Nutrient pollution of United States surface waters has been steadily increasing, primarily due to agricultural and urban runoff. Excess nitrogen and phosphorus cause degradation of aquatic ecosystems. Sensitivity of aquatic macroinvertebrates to environmental stressors (e.g. excess nutrients) has made them historic indicators of water quality. Taxonomic indices are commonly used to represent macroinvertebrate diversity, however, the use of functional traits as a diversity measure has become increasingly popular due to their ability to mechanistically link macroinvertebrate communities to environmental stressors. The objectives of this study were to determine whether taxonomic or functional indices of macroinvertebrate communities are better indicators of nutrient pollution in impacted Ohio watersheds. Based on previous studies, I predicted that sites with high nutrient pollution would have low functional and taxonomical diversity while sites that had low to moderate nutrient pollution would have high functional and taxonomical diversity. Furthermore, I hypothesized that functional diversity indicators will be more accurate than taxonomical indicators at depicting the impact that nutrient pollution has on aquatic macroinvertebrates. Macroinvertebrate and water quality samples were collected from nutrient impacted watersheds in Ohio (i.e. Burr Oak (n=6), Hoover Reservoir (n=11), Indian Lake (n=11)). Results of univariate analysis indicated that functional richness and the percentage of predator individuals were higher at Burr Oak than Hoover and Indian Lake. Results also indicated that the percentage of collector-filterers, total nitrogen, and total phosphorus were higher at Indian Lake and Hoover than Burr Oak. Based on these results, functional diversity can help provide insight as to the effect of nutrient impairment in streams with differing land use.