Sugar Creek: CR 1320

NW NW NW
Section 8-7N-9W
Caddo County
N 35.10244° W 98.17707°
WBID#: OK31080-05-0010C

Sugar Creek is located in southwest central Oklahoma in the Cross Timbers ecoregion. The land is used mainly for agriculture, and is very flat around the stream. The headwater, or where the stream begins, is near Hinton. Sugar Creek drains an area that measures about 240 square miles.

Sugar Creek has a high flow, which means it flows fast, and it flows a lot. The wooded bank of the stream provides the canopy cover shading and some bank stability as well. The roots of the trees and grasses that grow on the bank provide stability and prevent erosion to an extent, though the banks are not well vegetated. Sugar Creek does not vary in depth much. It was shallow with a sandy bottom and very few pools. There is not as much instream cover as is needed to shelter and protect the stream's inhabitants. The bottom of the stream is very soft and sandy indicating that a lot of sediment is traveling down the channel. The habitat score is less than half of the average high quality stream and is definitely lacking some of the components needed to have a healthy, thriving underwater community.

The fish collection at Sugar Creek took place on August 6, 2007. There were only 9 species of fish collected; no darter/benthic species or intolerant species found. There were 2 species of sunfish (Bluegill sunfish and Largemouth bass). The lack of darter/benthic species and intolerants species causes a little concern that there might be something causing their extinction in the stream. This was a very poor collection: Sugar Creek scored an E for its fish conditions, the lowest possible score.

Bugs have been collected in the winter of 2007 at Sugar Creek. The stream scored a C with a collection only 45% as good as is found in high quality streams in the same ecoregion. There are still many of the tolerant species available in the stream, but the EPT bugs, or the more sensitive bugs, are dwindling in the winter months.

Bugs were collected in the summer of 2007 at Sugar Creek. The stream scored a B in bug conditions for the summer months. The tolerant bugs are numerable and the intolerant bugs, EPT, are still there as well, but in moderation.

Water chemistry was only reported twice at Sugar Creek, August 2006 and September 2006. The oxygen saturation was normal at 102.5%. Soluble nitrogen was a little high at 1.24 mg/L N. The orthophosphate phosphorus was quite high at 0.18 mg/L P. Chloride and pH were in normal ranges. Sugar Creek has elevated levels of nutrients.

Sugar Creek has some good canopy shading, but the habitat is lacking a few crucial ingredients, such as instream cover for its inhabitants. There is also a lot of sand in the creek which makes the bottom unstable and has filled in most pools. This and the elevated levels of nutrients may be the cause for the low population of fish. There are many possibilities and outside influences involved also, such as how the surrounding communities have influenced the habitat. The bug population has retained some of its

more sensitive species, so this is a good sign. There have not been enough chemical tests to see fluctuation and averages.

Sugar Creek would not measure up to other high quality streams due to its lack in habitat, fish species diversity, and chemistry. All of these factors play a role in the balance of the stream, and if one is thrown off they all go haywire.

Written by: Shelbey Hill