygen saturation is normally high but can drop to a level that is dangerous and caution must be taken if it drops to a low level. The reason the oxygen can drop to the dangerous level is because the water is very slow moving and pooled. The pH level normally stays at an average of 7.5. The nutrients nitrogen and phosphorus have been very low every time the creek has been tested (usually below the detection levels of the tests.) The median chloride value is 10 mg/L Cl (also very low.)

At Caston Creek during the summer of 2007-2008 the water was tested six times for bacteria. *E. coli* has to be below four-hundred colony forming units per 100 mL water to safely go swimming. On July 14, 2008 the *E. coli* was tested and it was 1400 CFUs/100 mL.

The monitoring site on Caston Creek is located on Harmon Road in Wister, Oklahoma. Many other creeks and rivers run into Caston Creek. The habitat is not as good as the average of high quality creeks in the Arkansas Valley ecoregion, but it is not horrible. Many fish live in this water source. There are also many different bug species. Many sensitive fish and some sensitive bugs are missing from the collections from this creek. At this creek the oxygen level is normal but can drop into a caution level. This creek's nutrient level is low and the pH and chloride are average. Bacteria, particularly *E. coli*, is occasionally high enough that you should not swim in the creek. It is possible that the proximity of cattle to the creek is the reason. Caston Creek, based on the average, is a pretty healthy creek.

By: Cortney Brown