

Wolf Creek: McMahon Soccer Park
NW SE NW
Section 2-1N-12W
Comanche County
N 34° 35.439'
W 98° 26.096'
WBID#: OK 311300-02-0040M

Blue Thumb Volunteer Monitoring Data Review

Wolf Creek is located in Lawton, Oklahoma in Comanche County which is within the Central Great Plains ecoregion. The Central Great Plains is by far the largest ecoregion in the state. The creek drains part of Lawton and part of Fort Sill. The watershed (drainage area) of this creek is about thirty-five square miles. The location where the water samples are taken is Louise D. McMahon Soccer Park on the south side of Lawton.

Wolf Creek has an excellent amount of shading from trees left along the banks. It also has a high food source coming into it from the grasses and shrubs that are along the banks, although the vegetation stability on the bank is not as good as it should be. There are some places in the stream that provide structure for fishes and insects to hide beneath, behind, and even within. The bank stability is fair; there is quite a bit of loose sediment on the bottom of the creek. There is little flow with hardly any difference in water depth throughout the stretch of creek assessed. The creek doesn't have many curves, it seems to follow a straight line and not deviate from that line much. The habitat in Wolf Creek received a total score of 46. The average high quality stream in the Central Great Plains ecoregion has a score of 78.

Fish were collected by seining on August 9, 2007. There were actually more different species of fish collected than are found in the average high quality streams in the ecoregion, however there were no sensitive benthic species found at all. There were eighteen different species caught in this creek: six different species of sunfish (Green sunfish, Orangespotted sunfish, Bluegill sunfish, Longear sunfish, Redear sunfish and Largemouth bass), and one intolerant species (Suckermouth minnow) caught. The condition of this creek was ranked B when compared to high quality creeks in the same ecoregion, which means that there was decreased species richness, especially to the sensitive species.

In the summer of 2007 benthic macroinvertebrates (bugs) were collected from woody debris. While the total number of species was not quite as good as the high quality streams, there were almost as many sensitive species and the number of sensitive individuals was considerably higher. In addition, the diversity of the collection was better than reference conditions. The condition of the bugs was ranked at an A when compared to high quality creeks in the same ecoregion; this means that the creek is comparable to the best situation expected within the ecoregion. This creek has a balanced trophic and community structure for stream size.

Water chemistry was tested only four times in 2007. Everything tested was within normal ranges except the orthophosphate phosphorus (median value 0.05 mg/L P) was in the caution range half of the times it was tested. The oxygen saturation for this

creek has a median of 113.5% and can range higher than 120% and occasionally lower than 100%. A normal oxygen saturation range is between 80% and 120%. The pH of the water has a median 7.75 and ranges from 7.5 to 8.0. Neutral pH is 7.0. The soluble nitrogen level of the creek is .68 mg/L N. The chloride level has a median of 45 mg/L Cl and occasional reaches up to 80 mg/L Cl.

Wolf Creek is located in south Lawton in Comanche County. It is in the Central Great Plains, one of the biggest ecoregions of the state. The watershed for this creek is about thirty-five square miles. The creek has a low flow and doesn't divert much off of a straight course. There is little water depth variation and quite a lot of sediment built up on the bottom of the creek. Though there were many fish there was a lack of sensitive fish. This caused the fish condition to be ranked at a B; there was decreased species richness, especially to the sensitive species. The bug condition for the summer of 2007 produced many of the sensitive bug species. The bug condition was ranked at an A, meaning that the creek was comparable to the best situation expected within an ecoregion. The chemistry was found to be suitable with phosphorous being a bit high at times. Wolf Creek is your average creek. With some care and consideration for this creek the chemical quality and biological community could do very well.

Helen Talaese