# Connecticut Climate Impacts and Costs

The climate crisis is accelerating in Connecticut, posing increased risks and burdening residents with the costs of adapting to a rapidly changing environment. Connecticut is experiencing changing precipitation patterns, an increase in severe storms, sea level rise, hotter temperatures, more extreme droughts, and even wildfires — all changes that will accelerate in the coming years.[1] Even if fossil fuel emissions and atmospheric concentrations of greenhouse gases eventually stabilize through climate action, the severity of these events will continue to rise as we adjust to the new reality of the climate crisis. It is now estimated that the average person in the U.S. born in 2024 will incur $500,000 in climate-related expenses in their lifetime.[2]

Below we outline the impacts of climate change Connecticut faces and some of the potential costs associated with these impacts. The impacts and costs outlined herein are not exhaustive and other costs may be incurred as a result of additional climate change impacts.

## Increased Precipitation and Severe Storms

While average annual precipitation has not changed much in Connecticut,[3] rainfall increasingly takes the form of extreme rain events and severe storms due to climate change. A warmer atmosphere can hold more water, making extreme precipitation more likely.[4] In the northeastern United States, the number of days with over 2 inches of rain has increased by 50% since the 1950s and the number of days with over 5 inches of rain has increased by over 100% since the 1950s.[5]

We are already seeing the effects of these extreme precipitation events. An August 2024 storm produced more than 14 inches of rain in a 24-hour period in Oxford, Connecticut,[6] and resulted in catastrophic flooding throughout the northeastern U.S. According to the National Oceanic and Atmospheric Administration (NOAA), in the historic climate before climate change, this storm would have been a vanishingly unlikely 1 in 1,000 year event. This storm led to massive

1 Environmental Protection Agency, *What Climate Change Means for Connecticut* (2016), https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-ct.pdf.

2 ICF Incorporated, L.L.C., *Cost of Climate Change to an American Born in 2024* (Consumer Reports, 2024), https://advocacy.consumerreports.org/wp-content/uploads/2024/04/ICF-CR-Cost-of-Climate-Change-Study.pdf.

3 "Climate Change in Connecticut," Climate Central, 2025, https://www.climatecentral.org/climate-local/25.

4 Ibid.

5 National Oceanic and Atmospheric Administration, "Extreme Rainfall Brings Catastrophic Flooding to the Northeast in August 2024," Climate.Gov, August 30, 2024, https://www.climate.gov/news-features/event-tracker/extreme-rainfall-brings-catastrophic-flooding-northeast-august-2024.

6 Ibid.

damage across Connecticut, including mudslides that washed out roads, stormwater that flooded streets,[7] and the destruction of 80 businesses and 19 homes.[8] The event caused an estimated $300 million in damages.[9]

Extreme precipitation causing flooding has also wreaked havoc on Connecticut's $4 billion agricultural industry. In just the first two weeks of July 2023, Connecticut was hit with 425% of its normal rainfall for the month. This caused major flooding and damage to farms and crops, leading to $21 million in losses.[10]

According to NOAA, there have been 44 billion-dollar flooding events and 230 severe storms since the 1980s (inflation adjusted). The number of billion-dollar floods has risen since the '80s, from an average of 0.6 events per year, to 2.3 events per year in the last three years. Similarly, the number of billion-dollar storms has risen since the '80s, which had an average of 1.4 events per year, to 16.0 events per year over the last three years (inflation adjusted). These billion-dollar flooding events cost an average of $4.6 billion per event and severe storms cost an average of $2.4 billion per event.[11] A recent analysis by Swiss Re, a reinsurance company, found that severe convective storms (SCS) in the U.S. incurred $50 billion in insured losses during 2025, which is the third costliest year for SCS losses in the U.S. after 2023 and 2024.[12]

## Potential Costs Related to Increased Precipitation and Severe Storms

**Structure and Infrastructure Projects**

- Remove, relocate, acquire, or demolish structures to minimize future flood losses.
- Install, reroute, increase capacity, or implement a routine cleaning and repairing plan of the storm drainage system.
- Add extra culverts or increase dimensions of existing culverts as needed.

7 Ibid.

8 Ken Dixon, "CT Asks for More than $300 Million in Disaster Relief Following Last Month's Historic Flooding," *CT Insider*, September 9, 2024, https://www.ctinsider.com/politics/article/ct-300-million-flood-disaster-relief-lamont-19752684.php.

9 Ibid.

10 John Henry Smith, "For CT Farmers, Changes in the Climate, and in the Agriculture Industry, Pose New Challenges," News, *Connecticut Public*, October 18, 2023, https://www.ctpublic.org/news/2023-10-18/for-ct-farmers-changes-in-the-climate-and-in-the-agriculture-industry-pose-new-challenges.

11 Climate Central, "U.S. Billion-Dollar Weather and Climate Disasters," Climate Central, accessed January 9, 2026, https://www.climatecentral.org/climate-services/billion-dollar-disasters; *NOAA National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters* (National Atmospheric and Oceanic Administration, 2023), https://doi.org/10.25921/stkw-7w73.

12 Swiss Re, "2025 Marks Sixth Year Insured Natural Catastrophe Losses Exceed USD 100 Billion, Finds Swiss Re Institute," Swiss Re, December 16, 2025, https://www.swissre.com/press-release/2025-marks-sixth-year-insured-natural-catastrophe-losses-exceed-USD-100-billion-finds-Swiss-Re-Institute/f710c271-58c8-4c48-9004-05203634d1e0.

- Install detention or retention basins, relief drains, spillways, drain widening/dredging or rerouting, etc.
- Inspect and maintain drainage systems and flood control structures (dams, levees, etc.).
- Install flood control structures in rural areas.
- Inspect bridges in order to identify and/or implement repairs or retrofits, or clean under low bridges.
- Stabilize bridges against scour by hardening abutments and piers.
- Resurface roads with more permeable pavement and concrete or plan to repair roads more frequently.
- Elevate roads and bridges above the base flood elevation (BFE)[13] to maintain dry access.
- Elevate structures above the BFE, or relocate utilities, water heaters, etc. above the BFE.
- Floodproof inside of municipal buildings, for example by installing check valves, sump pumps, or backflow prevention devices.
- Floodproof wastewater and water treatment facilities located in flood hazard areas.
- Protect emergency operations by requiring or moving all emergency operation centers, police stations, and fire department facilities outside of flood-prone areas.
- Protect critical and emergency facilities by requiring all critical facilities be built one foot above the 500-year flood elevation (to meet requirements of FEMA Executive Order 11988).[14]
- Protect critical and emergency facilities from floods using any other technique, for example, raising components above the BFE, installing pumping systems or back-up generators for pumping, building dikes or stabilizing banks.
- Construct floodwalls, small berms, revetments, bioengineered bank stabilization, or other small structural mitigants.
- Implement severe storm mitigation strategies for the future like burying utility lines underground.

**Natural Flood Mitigation**

- Protect and enhance natural floodplain mitigation features (such as wetlands, dunes, and vegetative buffers) to help prevent flooding in other areas.
- Install green stormwater drainage infrastructure (such as bioretention, porous pavement, bioinfiltration, and bioswale construction).

13 Base flood elevation (BFE), as defined by FEMA, is "the elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year."

14 Federal Emergency Management Agency, "Executive Order 11988: Floodplain Management," https://www.fema.gov/emergency-managers/practitioners/environmental-historic.

**Local Planning and Regulation**

- Update flood risk maps and flood zones.
- Develop a floodplain management plan.
- Adopt a stormwater management or drainage plan.
- Adopt, apply, and enforce building codes to ensure buildings can withstand flooding.
- Obtain easements to use privately-owned land for temporary water retention and drainage.
- Join or improve compliance with the National Flood Insurance Program (NFIP).[15]
- Preserve floodplains as open space using any of several land use planning tools: develop a plan that targets hazard areas for acquisition, reuse, and preservation, a land banking program, use of transfer of development rights to keep floodplains vacant, easements to prevent development, or acquiring properties in the floodplain and turning them into open space.

**Education and Awareness Programs**

- Increase public outreach to encourage flood insurance purchase; educate residents in flood safety, flood mitigation, technical assistance availability, funding sources, and best practices.
- Locate new utilities and critical facilities outside of susceptible areas.
- Identify, map, or track erosion hazard areas.

**Public Health**

- Treat an increase in hospitalizations related to water-borne illness.

**Individual Costs**

- Floodproof inside of personal homes, for example by installing check valves, sump pumps, or backflow prevention devices.
- Implement green stormwater drainage infrastructure in yards, including increasing green space or installing porous sidewalks.
- Obtain flood insurance, if applicable.
- Pay for increased home and auto insurance premiums due to more severe weather.
- Increased costs for medical treatment related to water-borne illness or injury during an extreme storm event.
- Temporary relocation expenses due to flooding or severe weather.

15 U.S. Federal Emergency Management Agency (FEMA), The National Flood Insurance Program (NFIP), at www.fema.gov/national-flood-insurance-program Policy Information by State (https://nfipservices.floodsmart.gov//reports-flood-insurance-data), accessed March 31, 2024; Connecticut has over 31,000 active NFIP policies in place, which covers $8.6 billion.

## Rising Sea Levels, Coastal Flooding, and Coastal Erosion

Globally, sea levels are rising,[16] as glaciers melt and ocean waters rise due to thermal expansion.[17] Over the past 100 years, global sea level has risen on average between 6 and 8 inches.[18] In Connecticut, sea level has risen at a faster rate of about 10-12 inches per century. Sea level is expected to rise another 1 to 8 feet by 2100.[19] With over 600 miles of tidal coastline,[20] Connecticut residents are already feeling the effects of sea level rise. Connecticut is expected to lose 24,000 acres of land in the next 50 years.[21] About 61% of the state's population is threatened by flooding induced by sea level rise. The Mystic Seaport Museum, for example, located in southeastern Connecticut, is being forced to contend with more frequent flooding due to storms, high tides, and heavy winds. The museum is planning adaptation efforts to protect more than 150 of its structures from these climate-related hazards, but the costs of implementing these measures are potentially prohibitive at an estimated tens of millions of dollars.[22]

One impact that is already costing communities millions is the increase in the number of days coastal cities in Connecticut experience high tide flooding. According to the NOAA's high tide flooding outlook, the number of high tide flooding days in New London, CT, has been increasing since 2000. In 2000, the city experienced about two high tide days per decade, rising only slightly to about four days per decade in 2020. However, by 2050, the city is projected to experience about 65 high tide flooding days per decade under an intermediate sea level rise scenario.[23] According to a report by the Center for Climate Integrity, Connecticut will face $5.3 billion in costs to build 394 miles of seawalls to protect vulnerable buildings, homes, roads, rails and other infrastructure by 2040.[24]

16 B. Ekwurzel et al., "The Rise in Global Atmospheric CO2, Surface Temperature, and Sea Level from Emissions Traced to Major Carbon Producers," *Climatic Change* 144, no. 4 (2017): 579–90, https://doi.org/10.1007/s10584-017-1978-0.

17 Kenneth G. Miller et al., "A Geological Perspective on Sea-Level Rise and Its Impacts along the U.S. Mid-Atlantic Coast," *Earth's Future* 1, no. 1 (2013): 3–18, https://doi.org/10.1002/2013EF000135.

18 NASA, "How Long Have Sea Levels Been Rising? How Does Recent Sea-Level Rise Compare to That over the Previous Centuries?," NASA Sea Level Change Portal, accessed March 31, 2025, https://sealevel.nasa.gov/faq/13/how-long-have-sea-levels-been-rising-how-does-recent-sea-level-rise-compare-to-that-over-the-previous.

19 K. E. Kunkel, *State Climate Summaries for the United States 2022. NOAA Technical Report NESDIS 150.* (NOAA NESDIS, 2022), https://statesummaries.ncics.org/chapter/ct.

20 "Arriving by Water — Connecticut's Port Towns," 2025, https://ctvisit.com/articles/arriving-water-connecticuts-port-towns.

21 Tricia Ennis, "Sunk: Connecticut's Growing Flood Risk," *Inside Investigator*, February 19, 2023, https://insideinvestigator.org/sunk-connecticuts-growing-flood-risk/.

22 Annabel Keenan, "A Seaport Museum Faces an Unlikely Threat: The Sea Itself," Arts, *The New York Times*, April 22, 2025, https://www.nytimes.com/2025/04/22/arts/design/mystic-seaport-museum-sea-level-rise.html.

23 National Oceanic and Atmospheric Administration, "Annual High Tide Flooding Outlook," 2025, https://tidesandcurrents.noaa.gov/high-tide-flooding/annual-outlook.html?station=8461490#decadal.

24 Sverre LeRoy and Richard Wiles, *High Tide Tax: The Price to Protect Coastal Communities from Rising Seas* (Center for Climate Integrity, 2019), https://www.climatecosts2040.org/costs/connecticut.

As the report notes, these rising tides are unavoidable and will routinely flood these assets if measures are not taken to protect them.

Not only does sea level rise increase high tide flooding, it also increases the height of storm surges, leading to more costly storm recovery and more damage from associated high tide flooding.[25] More intense hurricanes that tend to stall over land and drop extreme amounts of rainfall have been occurring in recent years, which has been attributed to climate change.[26] Not only does an increase in the probability of a strong hurricane threaten Connecticut communities, but sea level rise compounds the disastrous impacts. In 2012, Hurricane Sandy hit the east coast causing over $60 billion in total damage (from repair, response, and restoration) and $360 million in damage in Connecticut. A recent study estimated that about $8 billion of the total damage would not have occurred without anthropogenic sea level rise.[27] In the end, Connecticut ended up providing more than $5 billion in community grants to help rebuild from Sandy.[28]

New England also has a $20 billion fishing industry which is severely impacted by climate change.[29] Increased ocean temperatures, ocean acidification, and marine heatwaves are harming local fisheries by causing die offs to different species.[30] In 1990, Connecticut's lobster industry produced 3.7 million pounds of lobster a year and raked in $12 million. By 2014, the lobster supply was essentially wiped out, reduced to about 127,000 pounds, which only generated about $600,000 in revenue.[31]

25 Ibid.

26 Zhang et al., "Attributing Intensification of Precipitation Extremes to Human Influence"; Reed, Wehner, and Zarzycki, "Attribution of 2020 Hurricane Season Extreme Rainfall to Human-Induced Climate Change"; Welch, "How Climate Change Likely Strengthened Recent Hurricanes." https://onlinelibrary.wiley.com/doi/abs/10.1002/grl.51010; https://www.nature.com/articles/s41467-022-29379-1; https://www.nationalgeographic.com/science/article/hurricane-harvey-climate-change-global-warming-weather.

27 Benjamin H. Strauss et al., "Economic Damages from Hurricane Sandy Attributable to Sea Level Rise Caused by Anthropogenic Climate Change," *Nature Communications* 12, no. 1 (2021): 1, https://doi.org/10.1038/s41467-021-22838-1.

28 Ennis, "Sunk."

29 "In New England, Climate Change Is Moving Fast. The Fishing Industry Is Not," *Connecticut Public*, directed by Barbara Moran, January 15, 2025, https://www.ctpublic.org/news/2025-01-15/new-england-climate-change-fishing-industry.

30 "In New England, Climate Change Is Moving Fast. The Fishing Industry Is Not"; U.S. Department of Agriculture, "Climate Change and Aquaculture in Connecticut's Long Island Sound," USDA Climate Hubs, https://www.climatehubs.usda.gov/hubs/northeast/topic/climate-change-and-aquaculture-connecticuts-long-island-sound.

31 Jan Ellen Spiegel, "Beneath the Waves, Climate Change Puts Marine Life on the Move," *CT Mirror*, August 29, 2016, http://ctmirror.org/2016/08/29/beneath-the-waves-climate-change-puts-marine-life-on-the-move/.

## Potential Costs Related to Rising Sea Levels, Coastal Flooding, and Coastal Erosion

**Structure and Infrastructure Projects**

- Strengthen stormwater and runoff infrastructure to accommodate increased flood severity, duration, and frequency
- Stabilize vulnerable cliffs and shorelines utilizing slope grading, vegetation management, and bioengineering approaches.
- Refer to "Structure and Infrastructure Projects" from "Potential Costs Related to Changing Precipitation and Severe Storms," as they also apply here.

**Coastal Protection**

- Dredging and sand deposition to maintain public beaches and a shore buffer to people and infrastructure.
- Protect critical infrastructure using techniques like beach nourishment, jetties, and seawalls.
- Restore natural wetland areas.

**Local Planning and Regulation**

- Identify, map, and track coastal erosion and flood hazards.
- Develop and enforce a coastal zone management plan.
- Develop site and building standards.

**Education and Awareness Programs**

- Increase awareness by disclosing location of high-risk areas to current and future property owners; offer mitigation technique information.
- Locate new utilities and critical facilities outside susceptible areas.
- Identify, map, or track erosion hazard areas.

**Individual Costs**

- Sell home and/or move if current residence is susceptible to sea level rise risks, like losing home to cliff failure.
- Obtain flood insurance, if applicable.
- Potential loss of home insurance in high-risk areas.

## Hotter Temperatures

Connecticut has warmed about 3.5°F since the start of the 20th century (Figure 1).[32] If carbon emissions are not curtailed, and to date they have not been, by 2100, temperatures in Connecticut are predicted to increase up to almost 15°F relative to the average temperature from 1901-1960.[33]

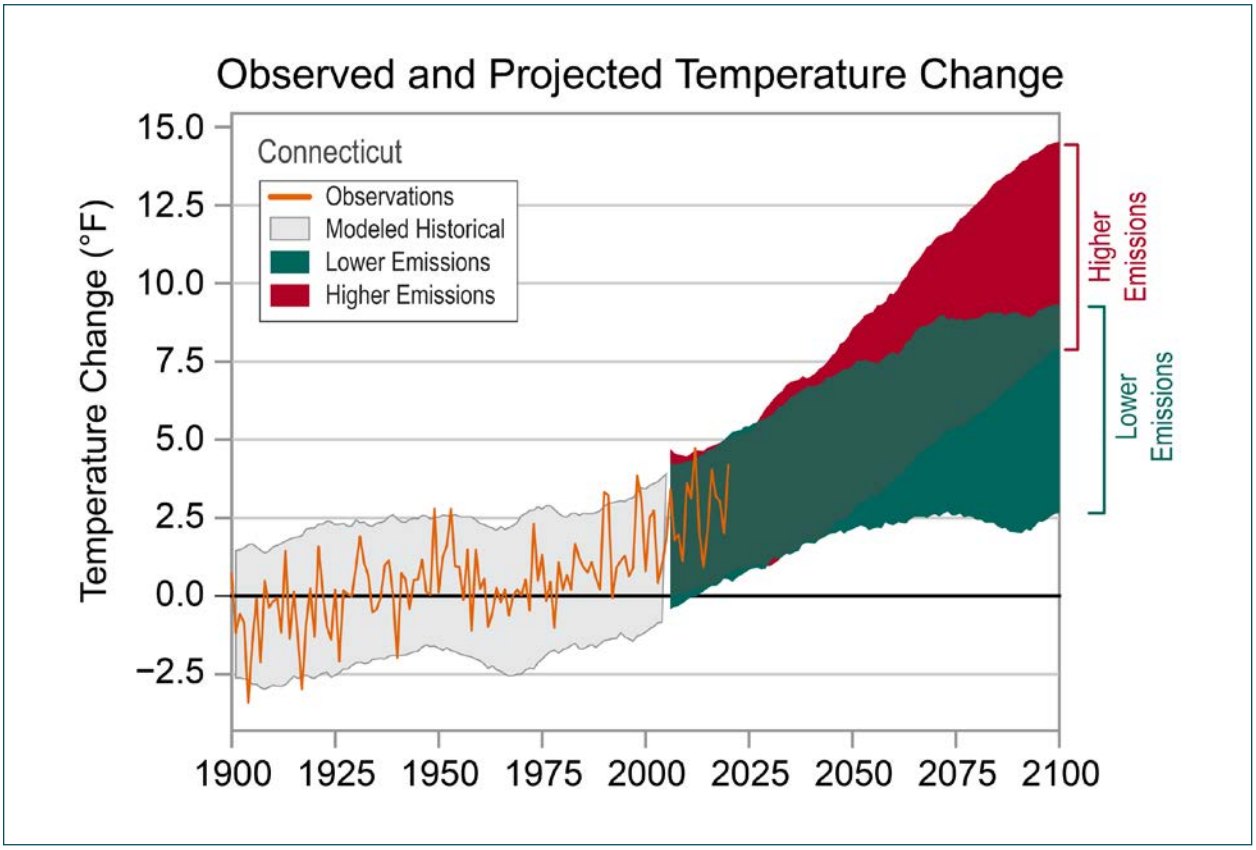


**Figure 1:** Taken from NOAA National Center for Environmental Information state climate summary report[34] showing the historic increase in temperature in Connecticut (orange line) and the projected increase in temperature through 2100 using a lower (teal) and higher (red) emissions scenario.

32 Kunkel, *State Climate Summaries for the United States 2022. NOAA Technical Report NESDIS 150.*

33 Ibid.

34 Ibid.

Perhaps more important than increases in average temperatures, days with extreme temperatures have increased in Connecticut and this trend will only continue to get worse. By 2050, the number of days over 90°F is expected to rise from about five days per year in 1895 to 25 days per year, a 400% increase.[35] In that same timeframe, the number of heat wave days, defined as at least six consecutive days with temperatures above the historical 90th percentile temperature, are expected to rise from four to 48 per year, a 1,100% increase.[36]

In 2024, the hottest year to date, Connecticut saw an increase in emergency room visits related to heat, up to an average of 84 visits per day during some of the hottest days that summer.[37] That summer, heat emergencies were declared across the northeast where heat indexes reached extreme caution levels across most of Connecticut.[38] In June 2025, at least one person died of heat illness in Connecticut during a heatwave.[39] According to the Center for Climate Integrity, Connecticut public schools faced around $35 million in new cooling costs between 1970 and 2025 to keep classroom temperatures below levels that negatively affect learning, impacting almost 8,000 students.[40]

## Potential Costs Related to Hotter Temperatures

**Structure and Infrastructure Projects**

- Energy efficiency retrofits in public and private buildings and housing, including costs for the design and development of standards.
- Increased cooling costs for all public buildings, including green roofs or cool roofing systems on public buildings and new air conditioning installation or upgrade costs for schools.
- Increased road damage due to more frequent extreme heat events.
- Plan for and increase capacity for increased energy demands due to both increased daytime and nighttime temperature.
- Increase high-albedo surfaces on buildings, roads, parking lots, or where feasible.

35 Adriana Ballinger et al., *An Extreme Heat Toolkit for Connecticut Municipalities* (Yale School of Public Health: Center on Climate Change and Health, 2022), https://resilientconnecticut.media.uconn.edu/wp-content/uploads/sites/3830/2023/08/FINAL-8.15.22-An-Extreme-Heat-Toolkit-for-Connecticut-Municipalities_No_Watermarks.pdf.

36 Ibid.

37 Katy Golvala, "How Extreme Heat Harms CT Residents: Impacts Are Far-Reaching," *CT Mirror*, September 19, 2024, https://ctmirror.org/2024/09/19/ct-extreme-heat-impacts-emergency-room/.

38 Jenna Russell, "Emergencies Declared Across the Northeast as Heat Index Hits Triple Digits," Weather, *The New York Times*, June 18, 2024, https://www.nytimes.com/live/2024/06/18/weather/heat-wave-news.

39 Peter Yankowski, "Historic Connecticut Heat Wave Caused 1 Death, 3 Other under Investigation, Offical Says," *CTInsider*, July 1, 2025, https://www.ctinsider.com/projects/weather/weather-watch-table/.

40 Center for Climate Integrity, "Hotter Days, Higher Costs: The Cooling Crisis in America's Classrooms." Center for Climate Integrity, 2021. https://coolingcrisis.org.

**Public Health**

- Build and manage more cooling centers, including staffing and tracking of high-risk individuals.
- Increased demand for publicly financed air conditioning targeted to low-income families and public housing.
- Control the increase of vector borne illness through education and physical and chemical controls for ticks and mosquitos.
- Treat victims of vector borne illness, including West Nile Virus.
- Increase in asthma attacks requiring hospitalization (resulting from increased heat and ground level ozone, and the increase in airborne allergens).
- Reduce the urban heat island effect by planting trees.
- Protect drinking water supplies from harmful algal blooms.

**Individual Costs**

- Energy efficiency retrofits in home, including installing or upgrading air conditioning systems, installing cool roofing and/or pavement, and increasing shade cover around home.
- Increased home cooling costs.
- Medical bills related to the treatment of vector borne illness, including West Nile Virus.
- Medical bills related to asthma attacks (resulting from increased heat and ground level ozone, and the increase in airborne allergens).

## Extreme Drought and Wildfires

Historically, the northeast experiences "flash" droughts, which typically last from two to six months.[41] Droughts have many impacts in Connecticut, such as increased wildfire risk, agricultural losses, and impacts to water.[42] According to the Connecticut state drought coordinator, climate change is increasing the frequency of droughts in the state[43] and, currently, much of Connecticut is "abnormally dry."[44] During periods of drought, Connecticut residents are encouraged to conserve water to protect public health and water quality, and to make sure there is enough water for fire suppression, if needed.[45] In 2022, a severe drought significantly impacted farmers across the state, forcing them to buy extra water and change their harvesting

41 National Oceanic and Atmospheric Administration, "Connecticut | Drought.Gov," 2025, https://www.drought.gov/states/connecticut.

42 Ibid.

43 Chris Polansky, "Parts of CT Remain in 'Emerging Drought' Status. Here's What It Means," News, *Connecticut Public*, October 17, 2025, https://www.ctpublic.org/news/2025-10-17/parts-of-ct-remain-in-emerging-drought-status-heres-what-it-means.

44 Department of Agriculture, "Drought Monitor," State of Connecticut, 2025, https://portal.ct.gov/doag/adarc/adarc/drought-monitor.

45 Polansky, "Parts of CT Remain in 'Emerging Drought' Status. Here's What It Means"; "Connecticut Water Urges Voluntary Water Conservation," Connecticut Water, 2025, https://www.ctwater.com/community-commitment/community-news/connecticut-water-urges-voluntary-water-conservation/.

plans.[46] Drought also increases the risk of illness to residents by increasing the concentration of pollutants in local water supplies.[47] During the 2022 drought, a doctor in Connecticut saw an increase in healthy patients with sinus infections, walking pneumonia, and e coli sepsis, which are all linked to "drought concentrating bacteria and viruses" in local drinking water supplies.[48]

During extreme heat and periods of drought, Connecticut is also susceptible to wildfires. Smoke from wildfires can decrease air quality far away from the source. This was seen in the summer of 2023, where Canadian wildfire smoke engulfed the United States, impacting air quality in Connecticut by raising PM2.5 and ozone concentrations to unhealthy levels.[49] Despite heavy rains in July 2024, Connecticut saw over 200 brush fires in October and November.[50] One specific fire during that time occurred in Berlin, CT, and required out-of-state crews and helicopter water drops to contain it, costing between $1 million and $5 million.[51] The Environmental Protection Agency estimates the cost nationwide to treat long-term health impacts from exposures to wildfire and wildfire-generated air pollution is $450 billion.[52] The same analysis estimated that short-term exposure (2008-2012) led to premature death and hospitalizations totaling $63 billion.[53] Wildfires are also costly to fight and control. Fire suppression — which includes expenditure on aviation, vehicles, and fire crew — cost the U.S. $3.7 billion in 2022.[54]

46 Jennifer Ahrens, "CT Drought Is Hitting Farmers' Pocketbooks, Agriculture Chief Says," *CT Mirror*, August 16, 2022, https://ctmirror.org/2022/08/16/ct-drought-farming-crops-agriculture-irrigation-rain-new-england-farms-crops/.

47 Zepei Tang and Yang Deng, "Climate Change-Driven Contaminants in Water," *Nature Sustainability*, Nature Publishing Group, January 6, 2026, 1–3, https://doi.org/10.1038/s41893-025-01747-x; Benjamen Wright et al., "Managing Water Quality Impacts from Drought on Drinking Water Supplies," *Journal of Water Supply: Research and Technology-Aqua* 63, no. 3 (2013): 179–88, https://doi.org/10.2166/aqua.2013.123; United Nations, "Water – at the Center of the Climate Crisis," United Nations, United Nations, accessed January 9, 2026, https://www.un.org/en/climatechange/science/climate-issues/water.

48 Jennifer Cuevas, "Could Connecticut's Drought Impact Your Health? Doctor Provides Tips amid Dry Conditions," *NBC Connecticut*, November 14, 2024, https://www.nbcconnecticut.com/news/local/could-connecticuts-drought-impact-your-health-doctor-provides-tips-amid-dry-conditions/3434075/.

49 Connecticut Department of Energy and Environmental Protection, "2023 Exceptional Events for Ozone," Connecticut's Official State Website, July 23, 2024, https://portal.ct.gov/deep/air/planning/ozone/2023-exceptional-events.

50 Emily Wilson and Christopher Renshaw, *Wildfire in Connecticut* (2025), https://storymaps.arcgis.com/stories/5a64920f7b1c4f8e8193415fdbf93b0e.

51 Staff Writers, "How Does Connecticut's Weather Compare to 'Normal'? Check the Charts," *CTInsider*, n.d., accessed January 6, 2026, https://www.ctinsider.com/projects/weather/connecticut-heat-tracker/.

52 Fann et al., "The Health Impacts and Economic Value of Wildland Fire Episodes in the U.S." https://www.sciencedirect.com/science/article/abs/pii/S0048969717320223?via%3Dihub

53 Ibid.

54 Jennifer L, "Wildfires Cost Over $148B and 30% of Emissions," Carbon Credits, January 30, 2023, https://carboncredits.com/wildfires-cost-emissions/.

## Potential Costs Related to Extreme Drought

### Water and Infrastructure Management

- Public health costs related to increased exposure to water-borne illnesses.[55]
- Replace old pipelines that have water leak issues.[56]
- Use climate science to update water treatment, wastewater treatment, and other energy infrastructure.[57]
- "Climate proof water treatment and distribution systems and improved early-warning systems."[58]
- Reinforce roads, bridges, and buildings to withstand prolonged drought.
- "Expand the use of treated wastewater for irrigation and non-potable uses."[59]
- "Upgrade water storage and conveyance systems to reduce losses and improve efficiency."[60]
- "Implement managed aquifer recharge projects to replenish depleted groundwater resources."[61]
- "Invest in new technologies and farming practices that improve water use efficiency and crop resilience."[62]

### Wildfires

- Increase fire suppression, including staffing and aviation.
- Rebuild or relocate damaged properties and public infrastructure, such as homes and utility lines.
- Relocate public infrastructure where necessary.
- Update power lines to withstand dust from wildfires.
- Implement fire mitigation strategies for the future like burying utility lines underground.
- Plan for and disburse community aid after wildfires.
- Implement fire detection strategies, like solar-powered sensors.[63]
- Rehabilitate the landscape post-fire to reduce the risk of erosion and invasive species and mitigate future fire risk.

55 Ibid.

56 *Drought and Infrastructure - A Planning Guide* (Cybersecurity and Infrastructure Security Agency with the National Drought Resilience Partnership, 2021), https://www.cisa.gov/sites/default/files/publications/Drought_and_Infrastructure_A_Planning_Guide_508c.pdf.

57 Ibid.

58 Jan C. Semenza and Albert I. Ko, "Waterborne Diseases That Are Sensitive to Climate Variability and Climate Change," *New England Journal of Medicine* 389, no. 23 (2023): 2175–87, https://doi.org/10.1056/NEJMra2300794.

59 farmonaut, *California's Water Dilemma: Sierra Nevada Snowpack Levels and Central Valley Farming Future*, Usa, January 3, 2025, https://farmonaut.com/usa/californias-water-dilemma-sierra-nevada-snowpack-levels-and-central-valley-farming-future/.

60 Ibid.

61 Ibid.

62 Ibid.

63 L, "Wildfires Cost Over $148B and 30% of Emissions."

- Increased hospitalization costs for asthma attacks and other chronic health conditions (resulting from decreased air quality due to wildfire smoke).

**Local Planning and Regulation**

- Organize meetings to create water scarcity management plans.[64]
- Develop tools for monitoring ground and surface water resources for public use.[65]
- "Develop more flexible and responsive water allocation policies that adapt to changing climate conditions."[66]

**Education and Awareness Programs**

- Public education, outreach, and awareness campaigns about water conservation.[67]
- Increase public outreach to encourage wildfire risk management; educate residents in wildfire safety, technical assistance availability, funding sources, and best practices.

**Individual Costs**

- Individual purchase of water during water scarce times.[68]
- Replace old home pipelines that have water leak issues.
- Retrofits to homes to make them more fire resistant, including removing fuel from around home, installing fire-resistant siding and roofing, and removing large wood structures like decks and fencing.
- Medical bills related to the treatment of asthma attacks and other chronic health conditions, resulting from decreased air quality due to wildfire smoke.
- Sell home and/or move if the current residence is susceptible to wildfire, like living along the wildland-urban interface.
- Obtain fire insurance if applicable.
- Pay for increased home and auto insurance premiums due to more severe and frequent wildfires.
- Potential loss of home insurance in high-risk areas.
- Temporary relocation expenses due to wildfire.

64 *Drought and Infrastructure - A Planning Guide*.

65 Ibid.

66 farmonaut, *California's Water Dilemma*.

67 Ibid.

68 Zoë Roller et al., *Closing the Water Access Gap in the United States: A National Action Plan* (Dig Deep and US Water Alliance, 2022), https://static1.squarespace.com/static/5e80f1a64ed7dc3408525fb9/t/6092ddcc499e1b6a6a07ba3a/1620237782228/Dig-Deep_Closing-the-Water-Access-Gap-in-the-United-States_DIGITAL_compressed.pdf.

## Other Extreme Weather

Other extreme weather includes: tornados, windstorms, hurricanes, and more.

### Potential Costs Related to Other Extreme Weather

**Structure and Infrastructure Projects**

- Increased costs of storm recovery and clean-up.
- Protect power lines through pruning trees.
- Bury overhead power lines or install systems that allow small sections to fail rather than the complete system.

**Other Public Health Threats**

Other plausible impacts from climate change that would incur public health costs are increased allergen levels, food- and water-borne infections, and zoonotic diseases.[69]

69 Carmen Milanes et al., *Indicators of Climate Change in California*, 4th edition (Office of Environmental Health Hazard Assessment, 2022), https://oehha.ca.gov/media/downloads/climate-change/document/2022caindicatorsreport.pdf.