

# TRACKING

# Westport

Promoting environmental public health for all residents of the Commonwealth

## About Environmental Public Health Tracking (EPHT)

The Massachusetts Department of Public Health EPHT program has created these profiles to provide a snapshot of environmental health for Massachusetts communities.

#### What information is inside this community profile?

Data for several health and environmental topics are presented in this profile as well as population information. Terms that might be unfamiliar are in **bold** and defined in a glossary at the end. This profile also describes how baseline health, environmental, and social indicators available on the EPHT public website can inform climate and health adaptation planning in your community.

#### Who can use this community health profile, and what can they use it for?

The community health profiles can be used by anyone who would like to know about environmental public health in Massachusetts communities. Profiles can be used to gather data, guide public health actions, identify groups that are more likely to have negative outcomes from adverse exposure, and shape policy decisions.

#### What is environmental public health?

The word "environment" produces images of the outdoors – trees, grass, and other parts of the natural world. In the field of environmental public health, the environment also includes the man-made spaces that surround us every day - our homes, neighborhoods, schools, and workplaces – all of which contribute to our health.

#### How can the environment impact my health?

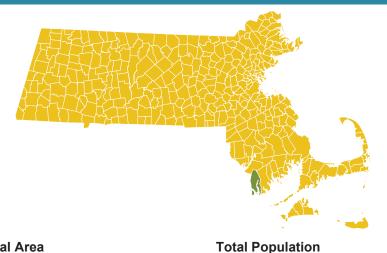
Some examples include runny noses and itchy eyes from spring pollen allergies, asthma attacks triggered by air pollution, and health problems in young children due to consuming old lead-based paint chips and dust.

#### Why track environmental public health?

Monitoring health outcomes over several years allows us to see trends and helps public health scientists better understand how the environment is impacting our health.

Look for this shaded box for more information about the connection between environment and climate change and health in Massachusetts. The Centers for Disease Control and Prevention (CDC) created a video describing How Climate Change affects Community Health.

## Geography



**Total Area 52.1** square miles

**16,245** people



#### Percent of Land Use

Agriculture -9.5% Recreation -Forest - **59.4%** Urban -16.9% Open space -

Water -8.6%



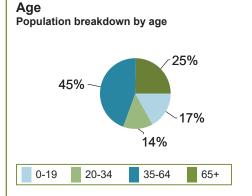
# MASSACHUSETTS ENVIRONMENTAL PUBLIC HEALTH TRACKING

# Westport

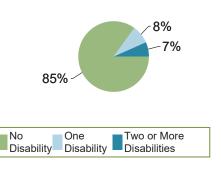
## **Population**

Some people are more vulnerable to **environmental hazards** than others. For example, the effects of lead poisoning are worse in young children. This is why it is important to understand the **sociodemographic** makeup of a community. Understanding population characteristics helps a community identify the needs of its residents and tailor its public health messages and programs.

#### **Demographics**



# **Disability**Population by number of disabilities



Older adults and populations with disabilities are more likely to have preexisting, concurrent, or multiple health conditions that may be complicated by environmental hazards, while young children have growing bodies that are more sensitive to environmental pollutants.

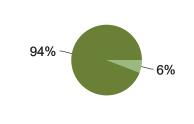
Older adults, people with disabilities, and children have difficulty with extreme heat and cold. They are also more likely to experience adverse health effects during and after flooding events and storms if they have mobility challenges and pre-existing health conditions.

# Income Distribution of household income 67% 20%

\$40-60K

<\$40K

# Poverty Households below the poverty line



Percent Above

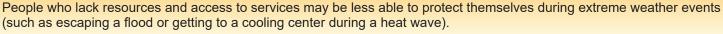
Hispanic

poverty status are important indicators of underserved groups.

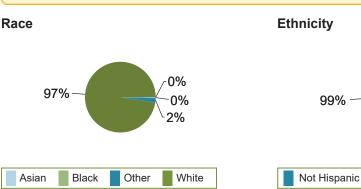
Poverty is both a cause and a

Median household income and

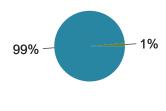
Poverty is both a cause and a consequence of poor health. An area with high rates of poverty may also be an area with residents who have health challenges.



Percent Below



\$60K+



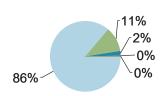
Various forms of discrimination and racism have created long-standing health inequities for people of color. The Environmental Justice section describes how people of color face the challenges of unjust distribution of resources and power that impact health outcomes.



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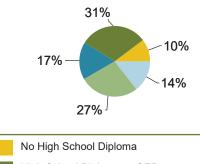
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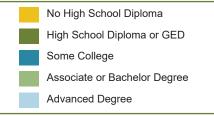
#### **English Language Proficiency**





#### **Educational Attainment**





People with limited education or English proficiency, or immigrant groups who are undocumented, may be less well-resourced to respond to and cope with the health impacts of climate change.

## **Environmental Justice (EJ)**

The principle of **environmental justice (EJ)** states that all people, regardless of income or race, have the right to fair treatment and equal involvement in environmental issues, and the right to live in environmentally healthy neighborhoods.

According to the U.S. Centers for Disease Control, communities of color and low-income communities are more likely to live near toxic waste sites, in areas with high air pollution, and in low-quality housing. These inequities are, in part, a result of a history

Westport: **10.6** % Statewide: **20.8** %

Percentage of population residing in a block group where one or more of the EJ criteria is met, compared to the average percentage for all MA communities (using data from the 2010 U.S. Census and the EOEEA.)

of policies rooted in systems of oppression, such as structural and institutional racism and classism. These policies contribute to increased exposures to environmental and health hazards through inequitable distribution of high pollution sites (e.g. highways, factories, and waste facilities) and limited participation or meaningful involvement of communities of color, which reduces community members' ability to advocate for healthy living conditions. Examples of structural inequity include fewer healthcare providers in the community, limited access to transportation options, and limited access to health information due to a lack of resources to increase literacy or access for non-English speakers.

In Massachusetts, EJ Populations are defined as neighborhoods (U.S. Census block groups) that meet one or more of the following criteria:

- Income (I): annual median household income is at or below 65% of the statewide median income; or Community of Color (C)\*: 40% or more of the residents reported to the U.S. Census Bureau their race as Black,
- American Indian/Alaska Native, Asian, or Native Hawaiian/Other Pacific Islander, some other race, and/or were two
  or more races, and/or that their ethnicity was Hispanic or Latino; or
  25% or more of the residents reported their race as described above, and their municipality's annual median
  household income does not exceed 150% of the statewide median household income; or
- English Isolation (E): 25% or more of the residents are not fluent in the English language.

EJ neighborhoods where more than one criteria are met may be the most at risk of exposure to environmental and health hazards.

Climate change disproportionately impacts the health of EJ communities. For example, people in EJ communities may face multiple social and environmental stressors at one time, which reduces their ability to prepare and respond to climate impacts. View the U.S. Environmental Protection Agency's factsheet on <u>Climate Change, Health, and Environmental Justice</u>

MA Department of Public Health's <u>Vulnerability Mapping Tool</u> provides access to information in your community on important social and economic factors that influence vulnerability to climate change.



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#### Health

The environment can contribute to the development of **chronic disease**. Chronic illnesses are some of the most common, expensive, and avoidable health problems.

Using an Environmental Justice frame is critical in reviewing the health outcomes below as we know racial inequities exist across these outcomes.

## **Childhood Lead Poisoning**

Lead paint and dust in older homes are the most common source of lead poisoning in Massachusetts. Chipping and peeling paint, lead paint on friction surfaces like windows and doors, and paint disturbed during home remodeling can create lead dust on floors and belongings. Children swallow lead dust when they put their hands or toys in their mouths. Toddlers who are crawling or teething are most at risk for lead exposure. There is no safe level of lead exposure. Lead exposure can damage the brain, kidneys, and nervous system; slow growth and development; and create behavioral problems and learning disabilities in children. The use of lead in household paint was banned in 1978. Over 1.8 million housing units in Massachusetts built before 1978 are not considered lead safe. Children continue to be exposed to high levels of lead in their homes.

**Lead Screening** 

81%

Statewide: 68%

Percentage of children age 9-47 months screened for lead in 2021

A blood test is the only way to know if a child is exposed to lead. Massachusetts requires all children to be tested between 9-12 months, again at age 2, and again at age 3. Children must also be tested at age 4 if they live in a high-risk community.

Prevalence of Blood Lead Levels (BLL) ≥ 5 ug/dl

7 per 1,000 \*

**Statewide: 13.6** per 1,000

5-year annual average rate (2017 - 2021) for children age 9-47 months with an estimated confirmed blood lead level ≥5 μg/dL

A child with a blood lead level of  $\geq 5$  micrograms per deciliter ( $\mu$ g/dL) must, by State law, receive follow-up testing using venous blood.

\* Prevalence is unstable due to small numbers and should be interpreted with caution

#### Do you live in a high-risk lead community?

A community is considered high-risk for childhood lead poisoning based on 3 factors:

- the percentage of homes built before 1978,
- the percent of families with low to moderate income, and
- the rate of first-time blood lead levels  $\geq 10~\mu g/dL$  that occurred over the past 5 years.

Based on these factors, Westport was not considered a high-risk lead community for 2021.

Percentage of houses built before 1978

63.6%

Statewide: 67.3%

Lead containing paint was banned in 1978. Prior to that year, many household paints contained dangerous levels of lead. The number of homes built before 1978 is a contributing factor to a community's rate of elevated blood lead levels. The Massachusetts Lead Law requires that homeowners delead homes built before 1978 that have lead paint where any children under the age of six live. Deleading means that lead hazards in the home such as peeling lead paint are covered or removed.

If you have questions about having your home inspected for lead, locating a licensed deleader, or understanding the Lead Law, call the Childhood Lead Poisoning Prevention Program at 1-(800) 532-9571.



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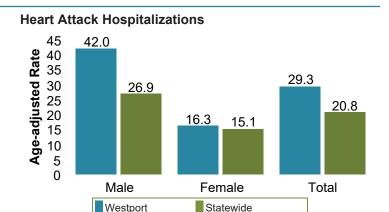


#### **Heart Attack**

Risk factors for having a heart attack include obesity, smoking, and high cholesterol; exposure to air pollution, such as ozone or particulate matter, can also increase risk.

Heart attack hospitalizations are tracked for adults over age 35. Some data may not be shown (NS) due to small numbers.

Climate change is increasing the number of very hot days, and hot days increase the risk of hospital visits for people with chronic conditions including lung, heart, vascular, and kidney diseases. Some medications can also impair the body's ability to cool itself. Learn more from the CDC on how extreme heat can impact our health.



Age-adjusted rate per 10,000 people

#### **Asthma**

Asthma attacks can be triggered by environmental exposures like air pollution and secondhand smoke. Asthma is more common in children than adults and is becoming more common across the state.

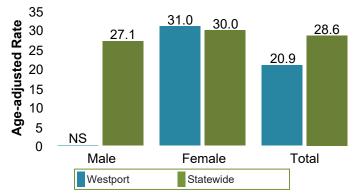
Asthma emergency department visits are tracked for people of all ages.

Asthma prevalence in Massachusetts is also tracked among children from kindergarten (K) through the 8th grade.

The MDPH Indoor Air Quality (IAQ) Program evaluates indoor environmental quality in public schools and buildings by request. For more information or to find out if an assessment has been conducted at a building in your community, visit <a href="https://www.mass.gov/dph/iaq">www.mass.gov/dph/iaq</a>.

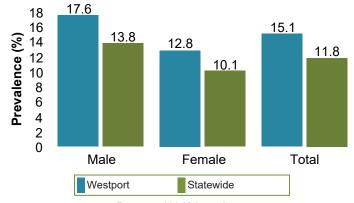
Increasing numbers of very hot days due to climate change may increase ozone and pollen levels that can trigger asthma. Learn more from the <u>CDC</u> on how climate changes decrease the quality of the air we breathe.





Age-adjusted rate per 10,000 people

#### Pediatric Asthma Prevalence in K-8 Students



Rate per 100 K-8 students



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#### **Environment**

The air we breathe and the water we drink can be impacted by pollutants, from many different sources. State and federal governments set standards and guidelines for environmental pollutants. They ensure that monitoring of those pollutants takes place and they take action if there is a violation. The impact of an environmental hazard on each person depends on many things. Characteristics like age and health may play a role, as well as the length of time of exposure to the hazard and the amount of the hazard present.

#### **Air Quality**

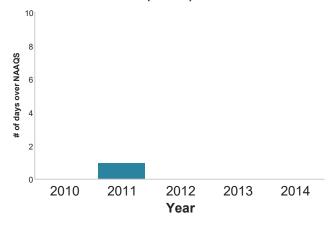
EPHT has two types of data that describe outdoor air conditions: 1) county-level monitored measures that use monitoring stations maintained by the Massachusetts Department of Environmental Protection (MassDEP); 2) community and censustract level estimated measures that are developed from U.S. EPA and CDC models. County-level monitored data is more upto-date than estimated data.

Exposure to air pollution can contribute to heart or lung illnesses. Air pollution can worsen asthma and other respiratory ailments and can trigger heart attacks. The U.S. EPA establishes limits on air pollution levels to protect public health, including the health of at-risk populations. Exceedances of these limits, called **National Ambient Air Quality Standards (NAAQS)**, are a measure of bad air quality days.

#### **Most Recent Monitored Observations**

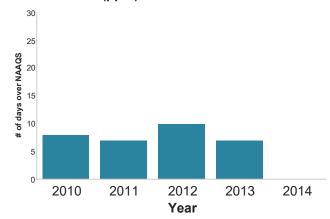
In 2017, Bristol County had 6 days with ozone levels above the 8-hour NAAQS of 0.070 ppm and 0 days with PM2.5 levels above the 24-hour NAAQS of 35  $\mu$ g/m3.

#### **Estimated Fine Particles (PM2.5)**



Fine particulate matter or PM2.5 refers to a mixture of extremely small airborne particles. The figure shows the number of days that estimated PM2.5 concentrations were above the NAAQS of 35  $\mu g/m3$  over a 24-hour period.

#### **Estimated Ozone (ppm)**



**Ozone** is a colorless gas. The figure shows the number of days that estimated ozone concentrations were above the NAAQS of 0.070 ppm over an 8-hour period.

Climate-related increases in heat and changes in weather patterns may increase exposure to air pollutants from automobiles and power plants. See how you can prepare for air quality changes from the CDC.

Smoke from distant wildfires can blow into Massachusetts and contribute to hazardous air quality. Learn more about wildfire smoke and health from the EPA.



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## **Drinking Water Quality**

The U.S. EPA sets limits for acceptable and safe levels of contaminants in drinking water, and the MassDEP Drinking Water Program is responsible for monitoring and enforcing those limits.

Most people in Massachusetts drink water from a public **community water system**. Water systems are responsible for testing water and reporting test results to the MassDEP. Contact your town water department or water provider to obtain a copy of current test results. You can also review the Consumer Confidence Report that your water supplier is required to send you each year. The <u>MassDEP Drinking Water Program's website</u> has consumer information about drinking water.

Some people have private wells on their properties that provide drinking water. Those individuals are responsible for testing their own well water to ensure it is safe for drinking.

Health effects from potential contaminants in drinking water will depend on the pollutant, the amount introduced into your body, how it entered your body (for example, if you drink the polluted water or if it touches your skin) and your individual sensitivity.

# Contaminants tracked by EPHT:

Arsenic
Atrazine

Di(2-ethylhexyl) phthalate (DEHP)
Disinfection Byproducts
Lead
Nitrate
Tetrachloroethylene (PCE)
Trichloroethylene (TCE)
Uranium

#### Have a private well?



Of the nine contaminants tracked by EPHT there have been no violations reported for water systems that service Westport.

Climate-related flooding may impact drinking water quality. Water from heavy rainfall and from flooding streams can pick up chemicals and sewage during a flooding event. Many of the Commonwealth's drinking water and wastewater treatment facilities are located at low elevations and are vulnerable to coastal and inland flooding during extreme storm events. Septic systems are vulnerable to leakage during flooding events and may contaminate nearby drinking water wells. Assessing the vulnerability of drinking water and wastewater treatment facilities to flooding is an important consideration in the adaptation planning process. Read about warming water and flooding from the CDC.



## MASSACHUSETTS ENVIRONMENTAL PUBLIC HEALTH TRACKING

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## **Climate Change**

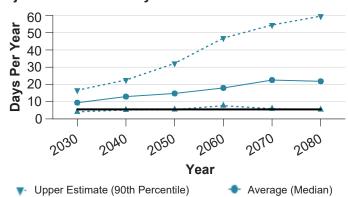
Climate change effects are broad-ranging and include hotter summers, flooding, <u>rising sea levels</u>, and more intense storms. These hazards will impact the health of Massachusetts residents. Some residents will be more vulnerable to climate effects due to pre-existing disease, lower socioeconomic status, unhealthy housing conditions, and exposure to higher levels of environmental contaminants. This section explains expected climate change impacts on health, shows how data can help your community plan for these changes, and provides additional resources for climate adaptation plans.

#### **Climate Change and Your Community**

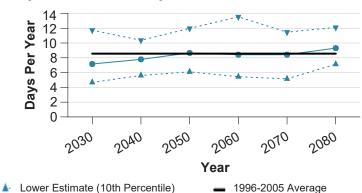
Climate change impacts will vary across Massachusetts. In most areas, the number of heavy precipitation events are expected to increase in the future, leading to flooding, while some areas may have little change in yearly precipitation. There may also be long periods of time without precipitation, which can result in drought conditions. Communities and residents will have different abilities to respond to these climatic changes. For example, while some coastal homes may be built to withstand flooding, homes in inland flood zones may not have these features. Even in communities that experience routine flooding, some residents do not have the resources to prevent or respond to damage, especially as the severity and frequency of flooding increases.

The community-specific graphs below show the range of projected changes in very hot days and in days of rainfall, and are based on watershed (basin) location, using data from the <u>Massachusetts Climate Change Clearinghouse</u>. These graphs can be used to identify future hazards and prepare for potential health threats. More information on other climate-related impacts can be found on the <u>EPHT climate change webpages</u>.

#### Projected Number of Days Over 90°F



#### **Projected Number of Days with Rainfall Over 1 inch**



Median (50th percentile) climate projections are shown with the most likely range of future upper (90th percentile) and lower (10th percentile) estimates.

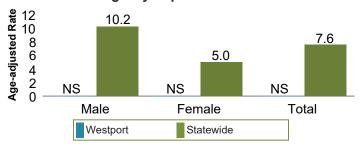
Climate change is raising sea levels and increasing coastal storm intensity. Nearly a quarter of Massachusetts communities are vulnerable to coastal storm surges – including some that are not directly on the coast. Read more about <a href="https://www.nurricane.coastal.

#### The Link Between Climate and Health: Extreme Heat-Related Events

#### Tracking Links between Climate and Health

More days of extreme heat will increase the number of residents at risk for experiencing heat stress. These effects include fatigue, cramps, dehydration and heatstroke. EPHT tracks the number of emergency room visits due to heat stress in each community in Massachusetts. Some data may not be shown (NS) due to small numbers.

#### **Heat Stress Emergency Department Visits**



Massachusetts Department of Public Health - Bureau of Climate and Environmental Health Report created on Aug 1, 2023



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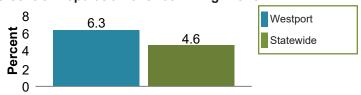


## **Climate Change**

#### **Tracking Vulnerable Populations**

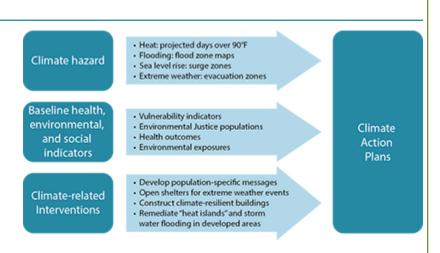
Older adults, especially those living alone, are more vulnerable to health impacts during extreme heat events. Understanding where the most at-risk groups live in your community can inform local climate change planning efforts.

#### Percent of Population over 65 Living Alone



## Planning for climate change

Assessing baseline conditions enables communities to better prepare for climate-related impacts. Gathering health and environmental data alongside demographic indicators can help your community develop adaptation plans. These plans can include interventions that target the populations most vulnerable to climate impacts. EPHT's advanced mapping features and the Vulnerability Mapping Tool can be used to inform a climate action plan for your community.



## Resources for Integrating Public Health into Climate Adaptation Planning

#### The Commonwealth's resources:

- Massachusetts Climate Change Adaptation Report details locally appropriate responses to protect the public from predicted adverse climate effects.
- Massachusetts State Hazard Mitigation and Climate Adaptation Plan Chapter 4 contains information on adaptations for a variety of climate hazards, including health and population vulnerability information.
- MA Executive Office of Environmental and Energy Affairs'
   <u>The Municipal Vulnerability Preparedness program</u>
   provides support to communities for identifying climate change vulnerabilities and health impacts, and implementing adaptation plans. This program uses the 
   <u>Community Resilience Building</u> framework for its local climate adaptation planning workshops.
- MA Coastal Zone Management <u>Sea Level Rise and Coastal Flooding Viewer</u> shows flooding and storm surge hazards.

#### Additional resources:

- US CDC Climate Program's <u>Assessing Health</u>
   <u>Vulnerability to Climate Change</u> guides local health
   departments conducting climate and health vulnerability
   assessments. The program also identifies <u>heat</u>
   preparedness and coastal flooding adaptations.
- US EPA's <u>Climate Change</u>, <u>Resilience</u>, <u>and Adaptation in New England Program</u> maintains a <u>database of adaptation plans and activities</u>.
- Antioch University's <u>Center for Climate Preparedness and Community Resilience</u> supports climate change adaptation in New England through education, training, capacity building, and applied research.
- NACCHO's toolkit for local health departments guides communities initiating climate and health programs.
- <u>APHA Climate, Health, and Equity Guide</u> provides support for local health adaptation efforts.



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## **Ways to Reduce Environmental Exposures**

There are many ways community leaders and residents can minimize the impacts of environmental hazards to health.

- Reduce exposures to <u>radon</u> and <u>lead</u> hazards in homes and schools, by promoting radon testing in homes and schools and removing lead paint hazards from low-income housing built before 1978 and other places children spend time. Contact the Radon Unit (1-800-RADON95) and Childhood Lead Poisoning Prevention Program (1-800-532-9571) for testing information. If you drink <u>private well water</u>, regularly test your water for contaminants.
- Promote the use of environmentally preferable cleaning products and provide training and education on the use and disposal of household chemicals.
- Encourage retailers to offer affordable, locally grown foods and raise awareness of food safety, including washing fruits and vegetables before consuming and following <u>fish consumption advisories</u>.
- Use social media to share <u>air quality forecasts</u> and provide alternative spaces for physical activity to children and older adults when outdoor air pollution levels are high, especially for those who have asthma.
- Increase the community's access to green space and public transport; create walking and biking paths. Ensure cars are maintained so that they burn fuel efficiently.
- Establish smoke-free zones at public events and provide support for those who want to quit smoking. Resources for smoker are available at 1-800-QUITNOW.

#### **About the Data**

Data presented on this profile are collected by many different partners of the MA EPHT Program and are the most up-to-date data available for each topic.

**Demographics:** US Census Bureau, American Community Survey (ACS), 5-year estimates, 2017 - 2021 <a href="https://www.census.gov/programs-surveys/acs">https://www.census.gov/programs-surveys/acs</a>.

**Geography:** Office of Geographic Information, Commonwealth of Massachusetts, MassIT, 2005 <a href="http://www.mass.gov/anf/">http://www.mass.gov/anf/</a> research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/.

**Environmental Justice:** Office of Geographic Information, Commonwealth of Massachusetts, MassIT, 2010 <a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/cen2010ej.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/cen2010ej.html</a> and the Executive Office of Energy and Environmental Affairs <a href="https://www.mass.gov/environmental-justice">https://www.mass.gov/environmental-justice</a>.

Asthma prevalence: MDPH BCEH, 2017-2018 school year <a href="http://www.mass.gov/dph/asthma">http://www.mass.gov/dph/asthma</a>.

Hospitalization: Massachusetts Center for Health Information and Analysis (CHIA), 2020 http://www.chiamass.gov/.

**Childhood lead poisoning:** MDPH BCEH Childhood Lead Poisoning Prevention Program (CLPPP), 2021 <a href="http://www.mass.gov/dph/clppp">http://www.mass.gov/dph/clppp</a>; UMass Donahue Institute (UMDI), 2017 population estimates; and ACS 5-year estimates for housing, 2017 - 2021 <a href="https://www.census.gov/programs-surveys/acs">https://www.census.gov/programs-surveys/acs</a>.

**Air quality:** MassDEP Air Assessment Branch, 2013 - 2017 <a href="https://www.epa.gov/outdoor-air-quality-data/download-daily-daily-daily-daily-d

**Drinking water quality:** MassDEP Drinking Water Program, 2016 - 2020 <a href="https://eeaonline.eea.state.ma.us/Portal/#!/search/drinking-water">https://eeaonline.eea.state.ma.us/Portal/#!/search/drinking-water</a>.

Climate change: CDC BRACE <a href="http://www.cdc.gov/climateandhealth/brace.htm">http://www.cdc.gov/climateandhealth/brace.htm</a>; Days over 90°F and rainfall greater than 1-inch (combined projections from CMIP5 RCP4.5 and RCP8.5 scenarios). Accessed April 2018 from the Massachusetts Climate Change Clearinghouse <a href="http://resilientma.org/data/data">http://resilientma.org/data/data</a>.

#### **Contact Us**

Email: DPH-MA-EPHT@state.ma.us

Phone: 1-617-624-5757

Feedback Survey: <a href="http://mdph.checkboxonline.com/MEPHTN-Feedback.aspx">http://mdph.checkboxonline.com/MEPHTN-Feedback.aspx</a>

## Acknowledgements

This program was possible made by the U.S. Centers for Disease Control and Prevention grant for the Maintenance and Enhancement of the State and National Environmental Public Health Tracking Network.



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#### **Glossary**

**Age-adjusted rate** - A statistical method applied to the rates of a disease in a population that allows comparison among populations with different age distributions; also known as age-standardized rate.

**Census block group** - A geographic area used by the U.S. Census. Block groups are smaller than census tracts and usually hold between 600 to 3,000 people.

**Chronic disease** - A chronic disease is an illness that is persistent over time. According to the U.S. Centers for Disease Control and Prevention, chronic diseases are among the most prevalent, expensive and preventable diseases.

**Climate Adaptation** - An action that reduces climate hazards or vulnerabilities, such as improving storm drains, reducing socioeconomic disparities, reducing heat islands, or restoring coastal wetlands.

Climate Hazard - A climate change-related danger to health, such as flooding, excessive heat, or vector-borne disease.

**Community Water System (CWS)** - Any water system that provides water for human consumption through pipes or other constructed conveyances to at least 15 service connections or serves an average of at least 25 people for at least 60 days a year.

Deciliter (dL) - A metric measure of capacity that is 1/10th of a liter.

**Environmental hazard** - A substance or situation in the environment that might adversely affect human health. People can be exposed to physical, chemical, or biological toxins from various environmental sources through air, water, soil, and food.

**Environmental Justice (EJ)** - The fair treatment and meaningful involvement of all people regardless of race, national origin, color, or income when developing, implementing, and enforcing environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear more than its share of negative environmental impacts.

Estimated Confirmed Blood Lead Level - A confirmed blood lead test is either a single venous test of any value, or the second of two capillary tests drawn within 12 weeks of each other. Single capillary tests 5-<10  $\mu$ g/dL were not required to be confirmed prior to December 1, 2017. Until confirmatory testing of preliminary capillary results 5-<10  $\mu$ g/dL becomes standard practice in Massachusetts, as is now required by MA CLPPP, a calculation is employed to estimate the true number of children with blood lead levels  $\geq$ 5  $\mu$ g/dL. The estimated confirmed  $\geq$ 5  $\mu$ g/dL measure includes both confirmed tests and a proportion of unconfirmed tests estimated to be truly elevated at  $\geq$ 5  $\mu$ g/dL based on calculated capillary test reliability rates.

Median - The median is the number in a data set that separates the upper half of the data in the data set from the lower half.

Micrograms (μg) - Unit of measure for weight/mass equal to one-millionth of a gram that is used to measure the concentration of pollutants in the air.

National Ambient Air Quality Standards (NAAQS) - Standards established by U.S. EPA that apply to outdoor air throughout the country.

NS - Not shown due to small numbers.

**Ozone** - There are two types of ozone—"good" ozone and "bad" ground-level ozone. Good ozone occurs high in the atmosphere and forms a layer that deflects harmful ultraviolet (UV) rays, preventing them from reaching the Earth. Bad ozone is an odorless, colorless gas that is created by a chemical reaction and can affect health.

**Particulate matter** - "Particles" or "particulate matter" are terms used to describe the mixture of solid particles and liquid droplets in the atmosphere. The microscopic solid and liquid particles are of human and natural origin and can vary greatly in size and composition.

**Poverty** - Poverty status for a household is determined by the income and makeup of that household. A household is "below the poverty line" if the total household income falls below a value set by the federal government. For more information about how the government defines poverty, including tables of poverty thresholds, visit the U.S. Census Bureau's Poverty webpage (<a href="https://www.census.gov/hhes/www/poverty/index.html">https://www.census.gov/hhes/www/poverty/index.html</a>).

**PPM** - Parts per million; denotes 1 part per 1,000,000 parts. Used to measure the concentration of ozone in the air.

**Prevalence** - The proportion of individuals in a population having a disease or condition. Prevalence is a statistic that refers to the number of cases of a disease that are present in a particular population at a given time.

Sociodemographic - A term describing data relating to sociologic and demographic factors.

**Vulnerability** - Factors that make a person more likely to develop an illness, either by increasing exposure to a hazard or by predisposing them to develop an illness.