Historical Climatology: East Central Lower Michigan

Michigan Climatic Division 7
East Central Lower

***Included counties**: Arenac, Bay, Huron, Saginaw, Sanilac, Tuscola*

Geography

The East Central Lower Michigan Climatic Division surrounds Saginaw Bay and covers most of the northern portion of the Thumb. It is almost entirely flat and dominated by agriculture, with small patches of mixed forests. The Saginaw Bay watershed is the largest drainage basin in Michigan, draining approximately 15% of the total land area. The watershed contains the largest contiguous freshwater coastal wetland system in the United States.

Overview

The effect of Lake Huron is particularly strong during periods of northeasterly winds. Under these conditions, the long trajectory of the air over Lake Huron gives the Saginaw Bay area cooler summer temperatures, while increased snow shower activity may accompany the milder fall and early winter temperatures. The lake effect, caused by the prevailing westerly winds blowing over Lake Michigan, often produces cloudiness which extends across Michigan's entire Lower Peninsula, modifying fall and early winter temperatures. Diminished wind speeds or winds which do not traverse large unfrozen lakes often produce clearing skies and the colder temperatures expected at continental locations. Because the day-to-day weather is controlled by the movement of pressure systems across the nation, this area seldom experiences prolonged periods of hot, humid weather in the summer or extreme cold during the winter.

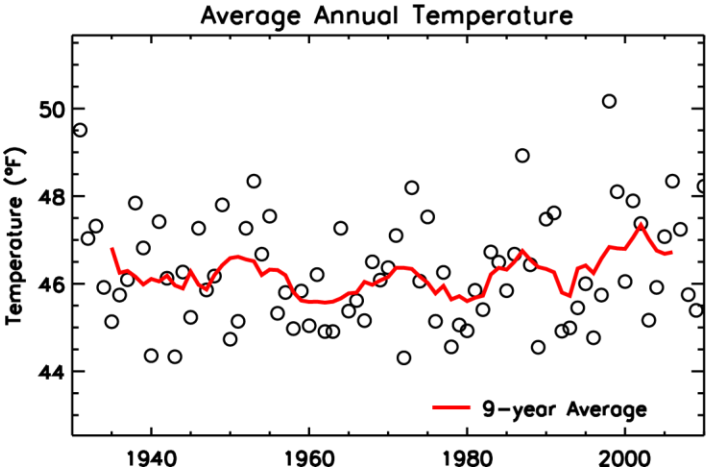
Mean Annual Temperature, 1981-2010	46.6°F	8.1°C
Mean Annual Total Precipitation, 1981-2010	32.9 in	83.5 cm

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

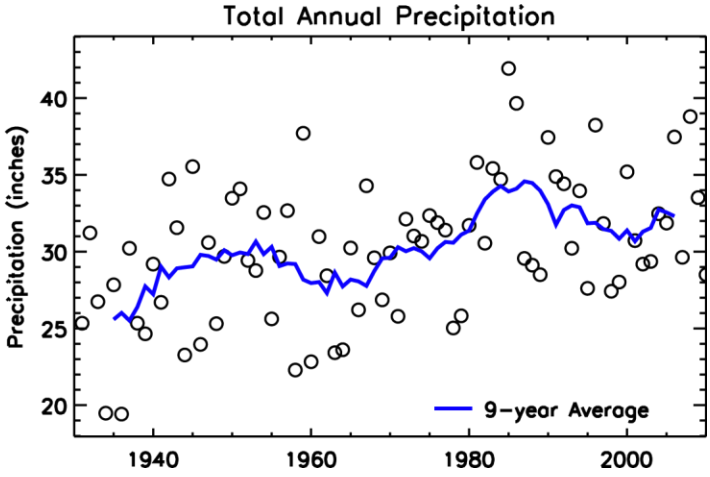
Annual	0.6
Winter, December-February	2.0
Spring, March-May	0.7
Summer, June-August	-0.2
Fall, September-November	-0.2

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

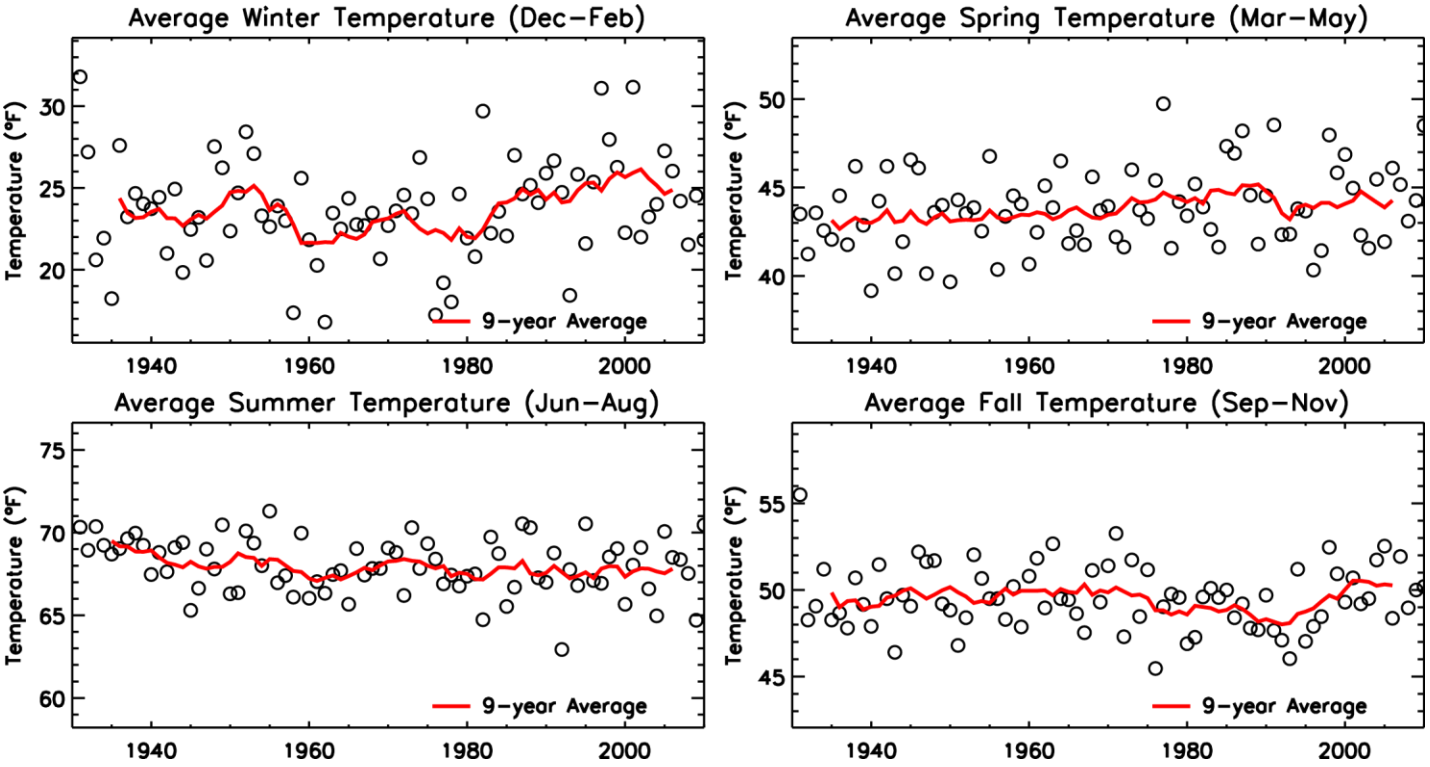
Annual	12.4
Winter, December-February	7.0
Spring, March-May	10.6
Summer, June-August	7.3
Fall, September-November	24.8



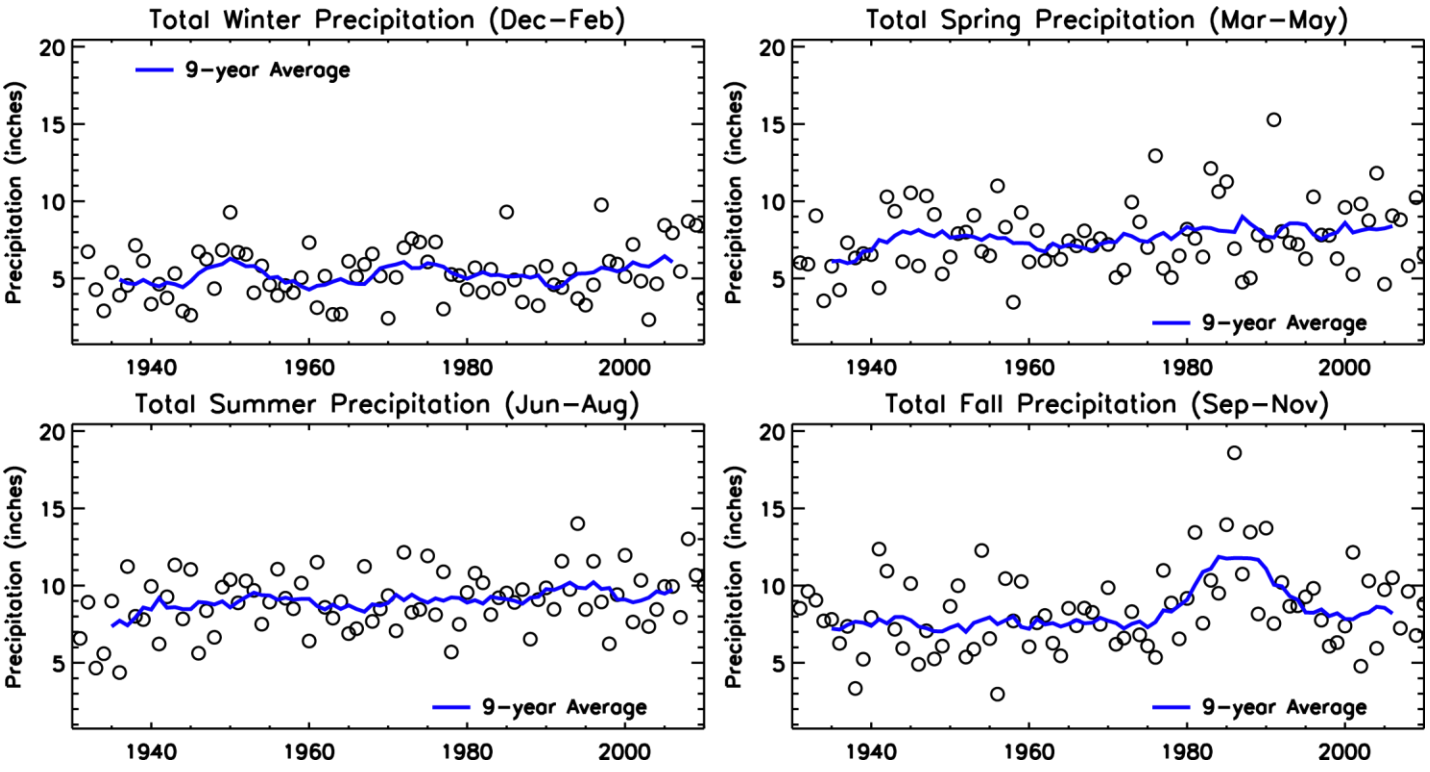
Mean annual temperatures from 1931 to 2011. An open circle represents the average temperature of a single year. The solid line represents the 9-year running mean.



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.