

[http://ferm.mtu.edu/projects/Stanton/docs/Stanton\\_report.pdf](http://ferm.mtu.edu/projects/Stanton/docs/Stanton_report.pdf)

(Stanton Park)

The National Park Service granted these properties in perpetuity to Stanton Township in 1981. The stipulation that the land be used for a recreational area only was attached to this agreement. Moreover, the U.S. Army Corps of Engineers retained several easements for access and right of way privileges to the Portage Lake Ship Canal. Nearly 14 acres of the northern compartment has existed as stamp sand beach historically from the mining era. Although difficult to quantify a rate of accumulation, the area covered by mine tailings (stamp sand) has been increasing over the last century as it has washed down shore from the Freda stamp mill nearly 10 miles away. During this time, the mine tailings have presented numerable ecological consequences and have impeded the chances of becoming vegetated. In August of 2005, the task of reclaiming the land with a soil cap was completed by removing soil from another area within Stanton Township's ownership ½ mile away. This project was made possible by the USDA National Resource Conservation Service's Superfund program.

#### *Bedrock Geology*

The bedrock found on the Stanton Township tract is some of the oldest known bedrock in the world dating back to well over one billion years old (Western U.P. Planning & Development Regional Commission, 2003). This bedrock was formed during the Precambrian Era and contains two sub-epochs of geological development including the Keweenawan, which we will focus on, and the middle Precambrian (Western U.P. Planning & Development Regional Commission, 2003). Specifically, the Keweenawan bedrock is made up of interlaid lavas and conglomerate overlaid by shale and sandstone (Western U.P. Planning & Development Regional Commission, 2003). The type of bedrock that the Stanton Township tract lies on is Freda Sandstone (Figure 2.1) (Western U.P. Planning & Development Regional Commission, 2003).

The Keweenawan bedrock is known for and associated with the production of copper and silver, which is very prominent in the Keweenaw Peninsula (Western U.P. Planning & Development Regional Commission, 2003).

### *Surface Geology*

Four glaciers pushed their way over the Keweenaw. That, along with weathering and erosion, made up the surface geology of the U.P. (Western U.P. Planning & Development Regional Commission, 2003). Glaciations began about one million years ago and the last glacier retreated 10,000 years ago resulting in anywhere from swampy lowlands and rolling moraine to ancient lakebeds and steep ridges and hills (Western U.P. Planning & Development Regional Commission, 2003).