



**Public
Health
Council**

of the Upper Valley

Climate and Health Priority

Looking ahead, we can expect to see more change in temperature and precipitation. Available analyses suggest the following potential health impacts:

Temperature

Historic Trends:

- Average annual max. temperatures have warmed 1.1 to 2.6°F with the greatest warming in winter (1.6 to 3.4°F).
- The number of days with minimum temperatures less than 32°F has decreased.
- The length of the growing season is two to four weeks longer.

Projected Trends:

- Mid-century annual average temperatures may increase 3 to 5°F, and end-of-century annual average temperatures may increase 4 to 8°F.
- Average summer temperatures may be up to 11°F warmer (compared to the historical average from 1980 to 2009).
- The frequency of extreme heat days is projected to increase dramatically.
- Extreme cold temperatures are projected to occur less frequently, and extreme cold days will be warmer.

Likely Health Impacts:

- Longer growing seasons will affect individuals with allergies, asthma, and cardiovascular illnesses by increasing the duration and severity of pollen events.
- As the region's landscape changes with development increased air pollution (e.g. emissions from vehicles and commercial/industrial sources) will affect individuals with asthma and cardiovascular illnesses.
- Increased number and severity of hot days will result in increased incidents of heat mortality and morbidity.
- Northward expansion of insects due to regional warming increases exposure to vector borne diseases (e.g. Lyme disease, Eastern Equine Encephalitis) and other pathogens.

Precipitation

Historic Trends:

- Annual precipitation has increased 12 to 20 percent.
- Extreme precipitation events have increased across the region, which are evident from Federally declared disasters statewide over the last 20 years.

Projected Trends:

- Annual average precipitation is projected to increase 17 to 20 percent by end-of-century.
- Extreme weather events will likely occur more frequently and with more severity.
- The frequency of extreme precipitation events may increase significantly. Under the high emissions scenario, storm events that drop more than four inches of precipitation in forty-eight hours are projected to increase two- to three-fold by the end of the century.

Likely Health Impacts:

- Increased exposure to injury or death during or immediately after an extreme weather event.
- Increased likelihood of individual isolation in rural areas – lost access to health care and services.
- Water and food-borne diseases after an event.
- Increased respiratory illnesses due to poor indoor air quality because of post-flood mold or dust.
- Exposure to hazardous materials in flood sediment.
- Mental health impacts from stressors of forced relocation, personal loss of property, and/or post-traumatic stress disorder.