The climate is changing… but will it change me?

The climate is changing but how is it going to impact people here in Michigan? In the activity you will get to see how the changing climate might impact your life. Below are three scenarios: drought, energy spent on air conditioning, and growing season.

Each scenario shows historical and predicted future climate data for eleven different weather stations in Michigan (for more data and tool visit the Pileus Project at http://www.pileus.msu.edu/climate/). The first map shows historical data for 1981-2000. The number in each box represents an average year in that period. The following maps show the predicted climate derived from several different climate models. Each scenario looks at the predicted climate from 2010 to 2029 (predictions that are already coming true!), 2040 to 2059, and 2080 to 2099. Follow the instructions next to each map to see how the climate might affect you!

Scenario 1: Drought

The summer of 2012 was very dry across the United States, including here in Michigan. Is this a taste of things to come? Drought during the spring and summer growing season hurts plant growth. During dry spells more effort is needed to keep garden plants and grass alive. Dry spells also negatively affect crops, which can cause food prices to increase. In this scenario a dry spell is considered two weeks or more without rain.

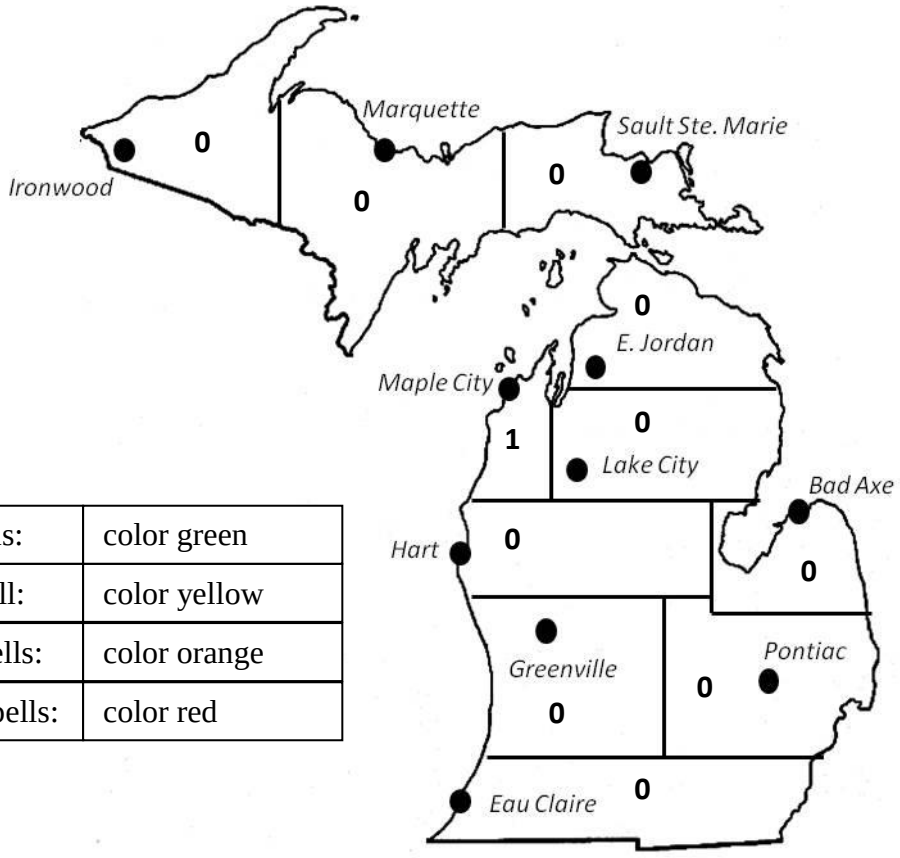
Scenario 2: Air Conditioning Usage

The warmer it gets, the more energy is needed to keep cool. Energy companies use a number called "Cooling Degree Days (CDD)" to measure energy demand for cooling. Once the average temperature gets higher than 65°F, some homes and businesses will start using energy to keep cool. Cooling degree days are the number of degrees over 65°. For example, if the average temperature for the day is 90°F, that day has 25 cooling degree days. The more cooling degree days, the more energy is spent on air conditioning.

Scenario 3: Length of Growing Season

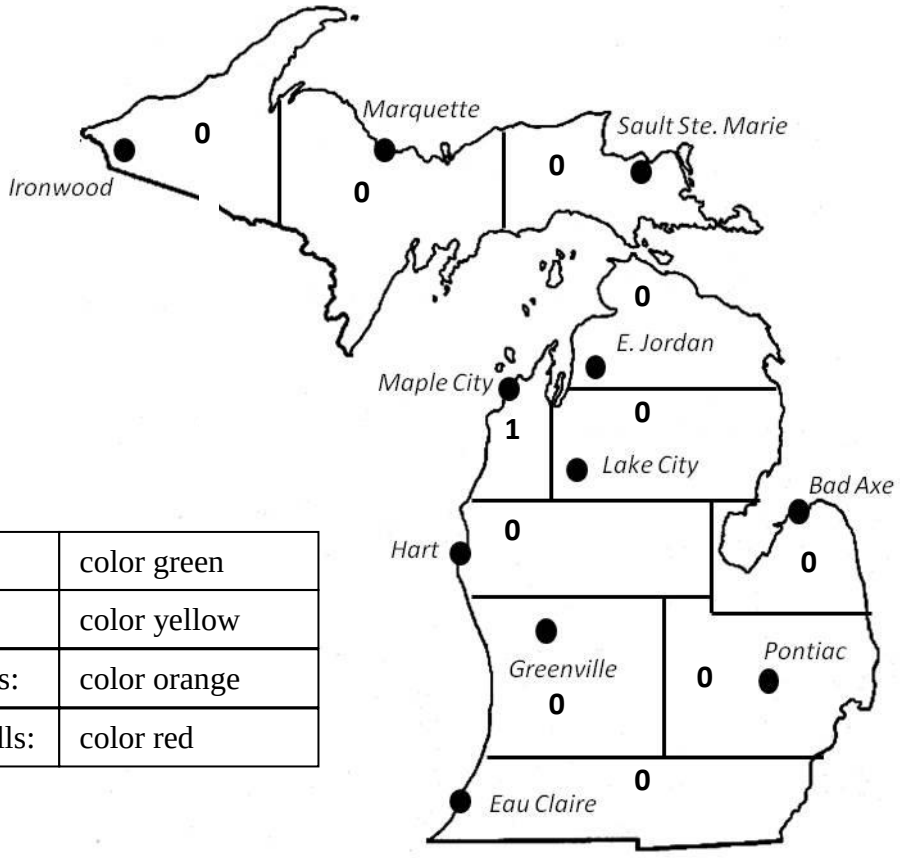
As spring and fall temperatures get warmer, plants can grow for longer periods of time. Gardens can survive for longer and crops can be more productive. Maybe climate change isn't all bad… is it?

Spring and Summer Dry Spells: 1981-2000



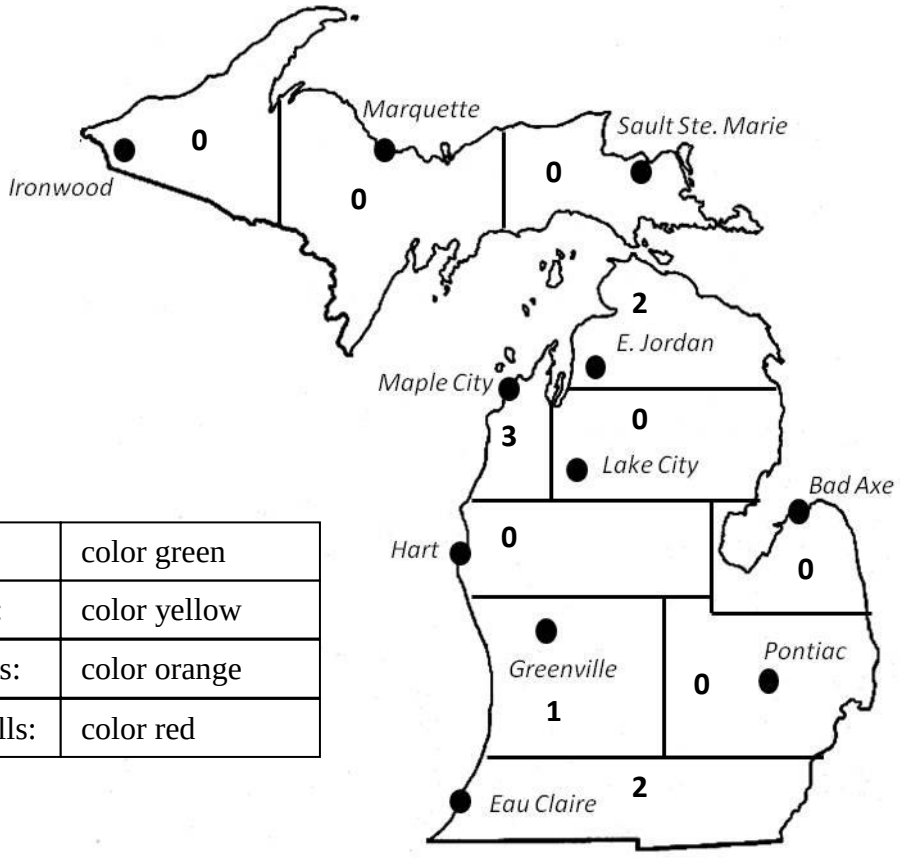
No dry spells:	color green
One dry spell:	color yellow
Two dry spells:	color orange
Three dry spells:	color red

Spring and Summer Dry Spells: 2010-2029



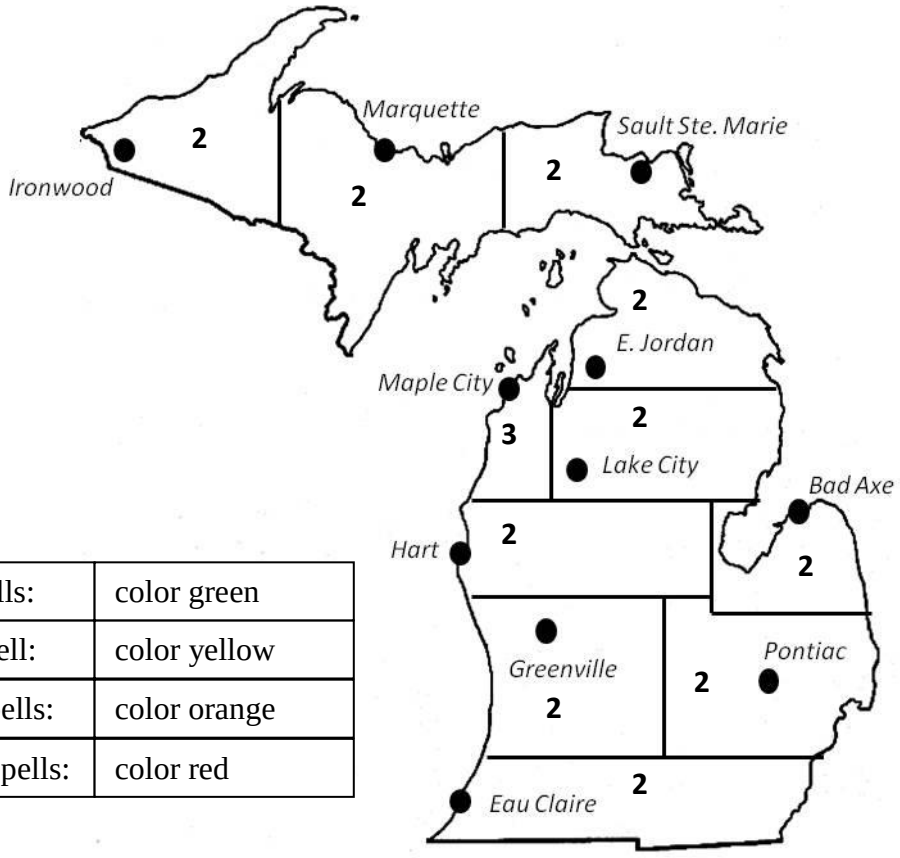
No dry spells:	color green
One dry spell:	color yellow
Two dry spells:	color orange
Three dry spells:	color red

Spring and Summer Dry Spells: 2040-2059



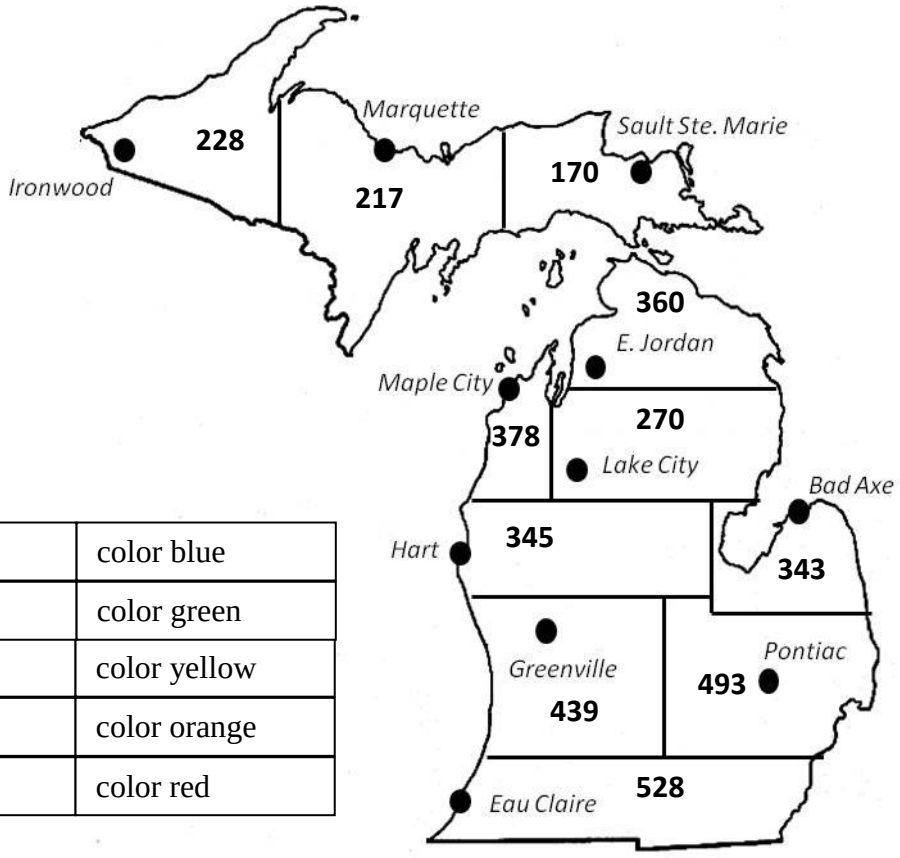
No dry spells:	color green
One dry spell:	color yellow
Two dry spells:	color orange
Three dry spells:	color red

Spring and Summer Dry Spells: 2080-2099



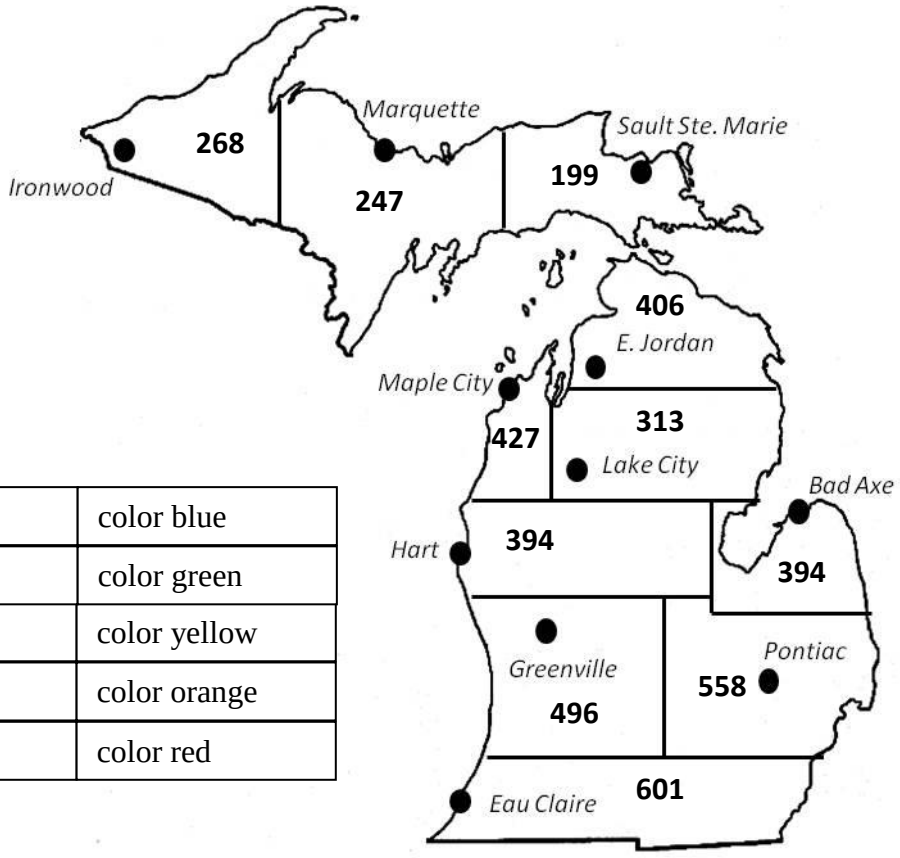
No dry spells:	color green
One dry spell:	color yellow
Two dry spells:	color orange
Three dry spells:	color red

Air Conditioning Demand (Cooling Degree Days or CDDs): 1981-2000



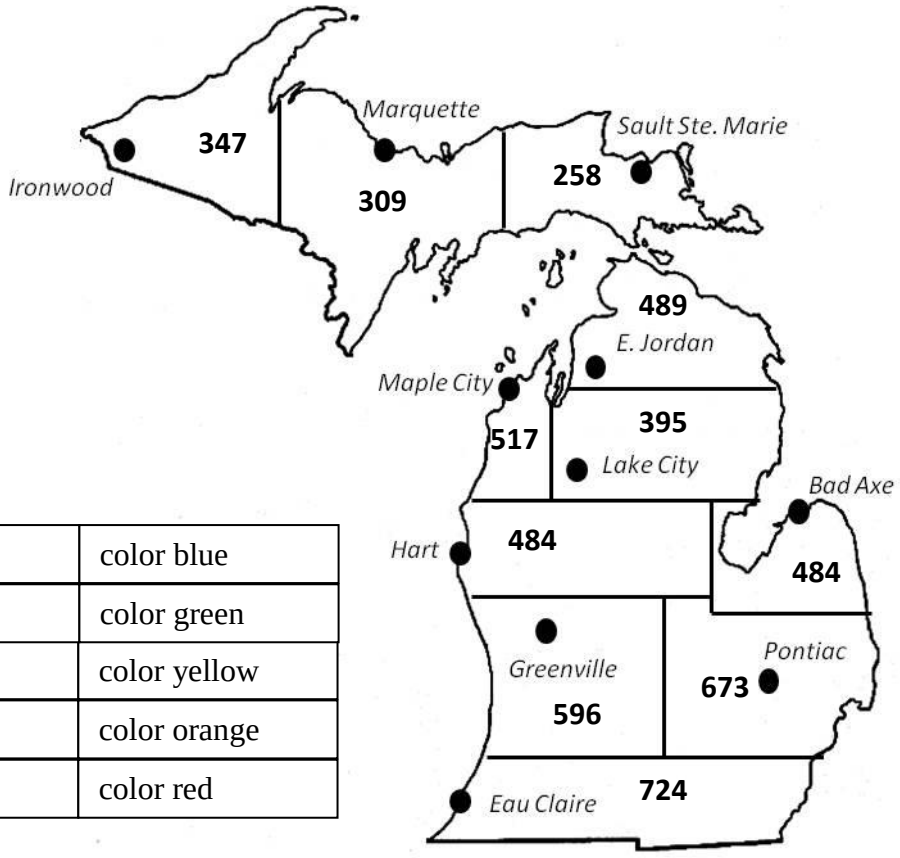
100-300:	color blue
300-500:	color green
500-700:	color yellow
700-900:	color orange
>900:	color red

Air Conditioning Demand (Cooling Degree Days or CDDs): 2010-2029



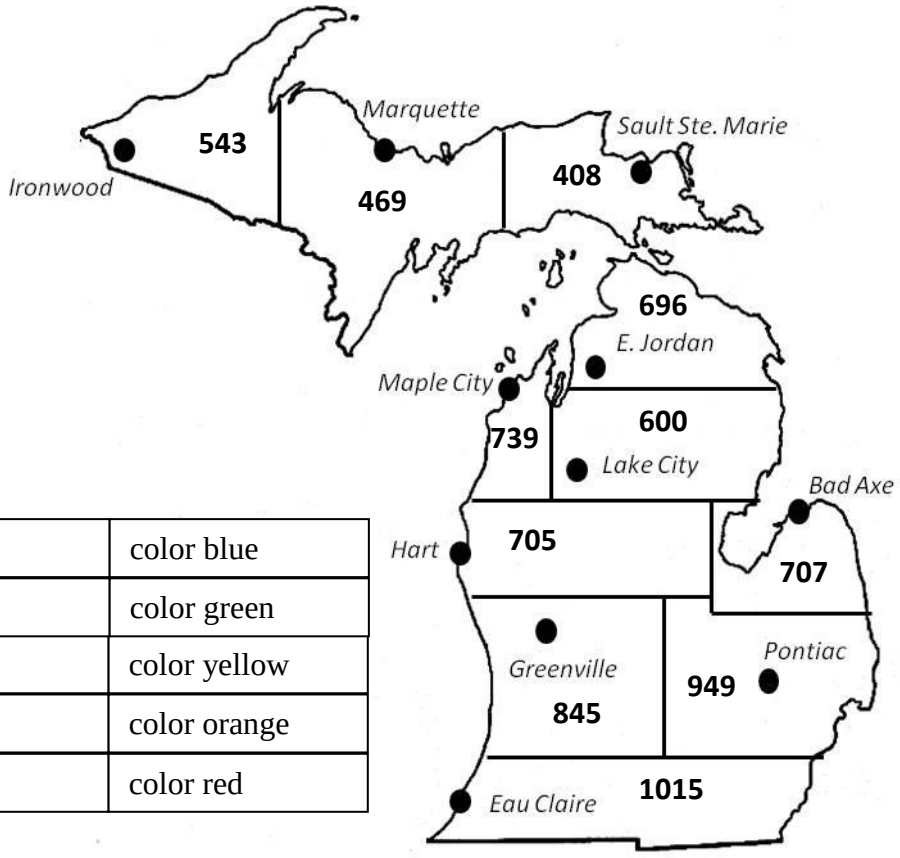
100-300:	color blue
300-500:	color green
500-700:	color yellow
700-900:	color orange
>900:	color red

Air Conditioning Demand (Cooling Degree Days or CDDs): 2040-2059



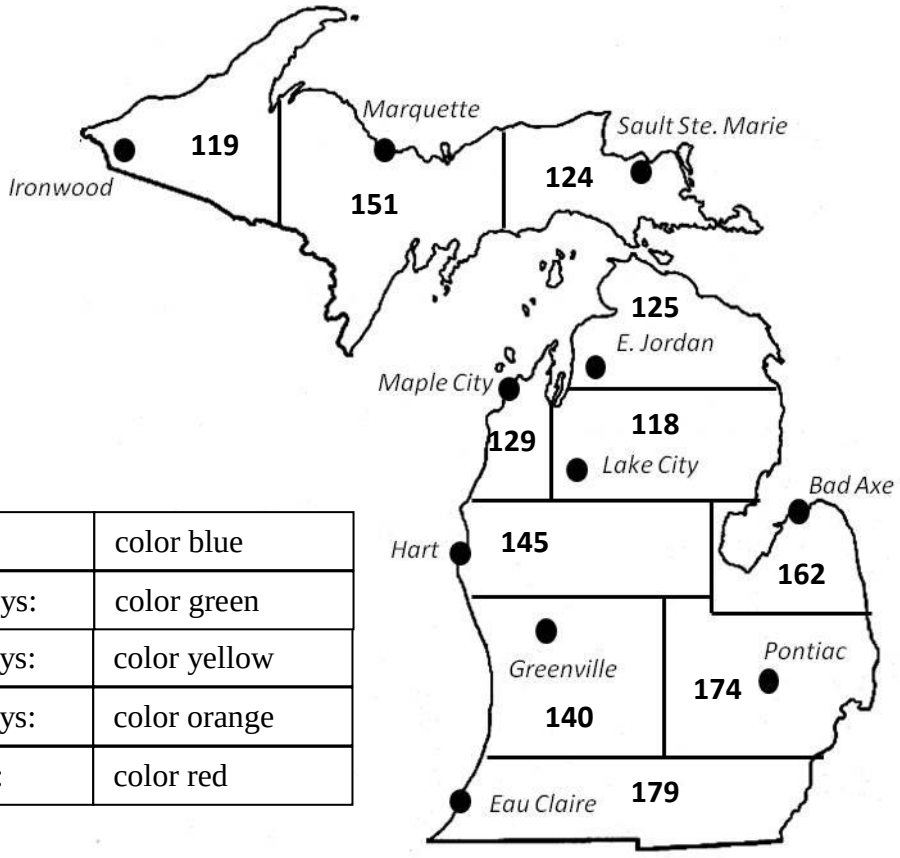
100-300:	color blue
300-500:	color green
500-700:	color yellow
700-900:	color orange
>900:	color red

Air Conditioning Demand (Cooling Degree Days or CDDs): 2080-2099



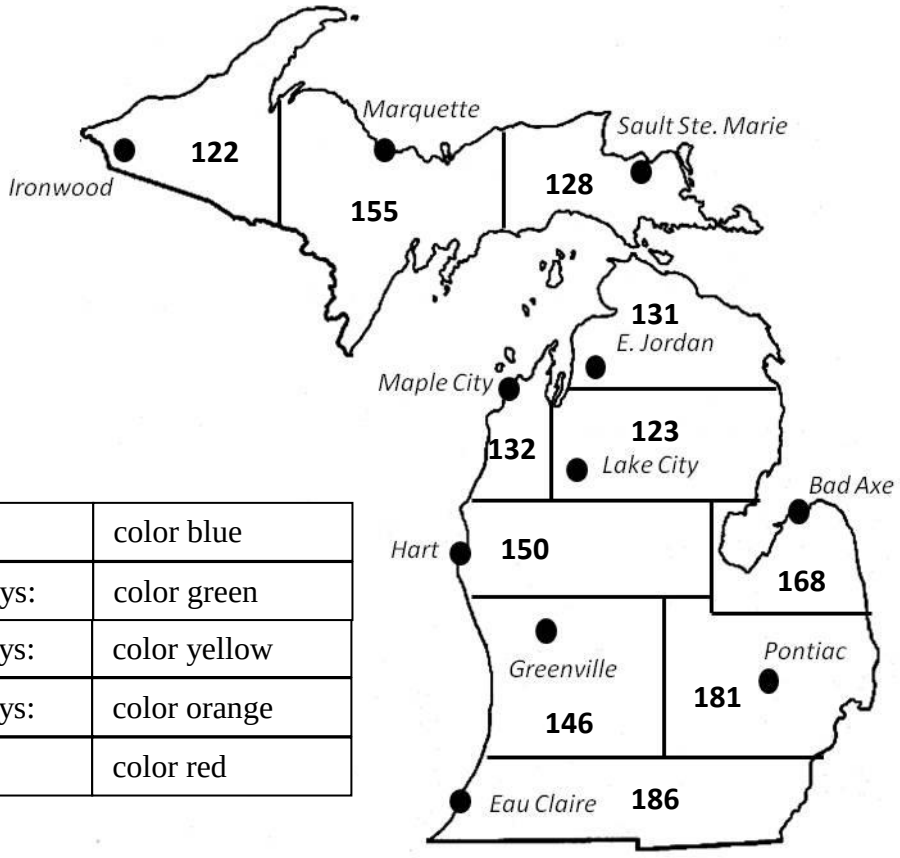
100-300:	color blue
300-500:	color green
500-700:	color yellow
700-900:	color orange
>900:	color red

Length of Growing Season: 1981-2000



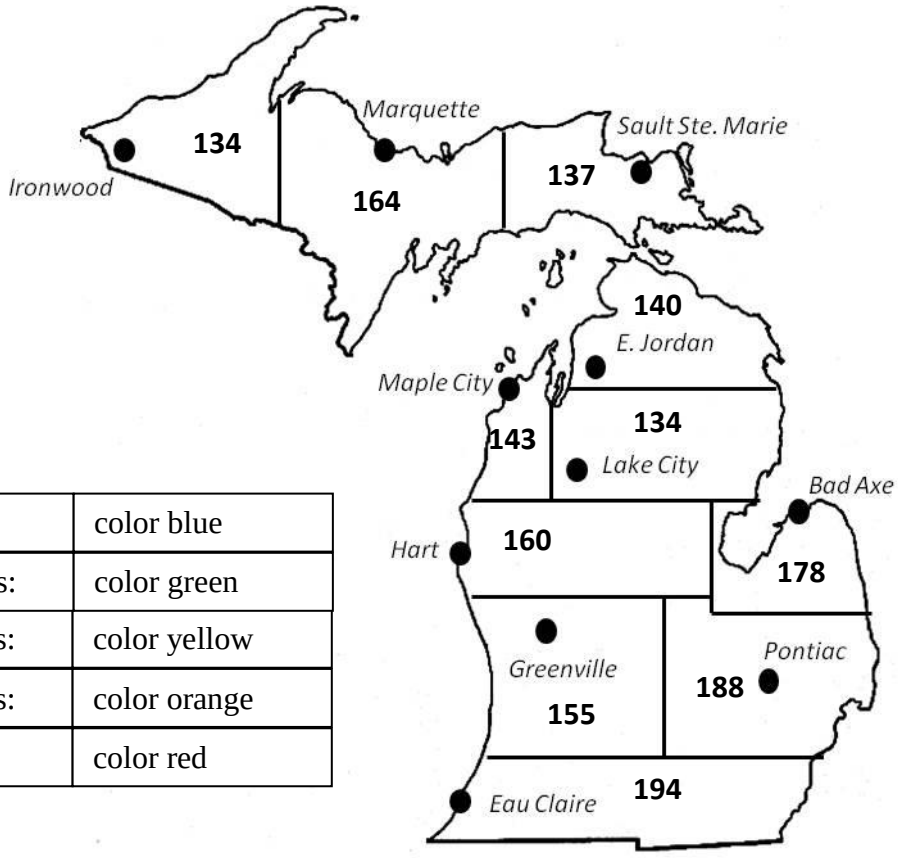
<130 days:	color blue
130-150 days:	color green
150-170 days:	color yellow
170-190 days:	color orange
> 190 days:	color red

Length of Growing Season: 2010-2029



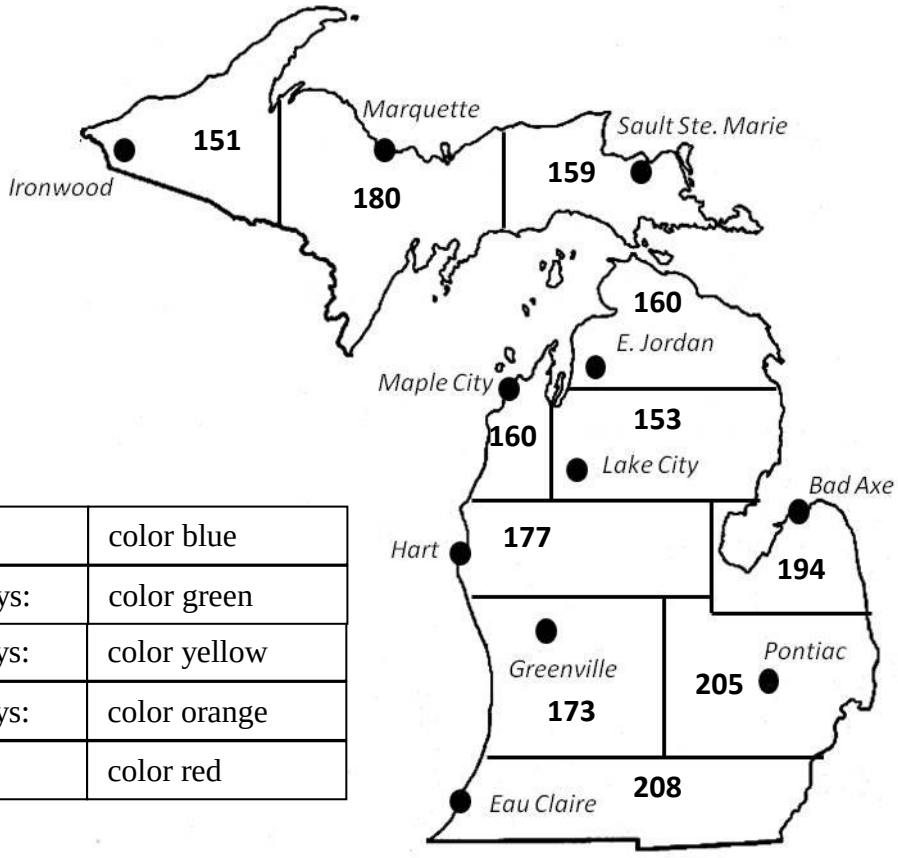
<130 days:	color blue
130-150 days:	color green
150-170 days:	color yellow
170-190 days:	color orange
> 190 days:	color red

Length of Growing Season: 2040-2059



<130 days:	color blue
130-150 days:	color green
150-170 days:	color yellow
170-190 days:	color orange
> 190 days:	color red

Length of Growing Season: 2080-2099



<130 days:	color blue
130-150 days:	color green
150-170 days:	color yellow
170-190 days:	color orange
> 190 days:	color red