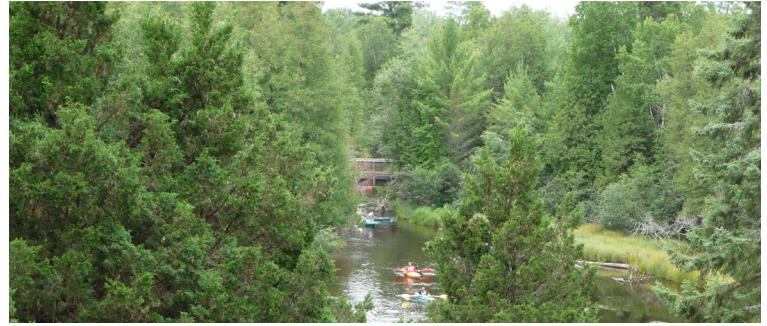


Regional Climate Trends

For Northwest Lower Michigan



STRONGER AND MORE STORMS

The number and severity of extreme storms is likely to increase in the Midwest.

Storms will occur with more frequency, especially in the winter, spring, and fall months.

Warmer temperatures will cause more precipitation to fall as rain and less as snowfall.

Multi-day precipitation events have also increased dramatically.

Source: GLISA

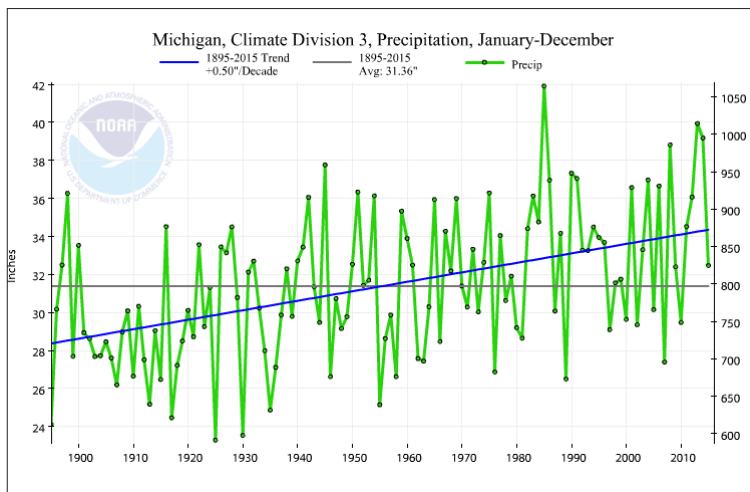
HIGHER TEMPERATURES

The number of extreme heat days (above 90 degrees Fahrenheit) is expected to rise to between 36 and 72 extreme heat days each year. Extreme heat is also more likely to be sustained for multiple days at a time.

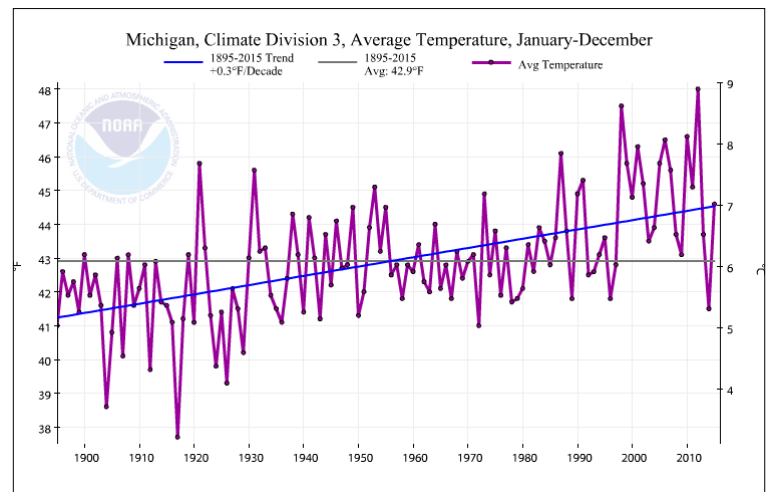
By 2050, air temperatures are projected to increase by 1.8 to 5.4 degrees Fahrenheit.

While the air temperature overall will continue to increase, it is projected that evening temperatures will increase faster than daytime temperatures.

Source: GLISA



Northwest Lower Michigan Annual Precipitation (In Inches) from 1895 to 2016. Source: NOAA Climate Divisions.



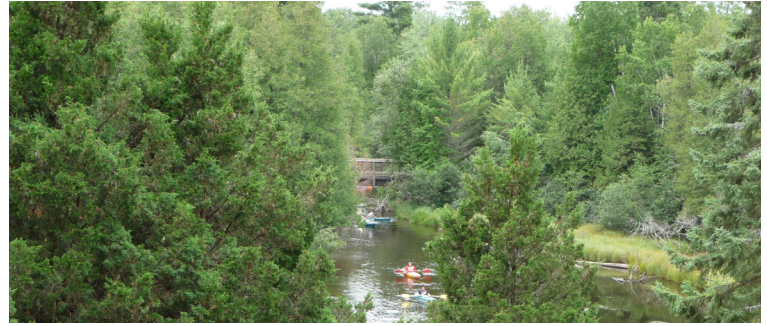
Northwest Lower Michigan Average Annual Air Temperatures from 1895 to 2016. Source: NOAA Climate Divisions.

According to the United States Environmental Protection Agency, climate change is already impacting many sectors of our communities. At a minimum, increases in air temperature and precipitation, combined with other factors, have caused impacts in the Great Lakes region including:

- Increased risk of heat-stress to equipment, infrastructure, and people, especially those who work outdoors or are otherwise vulnerable.
- Increased flooding and coastal erosion.
- Reduction in water quality due to increased occurrences of toxic algae blooms.
- Changes to the usability of water infrastructure like docks and piers.
- Economic impact to industries like forestry, fishing, crop production, tourism, manufacturing, energy production, and recreation.
- Expanded commercial navigation season as ice coverage continues to decline on the Great Lakes.

Regional Climate Trends

For Southwest Michigan



STRONGER AND MORE STORMS

The number and severity of extreme storms is likely to increase in the Midwest.

Storms will occur with more frequency, especially in the winter, spring, and fall months.

Warmer temperatures will cause more precipitation to fall as rain and less as snowfall.

Multi-day precipitation events have also increased dramatically.

Source: GLISA

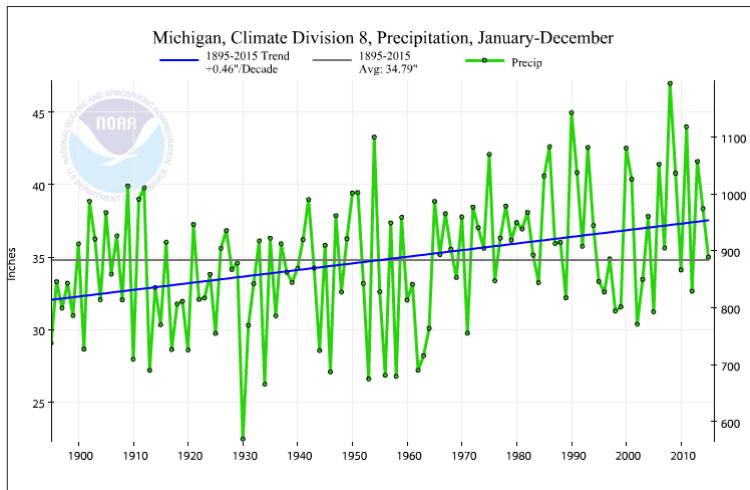
HIGHER TEMPERATURES

The number of extreme heat days (above 90 degrees Fahrenheit) is expected to rise to between 36 and 72 extreme heat days each year. Extreme heat is also more likely to be sustained for multiple days at a time.

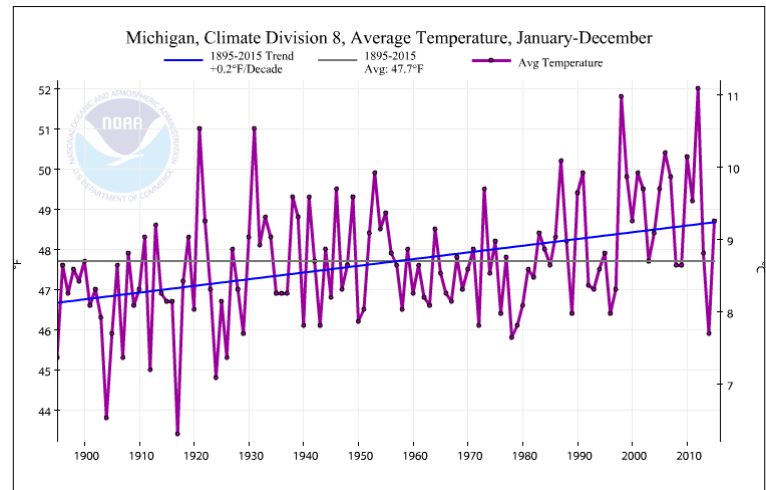
By 2050, air temperatures are projected to increase by 1.8 to 5.4 degrees Fahrenheit.

While the air temperature overall will continue to increase, it is projected that evening temperatures will increase faster than daytime temperatures.

Source: GLISA



Southwest Lower Michigan Annual Precipitation (In Inches) from 1895 to 2016. Source: NOAA Climate Divisions.



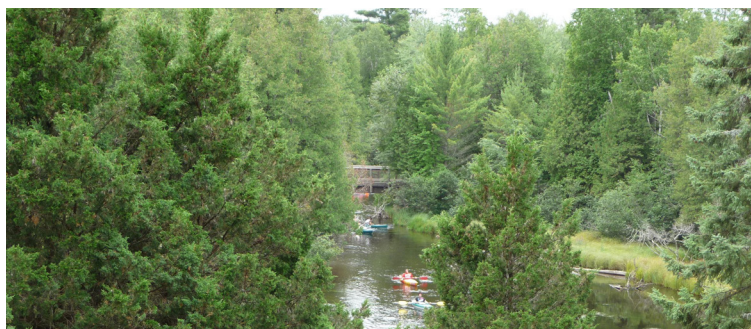
Southwest Lower Michigan Average Annual Air Temperatures from 1895 to 2016. Source: NOAA Climate Divisions.

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- Increased flooding and coastal erosion.
- Reduction in water quality due to increased occurrences of toxic algae blooms.
- Changes to the usability of water infrastructure like docks and piers.
- Economic impact to industries like forestry, fishing, crop production, tourism, manufacturing, energy production, and recreation.
- Expanded commercial navigation season as ice coverage continues to decline on the Great Lakes.

Regional Climate Trends

For Southeast Lower Michigan



STRONGER AND MORE STORMS

The number and severity of extreme storms is likely to increase in the Midwest.

Storms will occur with more frequency, especially in the winter, spring, and fall months.

Warmer temperatures will cause more precipitation to fall as rain and less as snowfall.

Multi-day precipitation events have also increased dramatically.

Source: GLISA

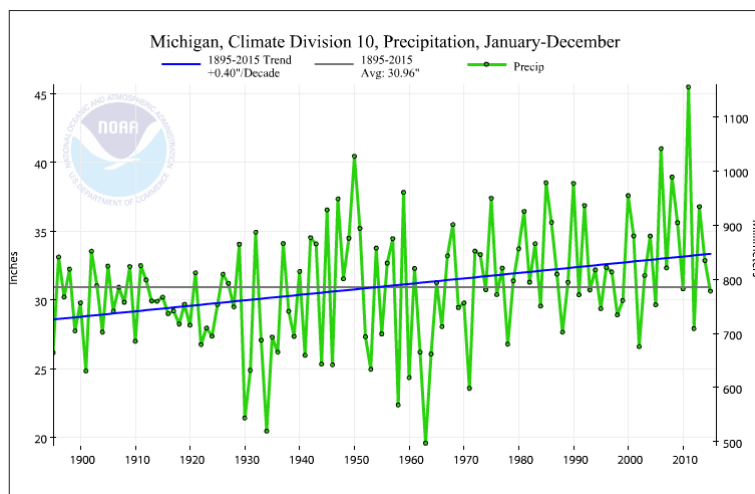
HIGHER TEMPERATURES

The number of extreme heat days (above 90 degrees Fahrenheit) is expected to rise to between 36 and 72 extreme heat days each year. Extreme heat is also more likely to be sustained for multiple days at a time.

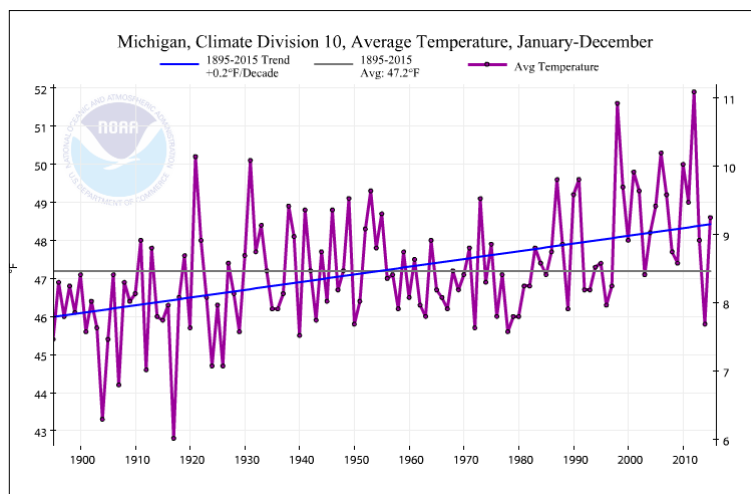
By 2050, air temperatures are projected to increase by 1.8 to 5.4 degrees Fahrenheit.

While the air temperature overall will continue to increase, it is projected that evening temperatures will increase faster than daytime temperatures.

Source: GLISA



Southeast Lower Michigan Annual Precipitation (In Inches) from 1895 to 2016. Source: NOAA Climate Divisions.



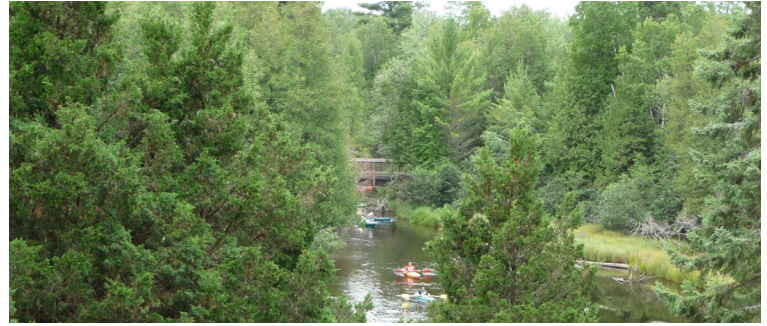
Southwest Lower Michigan Average Annual Air Temperatures from 1895 to 2016. Source: NOAA Climate Divisions.

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- Increased flooding and coastal erosion.
- Reduction in water quality due to increased occurrences of toxic algae blooms.
- Changes to the usability of water infrastructure like docks and piers.
- Economic impact to industries like forestry, fishing, crop production, tourism, manufacturing, energy production, and recreation.
- Expanded commercial navigation season as ice coverage continues to decline on the Great Lakes.

Regional Climate Trends

For South Central Lower Michigan



STRONGER AND MORE STORMS

The number and severity of extreme storms is likely to increase in the Midwest.

Storms will occur with more frequency, especially in the winter, spring, and fall months.

Warmer temperatures will cause more precipitation to fall as rain and less as snowfall.

Multi-day precipitation events have also increased dramatically.

Source: GLISA

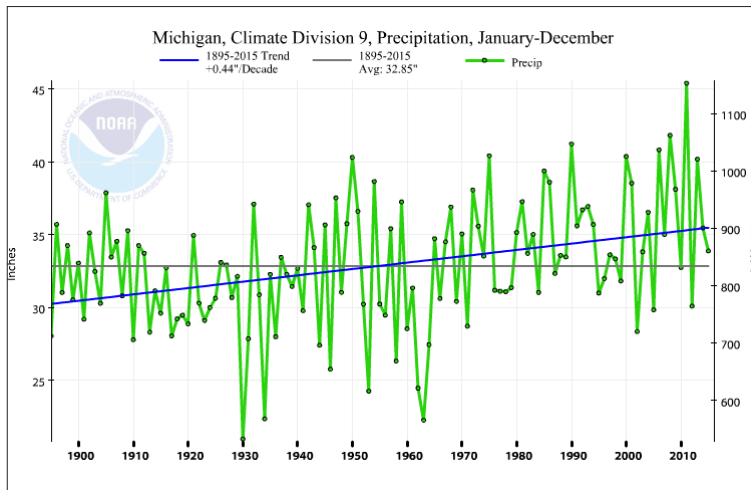
HIGHER TEMPERATURES

The number of extreme heat days (above 90 degrees Fahrenheit) is expected to rise to between 36 and 72 extreme heat days each year. Extreme heat is also more likely to be sustained for multiple days at a time.

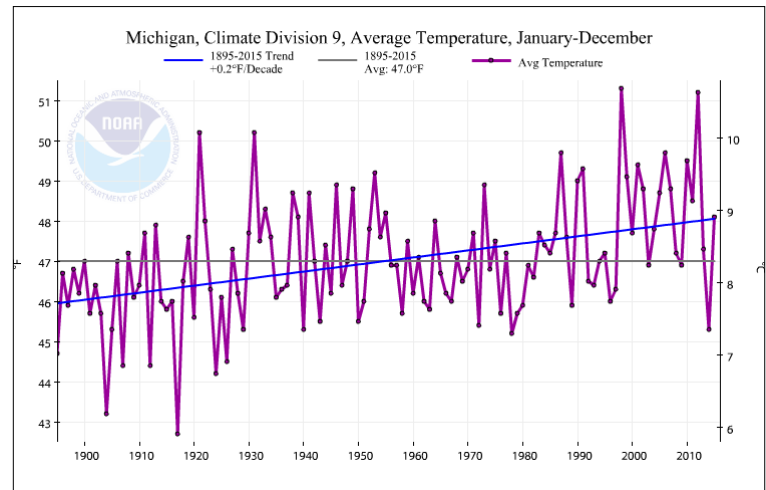
By 2050, air temperatures are projected to increase by 1.8 to 5.4 degrees Fahrenheit.

While the air temperature overall will continue to increase, it is projected that evening temperatures will increase faster than daytime temperatures.

Source: GLISA



South Central Lower Michigan Annual Precipitation (In Inches) from 1895 to 2016. Source: NOAA Climate Divisions.



South Central Lower Michigan Average Annual Air Temperatures from 1895 to 2016. Source: NOAA Climate Divisions.

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- Expanded commercial navigation season as ice coverage continues to decline on the Great Lakes.