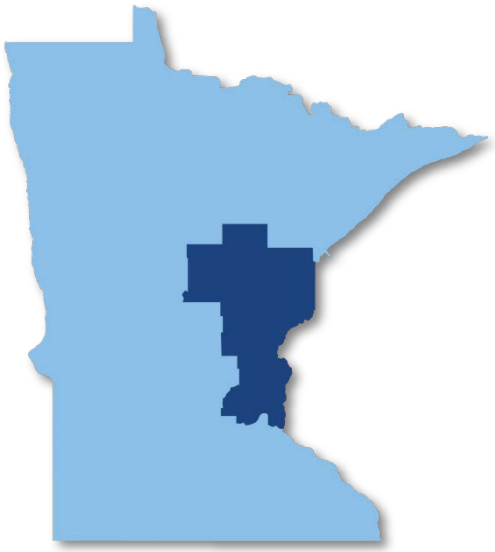
Historical Climatology: East Central Minnesota



Minnesota Climatic Division 6
East Central

***Included counties**: Crow Wing, Aitkin, Carlton, Mille Lacs, Kanabec, Pine, Isanti, Chisago, Anoka, Hennepin, Ramsey, Washington*

Geography

Minnesota Climatic Division 6 extends along the Minnesota-Wisconsin border from Duluth to the Twin Cities and includes Mille Lacs Lake to the west. The terrain is mostly flat, hilly to the north, and is covered with a wide range of forests, wetlands, lakes, and agricultural land.

Overview

Centrally located in North America, Minnesota's East Central Climatic Division experiences some of the widest ranging temperatures in the United States. Because there are no significant topographic barriers to keep cold air from moving south out of Canada, arctic air masses commonly bring extremely cold temperatures and strong winds, resulting in dangerous wind chill values. This division sees summer temperatures comparable to other Midwestern areas, but cold winters tend to lower the annual averages. Summers are often hot and humid, typical of continental, Midwestern locations. The division also experiences a wide variety of precipitation events. Snow, sleet, freezing rain, and the occasional liquid rain occur during the winter. Fueled by humidity, summer precipitation accounts for roughly half of the annual total and falls primarily during thunderstorms. Severe, damaging storms are not uncommon.

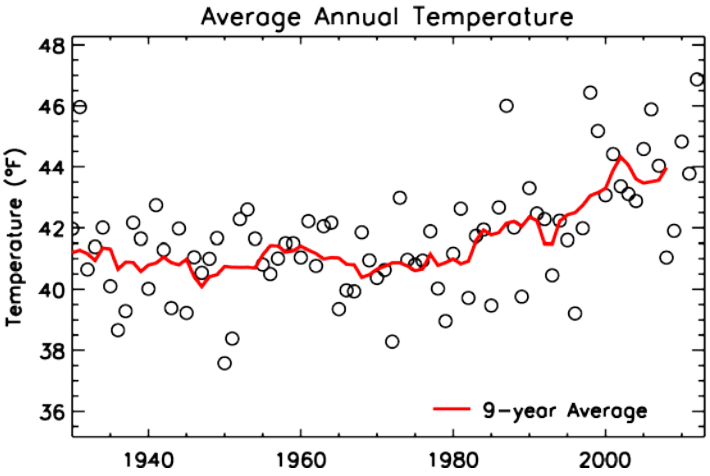
Mean Annual Temperature, 1981-2010	42.7°F	5.9°C
Mean Annual Total Precipitation, 1981-2010	30.8 in	78.3 cm

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

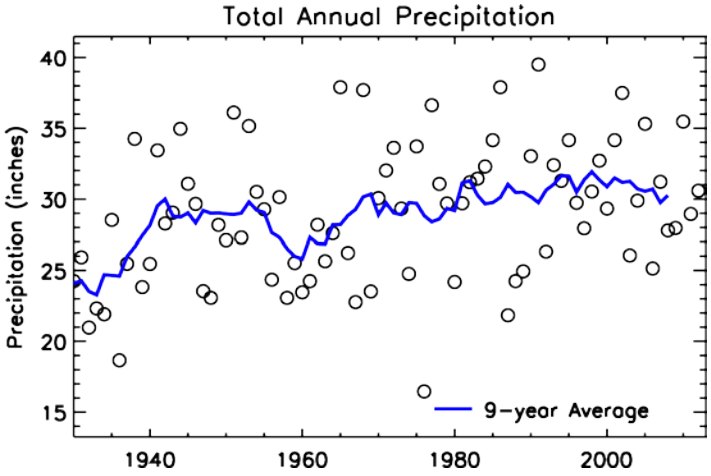
Annual	1.8
Winter, December-February	3.4
Spring, March-May	2.2
Summer, June-August	0.9
Fall, September-November	0.6

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

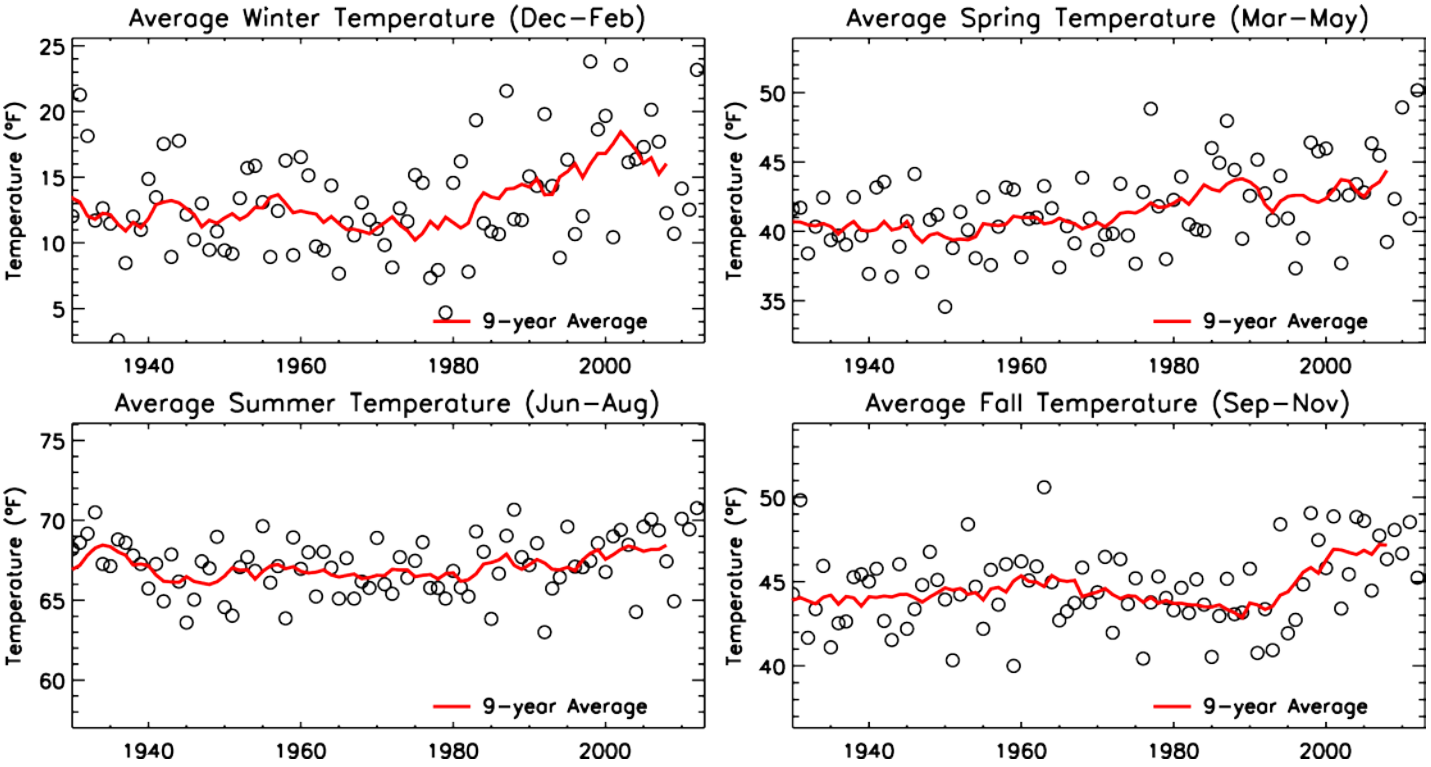
Annual	7.5
Winter, December-February	0.4
Spring, March-May	7.2
Summer, June-August	-1.6
Fall, September-November	27.3



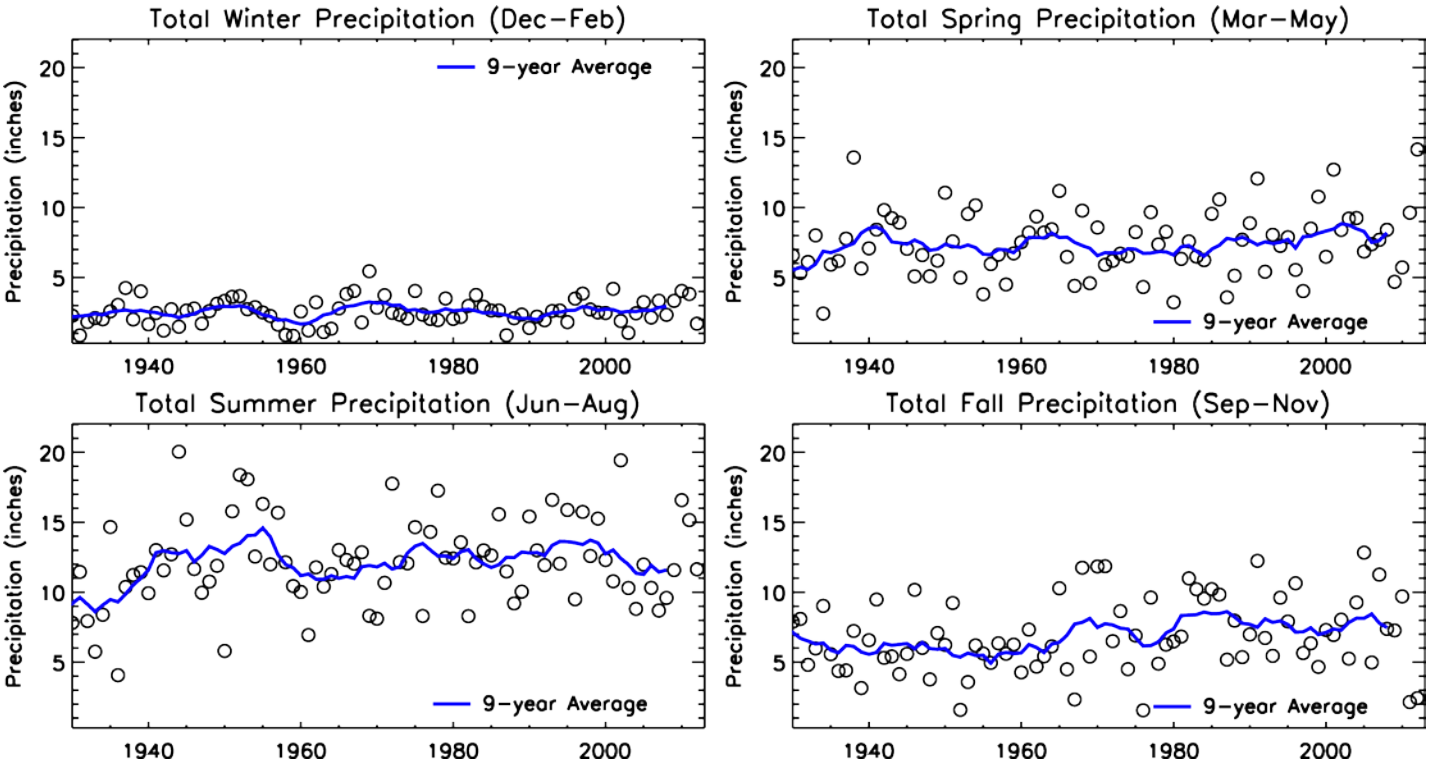
Mean annual temperatures from 1931 to 2011. An open circle represents the average temperature of a single year. The solid line represents the 9-year running mean.



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.