The Sumampa River in Mampong-Ashanti in Ghana is a very important river that supplies water to the water processing company for treatment for the whole community and its environs. In spite of its importance, the buffer area of the river has been encroached by settlers. Residential houses sited along the river have channeled their waste water into the river and several anthropo genic activities go on along the river. Therefore, this study was conducted to assess the effects of anthropogenic activities on the quality of the river. Water samples were collected from various parts of the river including the source and outflow for physico-chemical and microbial analyses. The results showed that, the water was highly turbid with high total dissolved solids at some points because of intense anthropogenic activities. High turbidity and total dissolved solids greatly influence the microbial load of the water. We therefore recommend that measures are put in place to protect the Sumampa River through the creation of a buffer zone by planting trees along the banks of the river. The trees could help detoxify the run-off water that flows into the river.