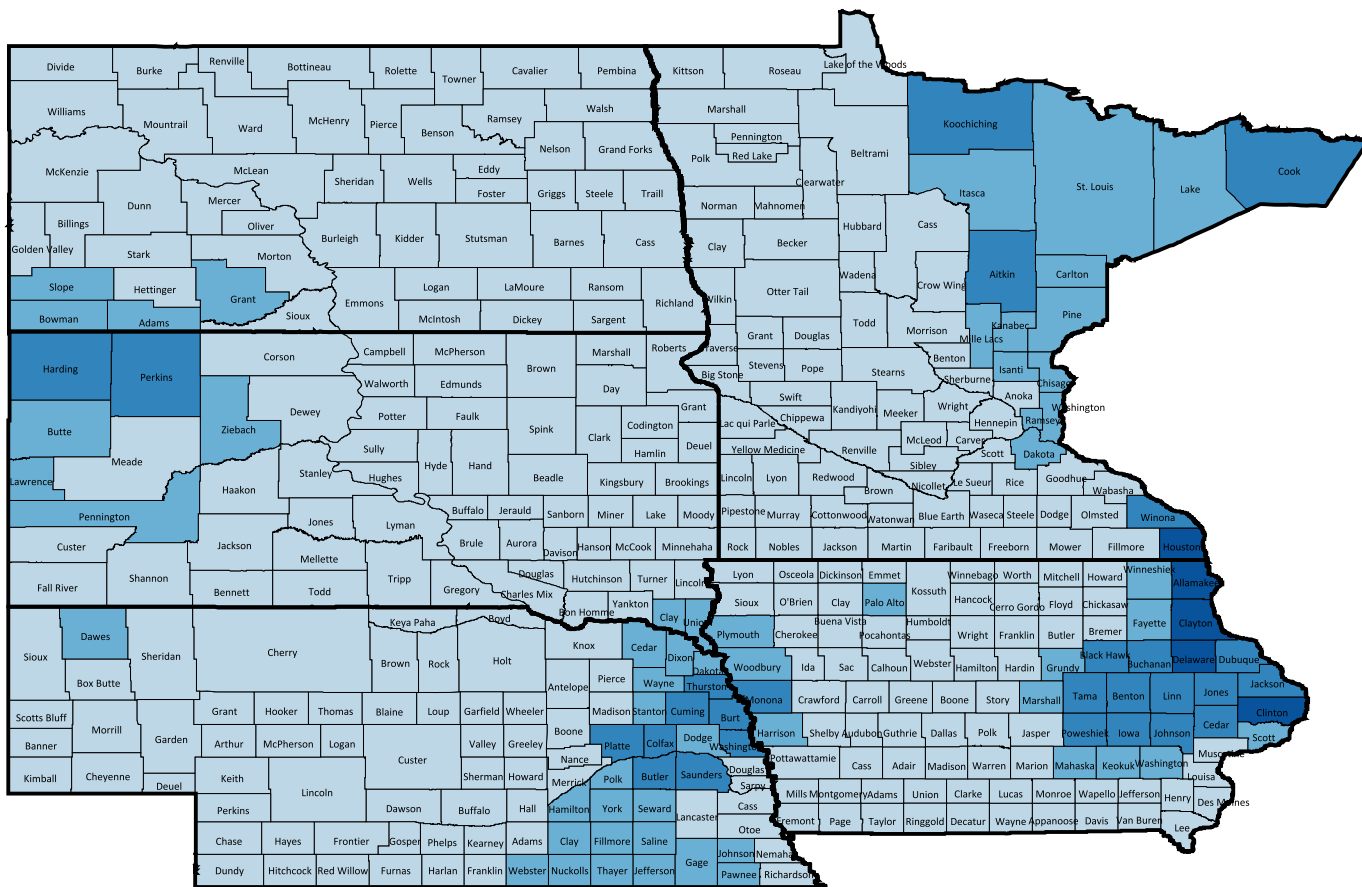
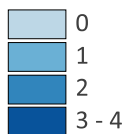


# Air Pollution-Particulate Matter Days - A health factor measure focusing on physical environment

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Number of days air quality was unhealthy for sensitive populations due to fine particulate matter, 2006



## CONTEXT

**What It Is:** The air pollution—particulate matter measure represents the annual number of days that air quality was unhealthy for sensitive populations due to fine particulate matter (FPM, < 2.5 µm in diameter).

**Where It Comes From:** The Public Health Air Surveillance Evaluation (PHASE) project, a collaborative effort between the Centers for Disease Control and Prevention (CDC) and the EPA, used Community Multi-Scale Air Quality Model (CMAQ) output and air quality monitor data to create a spatial-temporal model that estimated fine particulate matter concentrations throughout the year. The PHASE estimates were used to calculate the number of days per year that air quality in a county was unhealthy for sensitive populations due to FPM.

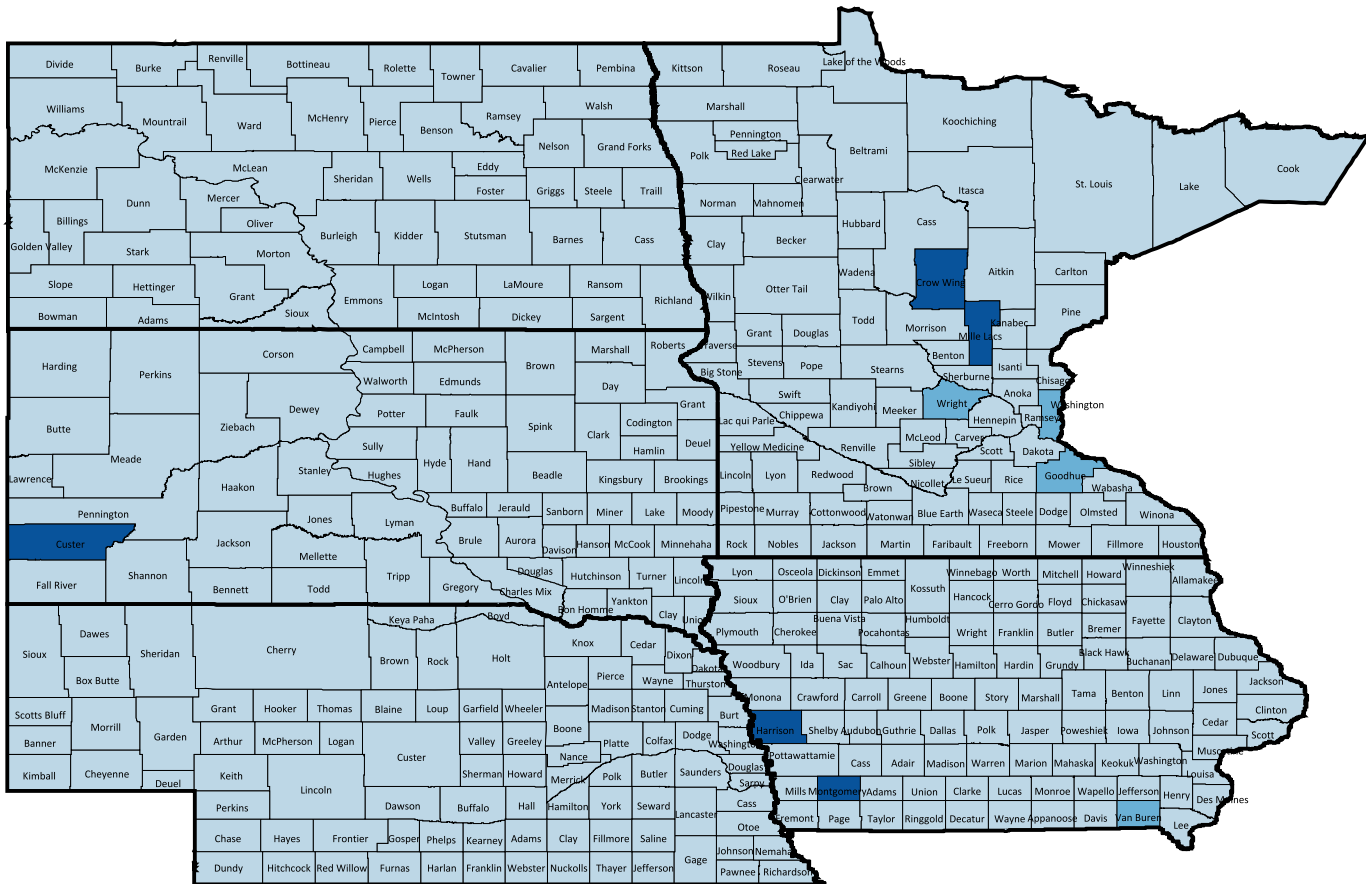
**Importance:** The relationship between elevated air pollution—particularly fine particulate matter and ozone—and compromised health has been well documented. The negative consequences of ambient air pollution include decreased lung function, chronic bronchitis, asthma, and other adverse pulmonary effects.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, <http://www.countyhealthrankings.org/>.

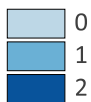
Disclaimer: The data displayed are from the source indicated; we do not vouch for the accuracy of the data or ensure they are the most recent available. The information is intended for personal, non-commercial use. It can be shared freely if it is not used for profit and appropriate acknowledgments are given. This map was prepared by researchers at North Dakota State University in Fargo for the 2011-2013 Fargo-Moorhead Community Health Needs Assessment Collaborative. December 2011

# Air Pollution-OzoneDays - A health factor measure focusing on physical environment

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Number of days air quality was unhealthy for sensitive populations due to ozone levels, 2006



## CONTEXT

**What It Is:** The air pollution—ozone measure represents the annual number of days that air quality was unhealthy for sensitive populations due to ozone levels.

**Where It Comes From:** The Public Health Air Surveillance Evaluation (PHASE) project, a collaborative effort between the Centers for Disease Control and Prevention (CDC) and the EPA, used Community Multi-Scale Air Quality Model (CMAQ) output and air quality monitor data to create a spatial-temporal model that estimated daily ozone concentrations throughout the year. The PHASE estimates were used to calculate the number of days per year that air quality in a county was unhealthy for sensitive populations due to ozone.

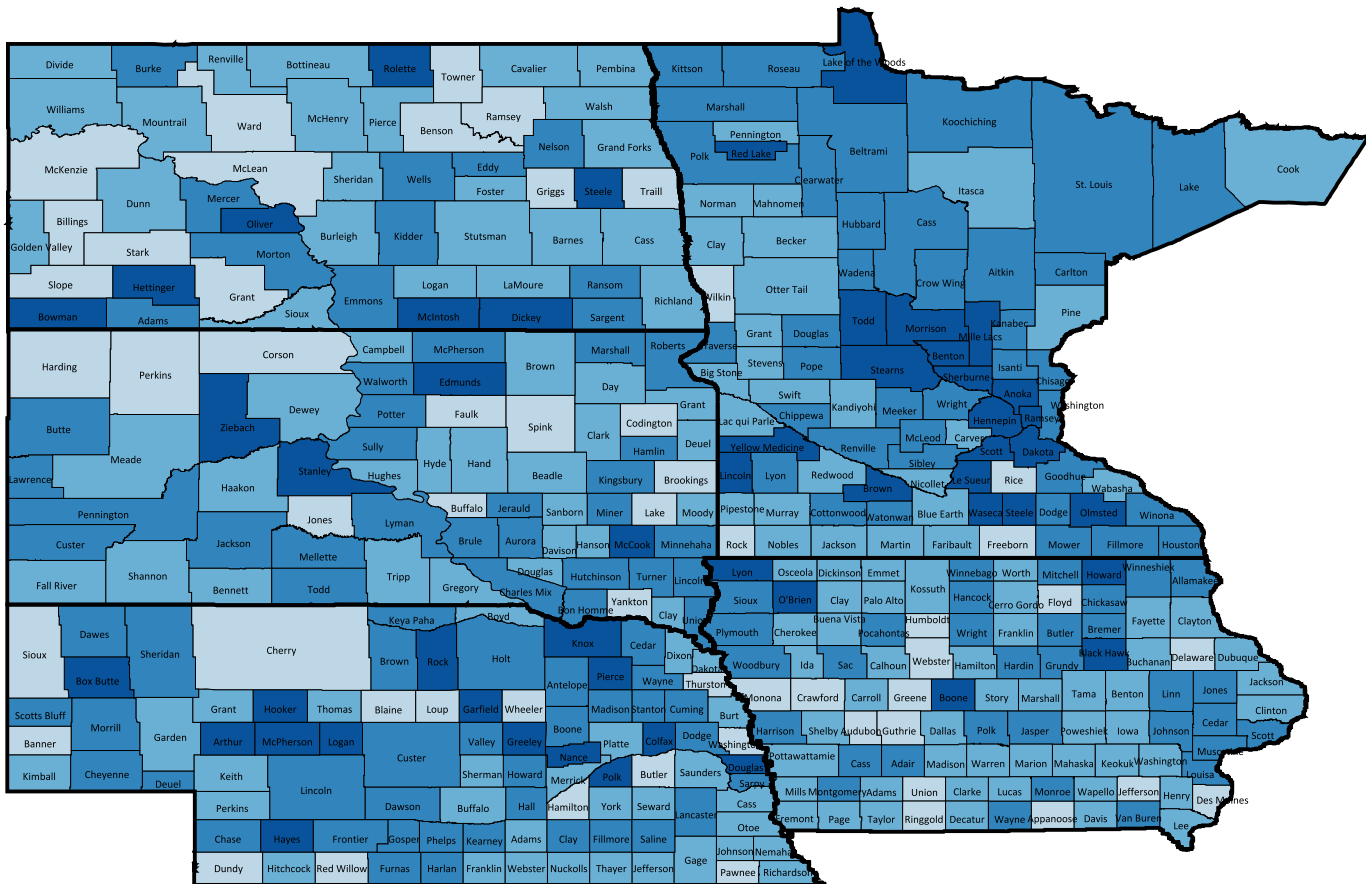
**Importance:** The relationship between elevated air pollution—particularly fine particulate matter and ozone—and compromised health has been well documented. The negative consequences of ambient air pollution include decreased lung function, chronic bronchitis, asthma, and other adverse pulmonary effects.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, <http://www.countyhealthrankings.org/>.

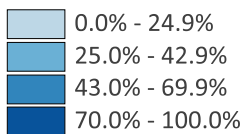
Disclaimer: The data displayed are from the source indicated; we do not vouch for the accuracy of the data or ensure they are the most recent available. The information is intended for personal, non-commercial use. It can be shared freely if it is not used for profit and appropriate acknowledgments are given. This map was prepared by researchers at North Dakota State University in Fargo for the 2011-2013 Fargo-Moorhead Community Health Needs Assessment Collaborative. December 2011

# Access to Healthy Foods - A health factor measure focusing on physical environment

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Percent of zip codes with healthy food outlets (i.e., grocery store or produce stand/farmers' market), 2008



## CONTEXT

**What It Is:** Access to healthy foods is measured as the percent of zip codes in a county with a healthy food outlet, defined as a grocery store or produce stand/farmers' market.

**Where It Comes From:** The measure is based on data from the U.S. Census Bureau's Zip Code Business Patterns. Healthy food outlets include grocery stores and produce/farmers' markets, as defined by their North American Industrial Classification System (NAICS) codes.

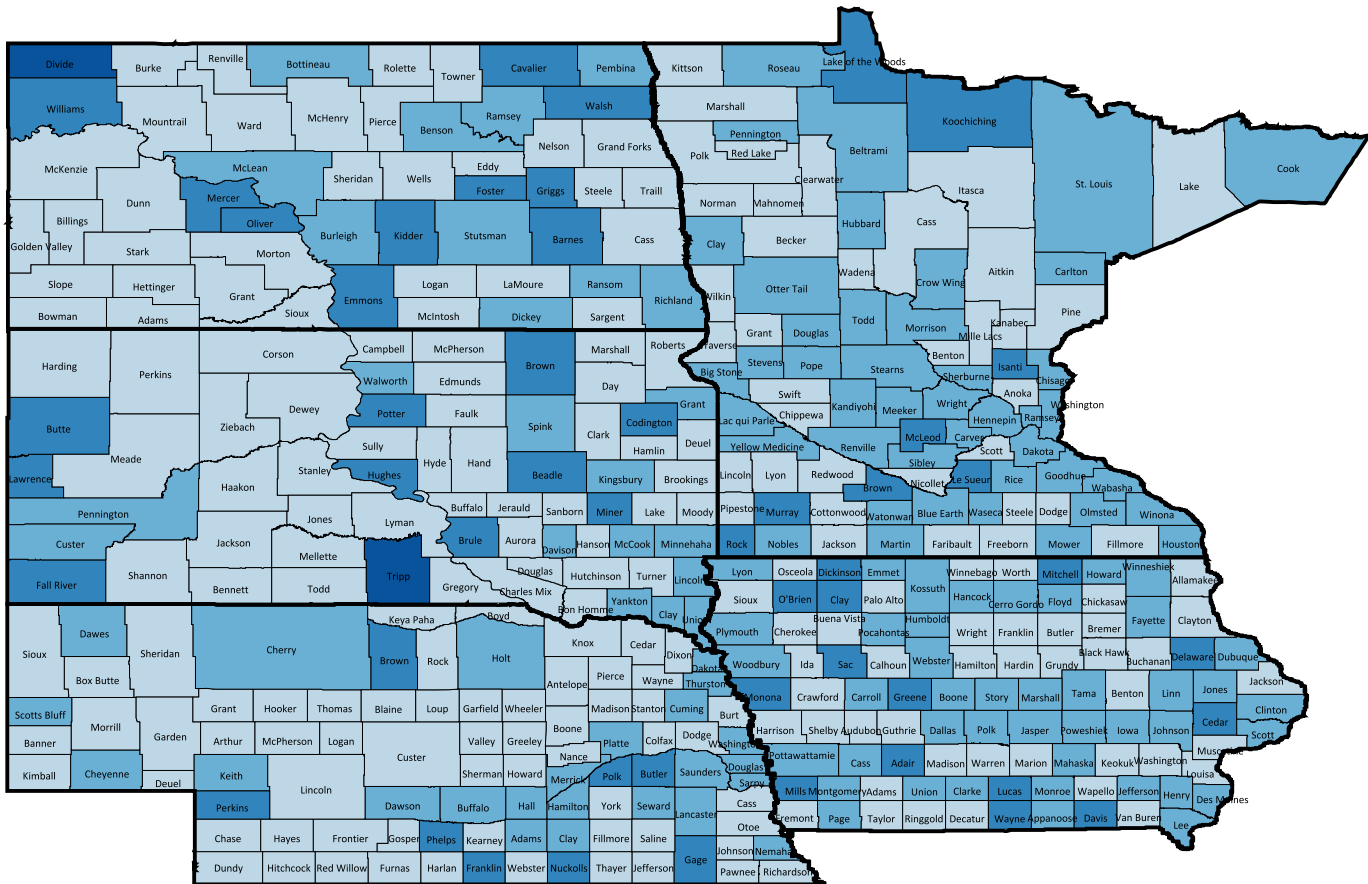
**Importance:** Studies have linked the food environment to consumption of healthy food and overall health outcomes.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, <http://www.countyhealthrankings.org/>.

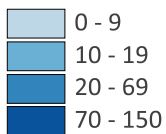
Disclaimer: The data displayed are from the source indicated; we do not vouch for the accuracy of the data or ensure they are the most recent available. The information is intended for personal, non-commercial use. It can be shared freely if it is not used for profit and appropriate acknowledgments are given. This map was prepared by researchers at North Dakota State University in Fargo for the 2011-2013 Fargo-Moorhead Community Health Needs Assessment Collaborative. December 2011

# Access to Recreational Facilities - A health factor measure focusing on physical environment

County distribution map for Iowa, Minnesota, Nebraska, North Dakota, and South Dakota



Number of recreational facilities per 100,000 population, 2008



## CONTEXT

**What It Is:** This measure represents the number of recreational facilities per 100,000 population in a given county. Recreational facilities are defined as establishments primarily engaged in operating fitness and recreational sports facilities, featuring exercise and other active physical fitness conditioning or recreational sports activities such as swimming, skating, or racquet sports.

**Where It Comes From:** This measure is based on a measure from United States Department of Agriculture (USDA) Food Environment Atlas, and is calculated using the most current County Business Patterns data set. Recreational facilities are identified by North American Industrial Classification System (NAICS) code 713940.

**Importance:** The availability of recreational facilities can influence individuals' and communities' choices to engage in physical activity. Proximity to places with recreational opportunities is associated with higher physical activity levels, which in turn is associated with lower rates of adverse health outcomes associated with poor diet, lack of physical activity, and obesity.

- Data and associated context were obtained from County Health Rankings, a key component of the Mobilizing Action Toward Community Health (MATCH) project - a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, <http://www.countyhealthrankings.org/>.

Disclaimer: The data displayed are from the source indicated; we do not vouch for the accuracy of the data or ensure they are the most recent available. The information is intended for personal, non-commercial use. It can be shared freely if it is not used for profit and appropriate acknowledgments are given. This map was prepared by researchers at North Dakota State University in Fargo for the 2011-2013 Fargo-Moorhead Community Health Needs Assessment Collaborative. December 2011