Historical Climatology: Northeast Lower Michigan

Michigan Climatic Division 4
Northeast Lower

***Included counties**: Alcona, Alpena, Cheboygan, Crawford, Iosco, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle, Roscommon*

Geography

In general, the terrain elevation increases from the coastal areas along Lake Huron toward the center of the state. The vegetation is a mix of large tracts of national and state forests along with agricultural cropland. Hartwick Pines State Park is one of the last remaining old growth virgin Eastern white pine forests and Au Sable State Forest is home to jack pine barrens.

Overview

Lake effects are generally more pronounced in the northern areas of the region as the Lower Peninsula narrows near the Straits of Mackinac. During periods of strong easterly and northeasterly winds, Lake Huron can have a strong effect on the area's weather, particularly the coastal areas to the east, resulting in cooler summer temperatures and increased precipitation and snow and in the fall and winter. The inland areas of the division have a largely continental climate, driven primarily by the movement of high and low pressure systems. As such, prolonged periods of hot and humid weather are rare. Lake-effect precipitation, coupled with increasing elevations in the center of the state, is responsible for the "Snowbelt" of Lower Michigan. Sudden, severe snowstorms are not uncommon.

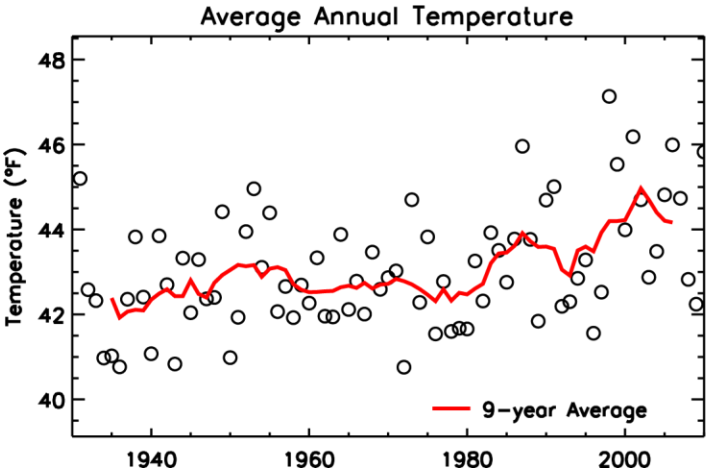
Mean Annual Temperature, 1981-2010	43.9°F	6.6°C
Mean Annual Total Precipitation, 1981-2010	30.8 in	78.2 cm

Changes in Mean Temperature (°F) from 1951-1980 to 1981-2010

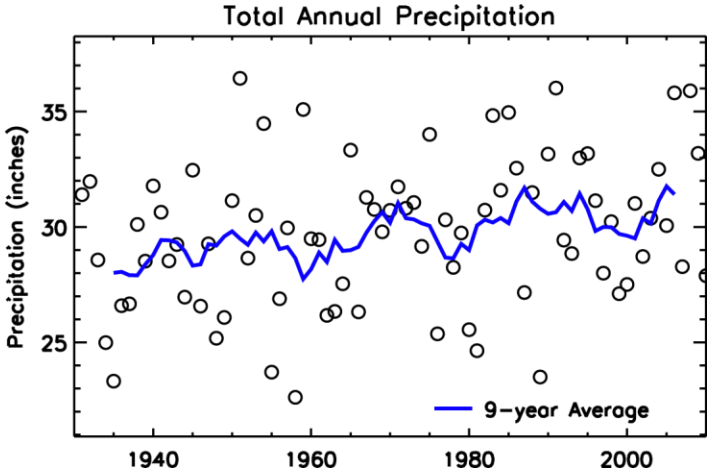
Annual	1.2
Winter, December-February	2.1
Spring, March-May	1.4
Summer, June-August	0.9
Fall, September-November	0.3

Change in Mean Total Precipitation (%) from 1951-1980 to 1981-2010

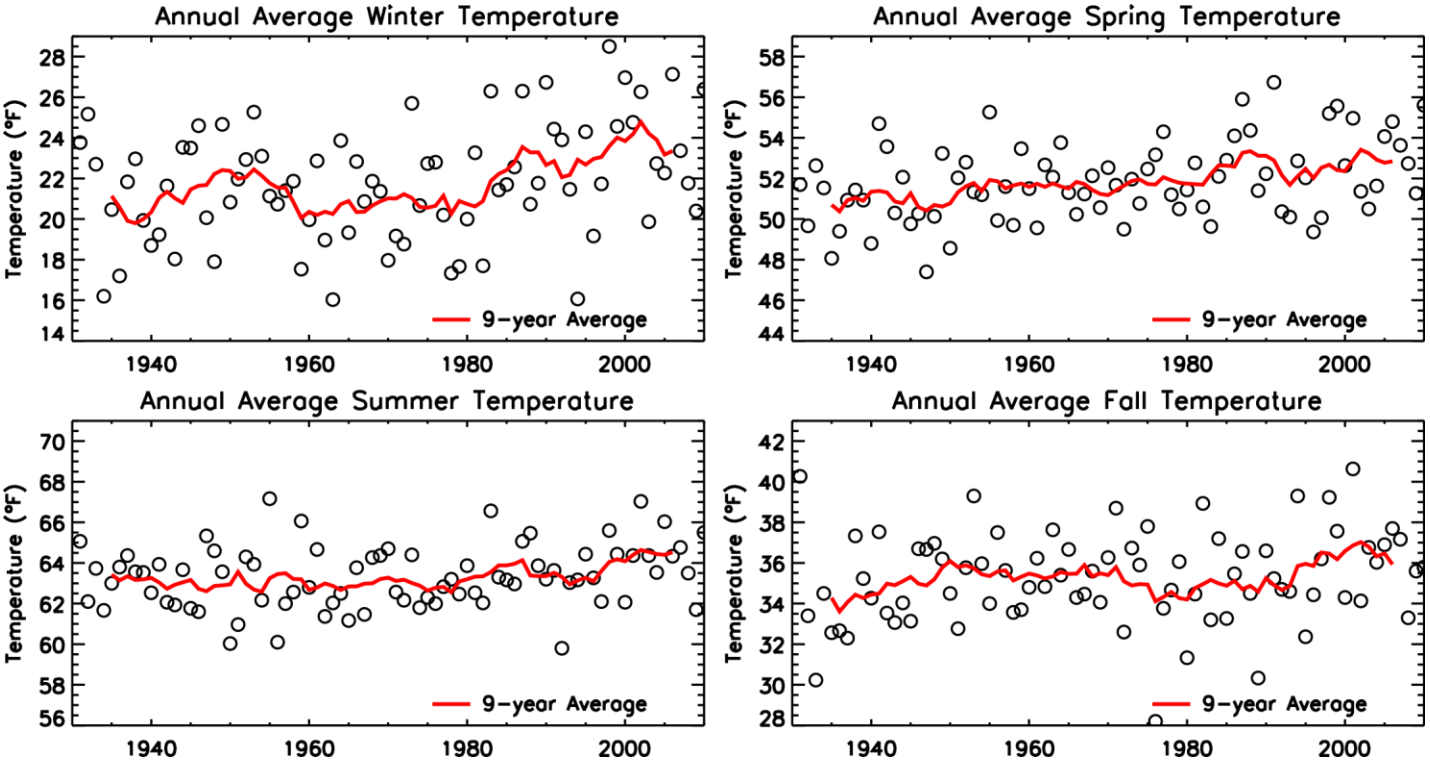
Annual	4.2
Winter, December-February	7.5
Spring, March-May	1.0
Summer, June-August	2.3
Fall, September-November	8.0



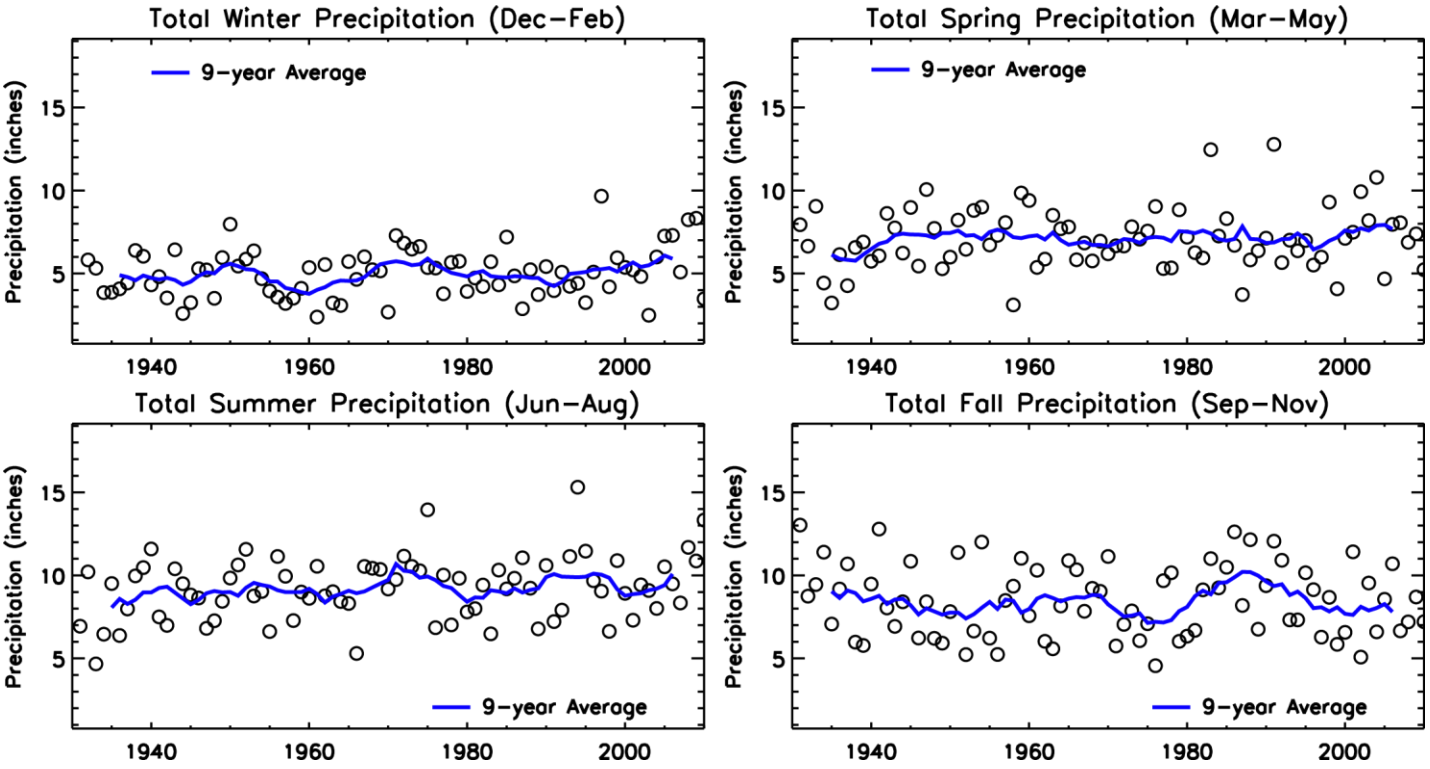
Mean annual temperatures from 1931 to 2011. An open circle represents the average temperature of a single year. The solid line represents the 9-year running mean.



Annual precipitation totals from 1931 to 2011. An open circle represents the total precipitation for a single year. The solid line represents the 9-year running mean.



Mean seasonal temperatures from 1931 to 2011. An open circle represents the average seasonal temperature of a single year. The solid line is the 9-year running mean. Winter values include data from the December of the previous year.



Total seasonal precipitation from 1931 to 2011. An open circle represents the total seasonal precipitation for a single year. The solid line represents the 9-year running mean of the total seasonal precipitation. Winter values include data from the December of the previous year.