The Heat Vulnerability Index (HVI)* analysis was created by the Building Resilience Against Climate Effects program within the Wisconsin Department of Health Services. The data displayed in the map is meant to serve as an informational tool to better understand the spatial distribution of human populations most vulnerable to extreme heat-related events.

* The Heat Vulnerability Index is based on the Wisconsin Heat Vulnerability Index** but has a reduced number of health-related indicators. It is representative of the heat vulnerability in the areas surrounding the Sokaogon Chippewa Tribal Lands and is not representative of the vulnerability compared to other areas in Wisconsin.

** The Wisconsin Heat Vulnerability Index is based on multiple indicators associated with risk for heat-related illness and mortality. The index analysis was created as a measure of vulnerability by U.S. Census block groups during an extreme heat event. The measure includes health factors, demographic and household characteristics, natural and built environment factors (e.g., air quality, temperature, land cover) and population density.
# Heat Vulnerability Index Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measure</th>
<th>Year</th>
<th>Data Source</th>
<th>Geography</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population Density</strong></td>
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<tr>
<td>Population density</td>
<td>Population per square mile</td>
<td>2011</td>
<td>U.S. Census</td>
<td>Block group</td>
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<tr>
<td><strong>Health Factors</strong></td>
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<tr>
<td>Heat stress</td>
<td>Percentage of population that visited an emergency department for heat stress</td>
<td>2002-2012</td>
<td>WI Department of Health Services (DHS)</td>
<td>Zip Code Tabulation Area (ZCTA)</td>
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<tr>
<td><strong>Demographic and Socioeconomic Factors</strong></td>
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<tr>
<td>Poverty</td>
<td>Percentage of households in poverty</td>
<td>2007-2011</td>
<td>U.S. Census, American Community Survey (ACS)</td>
<td>Block group</td>
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<tr>
<td>Age 0-4</td>
<td>Percentage of population aged 0-4</td>
<td>2007-2011</td>
<td>U.S. Census (ACS)</td>
<td>Block group</td>
</tr>
<tr>
<td>Age 85+</td>
<td>Percentage of population aged 85+</td>
<td>2007-2011</td>
<td>U.S. Census (ACS)</td>
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<tr>
<td>Age 65+ living alone</td>
<td>Percentage of population 65+ living alone</td>
<td>2007-2011</td>
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<tr>
<td>Living alone</td>
<td>Percentage of population living alone</td>
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<td>U.S. Census (ACS)</td>
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<tr>
<td>Non-white</td>
<td>Percentage of non-white population</td>
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<td>Less than high school education</td>
<td>Percentage of population with less than high school education</td>
<td>2007-2011</td>
<td>U.S. Census (ACS)</td>
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<tr>
<td><strong>Natural and Built Environment</strong></td>
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<td>Air surface temperature</td>
<td>July 6, 2012, air temperature</td>
<td>2012</td>
<td>Parameter-elevation Regressions on Independent Slopes Model (PRISM)</td>
<td>Raster, 4 k resolution</td>
</tr>
<tr>
<td>Air quality, PM$_{2.5}$</td>
<td>July 2012, average PM$_{2.5}$ concentration (ug/m$^3$)</td>
<td>2012</td>
<td>Environmental Protection Agency (EPA) Air Quality Index (AQI)</td>
<td>Lat/long (extrapolated)</td>
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<tr>
<td>Air quality, ozone</td>
<td>July 2012, maximum recorded ozone level (ppb)</td>
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<td>EPA AQI</td>
<td>Lat/long (extrapolated)</td>
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<tr>
<td>Households without vehicle</td>
<td>Percentage of households without a vehicle</td>
<td>2007-2011</td>
<td>U.S. Census (ACS)</td>
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<tr>
<td>Developed land cover</td>
<td>Medium and high intensity classification</td>
<td>2006</td>
<td>National Land Cover Database (NLCD)</td>
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<td>Nursing home</td>
<td>Nursing home bed count</td>
<td>2013</td>
<td>Division of Long Term Care</td>
<td>Lat/long</td>
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</table>