

# Climate and Health: A breakdown of current projects happening in Rhode Island and New England

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prepared for the RI Study Commission on Climate Change Impacts &  
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# Introduction

Research points to climate change being a leading cause of increased health related incidents among individuals.

**What programs are being established in Rhode Island to educate and combat climate change related health issues?**

**What are other New England states doing to handle climate related outcomes?**



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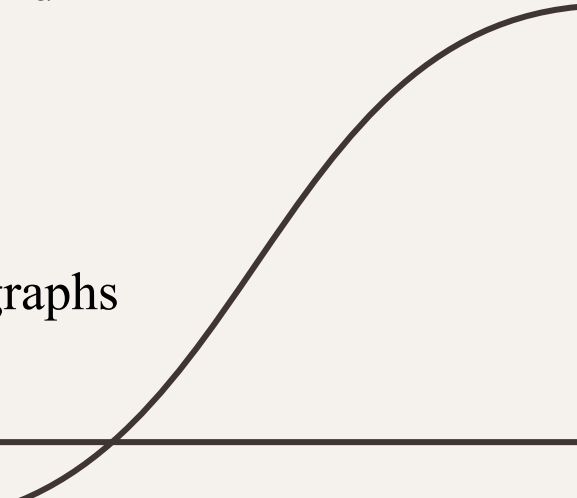
# Previous RI climate & health initiatives

2015 - RIDOH completes 'Climate Change and Health Resilience Report'

2017 - RIDOH publishes 'Climate Change and Health Adaptation Plan' (1page?)

2025 - RIDOH publishes 'Climate Change Explorer' web interface; browsable data & graphs

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# Climate Related Health Concerns

## Heat

- ❑ A rise in daily temps from 75°F to 85°F increased EMS visits by 24% (2005–2012).
- ❑ Heat stresses the body, causing life-threatening heatstroke, esp in very young, very old, athletes, and outdoor workers.

## Air quality

- ❑ Climate change increasing incidence of wildfires across North America & in New England → respiratory hazard

## Vector-borne Disease

- ❑ Warmer, longer seasons increase tick and mosquito activity and spread.

## Flooding

- ❑ Coastal and inland flooding can mobilize hazardous contaminants, increase exposure to mold

## Asthma

- ❑ Climate change (heat, storms, air pollution) increases asthma flare risk.
- ❑ RI adult asthma rate: 17.4% vs. 14.6% nationally, with low-income adults 40% more likely to have asthma.
- ❑ 703 child asthma hospitalizations in RI (2019–2023).

# Current RI Health Programs (Asthma)

**Asthma Control Program (RIDOH):** Reduces asthma burden and disparities in Rhode Island.

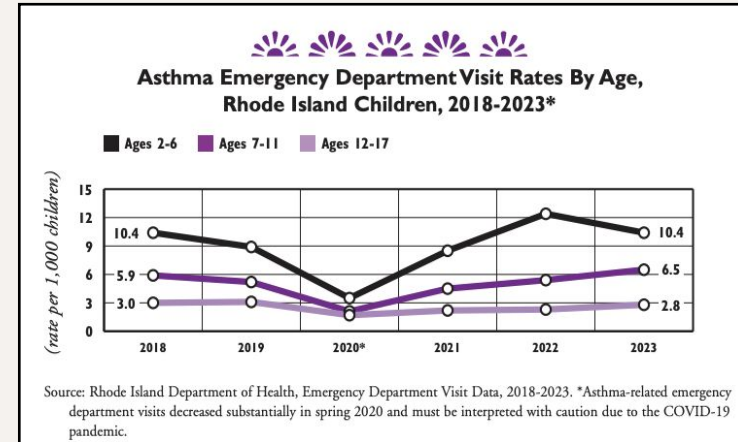
- ❑ *Fresh Air Providence:* Monitors air quality in high-asthma areas.
- ❑ *Home Visiting Program:* Helps manage home triggers, medication use, and housing rights.
- ❑ *Draw a Breath:* Supports asthma management, especially for families with children.

**Climate Justice Plan:** State law to cut emissions and promote equity (updated every 5 years).

- ❑ Invests in green infrastructure in low-income areas.
- ❑ Focuses on clean air, safe water, and less pollution in high-risk communities.

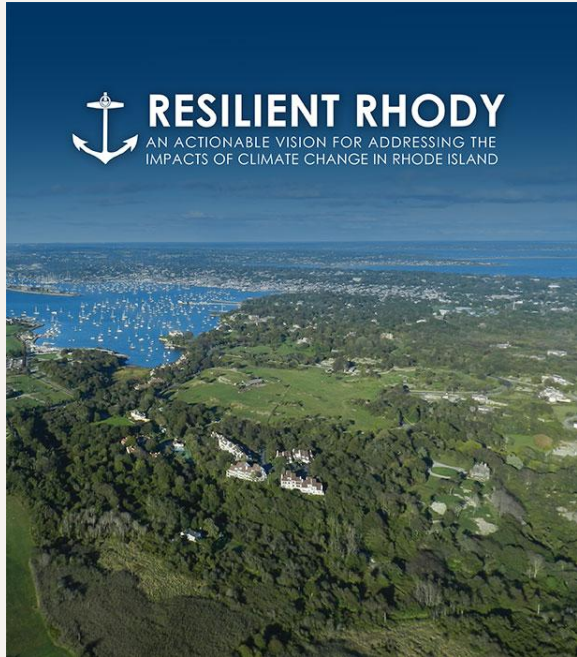
**Breathe Providence:** Network of low-cost air monitors in Providence (Brown University) measuring various pollutants, and weather conditions.

- ❑ *Science*
- ❑ *Community*
- ❑ *Policy*



<https://rikidscount.org/wp-content/uploads/2025/04/ChildrenwithAsthma.pdf>

# Current RI Health Programs (Air quality)



<https://www.riib.org/solutions/initiatives/>

**Indoor Air Quality Bill (H5597 – RI):** Mandatory uniform air quality standards in schools

- ❑ RIDOH sets air quality standards; RIDE enforces inspections.
- ❑ Requires testing for humidity, CO<sub>2</sub>, and particulate matter.

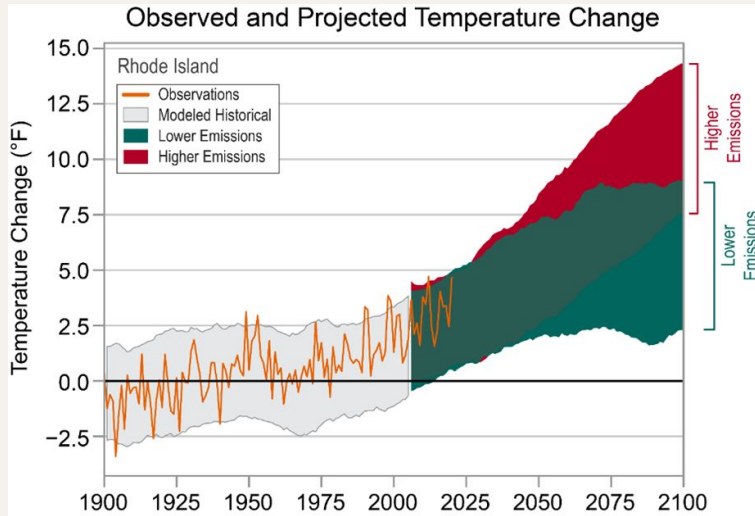
**Climate Change & Health Program (RIDOH – Resilient Rhody):** Prepares for health impacts of climate change.

- ❑ Addresses risks like heat, flooding, poor air quality, and vector-borne diseases.
- ❑ Partners with communities to support resilience, equity, and health-focused adaptation.

**Breathe Providence:** Network of 20+ low-cost air quality monitors in Providence (Brown University) measuring various pollutants, and weather conditions.

- ❑ *Science, Community engagement, Data-driven policy*

# Current RI Health Program (Heat)



<https://sustainability.brown.edu/resiliency/extreme-heat>

**CHAIRS-C:** A new NIH-funded Brown University center focused on studying climate-related health impacts and developing solutions to support healthy aging.

- ❑ Promotes collaboration between researchers and community partners to advance climate and aging research and inform effective policies and practices.
- ❑ Uses past heat data to determine chronic illnesses that are caused by excessive heat and how people can prevent/manage them

**UrbanHeatPVD (in dev't):** Developing capacity to map urban heat islands in Providence, work with city and state officials to develop mitigation plans.

- ❑ Installing dozens of real-time heat & humidity sensors around Providence and the state
- ❑ Highlights neighborhoods with extreme temperatures and poor overnight cooling.
- ❑ Informs planning efforts like expanding tree canopy, siting cooling centers, to mitigate risk of rising urban heat.

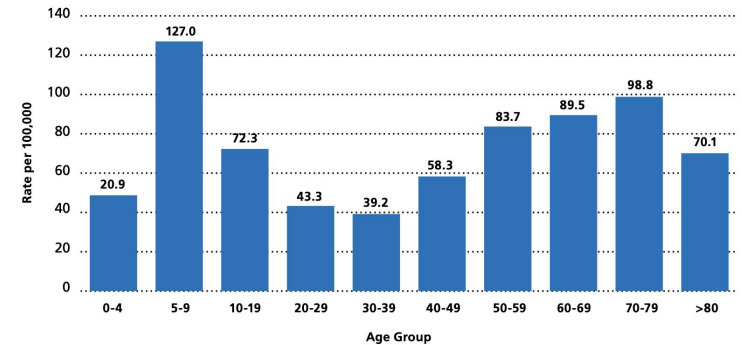
# Current RI Health Programs (Vector-Borne)

**Project ITCH:** URI-based program investigating whether residential tick control reduces ticks and Lyme disease using surveys and optional yard assessments.

**Tick Free Rhode Island:** RIDOH public campaign to prevent tick-borne illness.

- ❑ *Repel, Check, Remove:* Use repellent, check daily, remove ticks properly.

FIGURE 9. RATE OF LYME DISEASE BY AGE GROUP, RHODE ISLAND, 2013

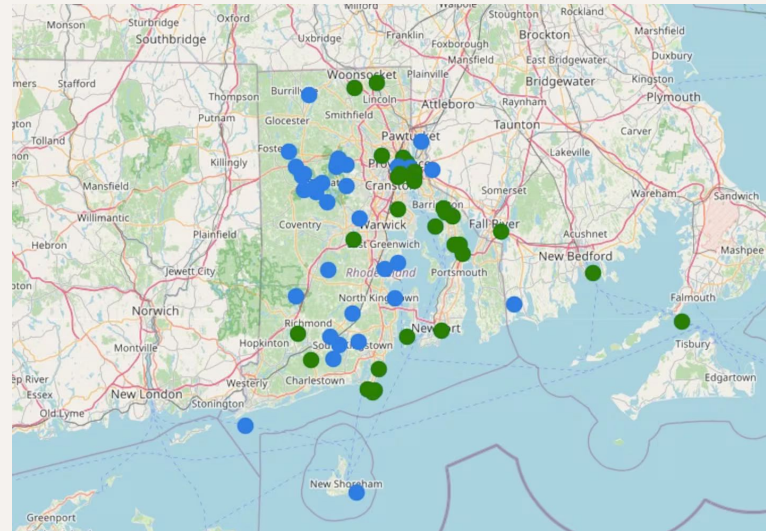


<https://health.ri.gov/sites/g/files/xkebur1006/files/publications/reports/ClimateChangeAndHealthResiliency.pdf>

# Current RI Health Programs (Flooding)

**3CRS:** Multi-institutional project helping working waterfront communities in New England (Rhode Island & Maine) build resilience to climate change, sea-level rise, and flooding.

- ❑ Uses low-cost flood sensors for real-time monitoring, maps vulnerabilities, and develops community-driven resilience plans.
- ❑ Partners: Brown University, University of Rhode Island (URI Coastal Resources Center, RI Sea Grant).
- ❑ Integrated flood forecasting (w/ CHAMP)



*Brown University's Network for Environmental Sensing and Technology ("NEST")*

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# New England Projects of Note

**MA Outdoor Air Quality Plan (2022–2026):** Aims to improve air quality for better asthma prevention and health equity.

- ❑ Focuses on public education, clean air policy, and air quality monitoring.

**Heat resilience solutions for Boston (2025):** citywide framework to prepare Boston for hotter summers

**EPA's Climate Pollution Reduction Grants (NE):** Support states, local governments, and communities at any stage of climate planning.

- ❑ Funds help design action plans targeting GHG reductions across electricity, industry, transportation, buildings, agriculture/lands, and waste.
  - ❑ Promote job creation, lower energy costs, and cleaner air.
  - ❑ Empower community-driven solutions in low-income and disadvantaged areas.
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# Areas of Opportunity

**Opportunity:** Expand engagement and resources for low-income, elderly, and non-English speaking communities most at risk from heat, flooding, and poor air quality.

**Exemplar: Chairs-C** – engaging community partners across RI to identify climate-related health vulnerabilities and identify solutions

**Opportunity:** Inform the public during high-risk conditions and raise awareness about symptoms related to vector-borne diseases.

**Exemplar: Tick Free Rhode Island** – Public awareness events and partnering with local clinics that offer check-ups in this specific area

**Opportunity:** Build on nascent efforts to create a state-wide network of real-time sensors for flooding, heat, and air quality

**Exemplar: Brown's "NEST" network** – public dashboard to monitor flood levels in real-time; Brown's 'Breathe Providence' network of air quality sensors

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**Thank You**