

# First-Year Research in Earth Sciences: Dunes

**FYRES: Dunes Research Report:** Williams, Matthew L., Anna Clousing, Samuel Latimer, Jennifer A. McClellan, and Andrew D. Van De Walker (2016). “The Relationship between Physical Accessibility and Scenic Experiences on West Michigan Coastal Dunes.” FYRES: Dunes Research Report #23. Grand Rapids (MI): Department of Geology, Geography and Environmental Studies, Calvin College. 19 p.

**Abstract:** As the North American population ages, researchers are beginning to ask questions about the accessibility of natural environments. However, no such studies have focused on dune environments. This study investigated the physical accessibility of west Michigan coastal dunes by examining the recreational trails at four Ottawa County Parks. We developed a weighted rating scale for trail accessibility based on different physical trail aspects. We applied the rating scale to recreational trails by collecting data on trail length, location, rest areas, parking lot connections, signs, trail width and slope angle. We also assessed the aesthetic experience of each trail by collecting data on dune environments and scenic views. The rating scale performed well in our field test and was able to distinguish between trails that were marked as accessible on maps and those that were not. The accessible trails scored higher on our rating scale, but they tended not to lead people to dune crests, views of the lake and a variety of dune environments. These results suggest that the aesthetic experience on west Michigan coastal dunes is not equally accessible to all people. Park managers should consider implementing trails that give all visitors equal access to high quality dune experiences.