Pharmaceuticals and Personal Care products are widely used for human and animal welfare and are ubiquitous in the environment. Wetlands provide a potential sink for these trace organic contaminants in the form of water purification. Two Indiana wetlands, one urban and one rural, were sampled monthly over the water year, October 2015 through September 2016 for measurement of trace organic contaminants. Trends in contaminant abundance and degradation were counter to initial hypotheses. Specifically, in both urban and rural wetland, minimal degradation of detected contaminants occurred. These data indicate wetlands may not mitigate anthropogenic contaminants effectively.