

CHAPTER 3

NATURAL RESOURCES

Climate

The climate is one factor, which contributes to Cross Village Township's appeal as a rural residential community. The Township's climatic conditions are similar to those across northern Lower Michigan: long cold winters, and moderate warm summers. However, the proximity to Lake Michigan serves to moderate summer temperature extremes as compared to inland communities of northwestern Michigan. The average date when temperatures drop to freezing in the fall is typically several weeks later than those areas further inland, with the first frost in the Township occurring as late as the beginning of October.

Table 3-1 illustrates some important weather statistics for the area including Cross Village Township, as available from the Natural Resources Conservation Service (formerly the Soil Conservation Service).

January average minimum temperature	13.7°
January average maximum temperature	28°
July average minimum temperature	57°
July average maximum temperature	76.5°
Days below 0 degrees F.	14
Days above 90 degrees F.	2
Average annual rainfall	28 in.
Average annual snowfall	66.3 in.
Source: Emmet County Soil Survey, U.S.D.A. Soil Conservation Service	

Geology

The bedrock underlying Cross Village Township was laid down during the Middle Devonian ages of the Paleozoic Era. The bedrock underlying in the Township is Detroit River Group.

The surface geology of the Township developed 10,000 to 12,000 years ago through glacial activity. Numerous advances and retreats by the glaciers resulted in the locally complex pattern of erosion and deposition. Furthermore, many creeks and wetlands in the Township are associated with the glaciers which once covered this region. The ice blocks embedded within the soils eventually melted and left depressions which are today's lakes, wetlands and interconnecting creeks.

The geology of Cross Village Township is shown in Figure 3-1. Cross Village Township is dominated by coarse-textured glacial till. Till is composed of unsorted sands and gravels left by

