Loss of habitat and habitat degradation is currently the biggest threat facing native flora and fauna. Ecological restoration attempts to address this issue: degraded lands are planted with the native, historic flora of the ecosystem in the hopes that native fauna will follow and the ecosystem will return to its historic state. Tualatin River National Wildlife Refuge (TRNWR) began restoring agricultural lands to their historical riparian habitat in 2008. However, little is known about what makes restoration successful. Few studies have been done on trophic levels other than plants. We studied 4 trophic levels: plants, soil, insects, and mammals on restored sites, and are comparing them to both degraded (agricultural) and intact (riparian forest) areas. The aim of this research is to identify ecological factors that are associated with successful habitat restoration. We have 2 data sets: with the Non Mammal data, we would like to know how the 3 site types (degraded, restored, and intact) differ in terms of vegetation, insects, nematodes and soil characteristics. Additionally, we would like to see how nematodes cluster/what characteristics the different types of nematodes prefer. The second set of data is the mammal data. With these data, we would like to see if mammals differ among the different sites and/or site types and how. This research is a first step towards elucidating methods that optimize restoration goals more effectively.