

Dr. McGahan is interested in identifying systematic variation in soil morphology and soil genesis using relationships with climate, vegetation and biological organisms, geomorphology, and geology. As a soil morphologist Dr. McGahan utilized multiple low and high technology tools to investigate soil and soil mineralogical alterations brought about by the soil forming factors. Mineralogical alterations are the primary cause of many important values we measure in soils. By studying the alteration of minerals and considering the evolution of soils (a very slowly renewable resource), relationships vital to addressing landscape scale issues are better understood. This knowledge of soil “in the environment” and “of the environment” is applicable to site-specific soil management(s) including both land use for agricultural, and land use for non-agricultural soils and soil uses. Furthermore, Dr. McGahan operates under the premise that understanding soil is also vital to conservation of many other natural resources.