



## **Vermont Climate and Health Alliance**

### *Medical and Health Professionals Calling for Change*

Good afternoon. I am Dan Quinlan - the Chair of the Vermont Climate and Health Alliance - a coalition of more than 300 Vermont medical and health professionals who are working to open people's eyes to the magnitude of the health threat that climate change poses. I am here this afternoon to express our strong support for increasing the funding for the state's weatherization program by at least that envisioned in H.439.

I'd like to start with the big picture. In September of last year, at the Global Climate and Health Summit, national political leaders met with an international group of physicians, health care NGOs, and leaders of major hospital systems. The communique issued at the end of that meeting led with these six words: "Climate change is a global health emergency."

Across the United States today, we are already seeing how climate change driven deviations in weather patterns severely impact human and animal health. Sea level rise in Florida, repeated heavy flooding in the mid-west farm belt, and more prevalent extreme storms across the country are just a few examples of how climate change will radically destabilize the ways in which our society ensures the health and well-being of all Americans.

Here in Vermont, the heat wave of 2018 caused a record spike in heat related illness and emergency room visits. Heavy rains caused an unprecedented release of untreated waste from municipal water treatment plants. We have the highest per capita rate of Lyme disease in the nation. These and other health issues are not random. They are precursors of devastating health effects the Center for Disease Control has been predicting for years. The most vulnerable among us – the elderly, Vermonters with low incomes, those with chronic illness, and children – are and will be hit first and hardest. They are often also the slowest to recover.

Joined by the Vermont Medical Society, the Vermont Public Health Association, the Vermont Chapter of the American Nurses Association and the Vermont Veterinary Medical Association, the Vermont Climate and Health Alliance argues that dramatically accelerating the state's investment in our weatherization program must be a budget priority for the following reasons:

- Buildings account for about ¼ of Vermont's greenhouse gas emissions. We must drive this number down, and as rapidly as possible.
- On average, weatherizing a home reduces a household's energy costs by \$500-\$1000 per year.

- As noted in a December 2018 Vermont Department of Health report we are submitting with this testimony, households in a properly weatherized home are estimated to save at least an additional \$275 per year in avoided health costs. Why? Weatherization also mitigates problems like mold and mildew build-up which cause or exacerbate a wide range of severe illnesses and disease.
- Per that report, it is highly likely that the household co-benefit savings are significantly greater than \$275. That is because there is no established methodology for making reliable savings estimates for many key health impacts. As such, the health savings estimate noted above is highly likely to be very conservative, as noted in that report.
- Finally, weatherizing 50,000 homes over 10 years would yield \$300-\$700 million in other public health benefits - due to reductions in respiratory and cardiovascular disease associated with air pollution and home heating.

Increasing investment in weatherization offers an established and powerful path for protecting the health of all Vermonters, supported by proven and strong economic benefits.

Thank you for the opportunity to be here today.

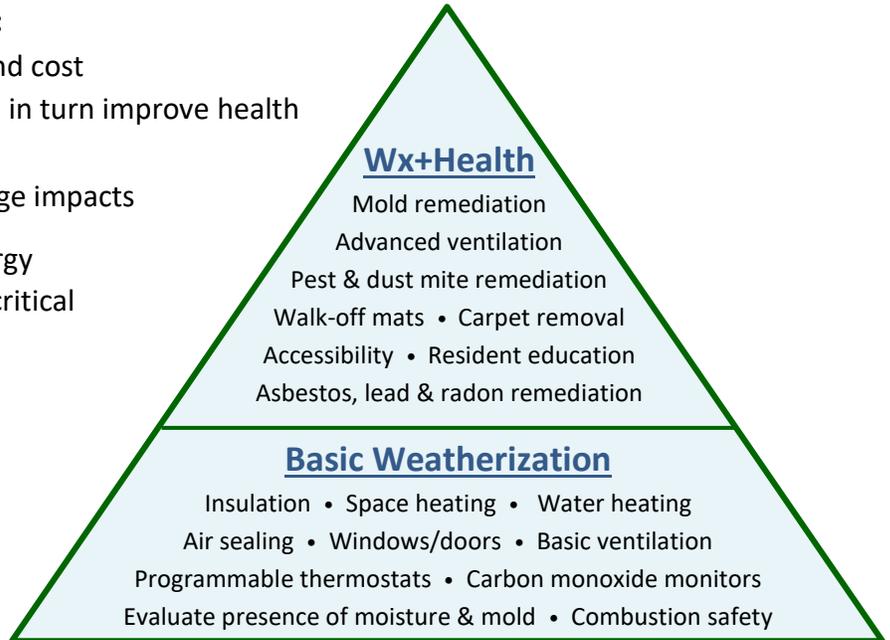
## Home weatherization addresses energy, health and environmental problems

### Benefits of home weatherization include:

- Reduced household energy usage and cost
- Improved housing conditions, which in turn improve health
- Reduced greenhouse gas emissions
- Increased resilience to climate change impacts

**Basic weatherization (Wx)** prioritizes energy efficiency improvements but can include critical health and safety improvements.

**Weatherization + Health (Wx+Health)** prioritizes delivery of health benefits by including specific health and safety improvements in addition to basic Wx strategies, which may be especially helpful for those with chronic health conditions or accessibility challenges.



**Wx+Health builds on basic weatherization strategies**

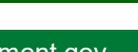
## Weatherization improves home conditions that affect health

### Wx improves the home

-  Reduced energy bills
-  Improved temperature control
-  Improved indoor air quality
-  Enhanced safety
-  Reduced humidity
-  Reduced mold
-  Reduced pest intrusion

*\*Published evidence about the indoor environmental quality and health impacts of Wx was reviewed to identify the expected effects. The strength of evidence for each finding was based on the quality and amount of evidence available.*

### Wx benefits health in many ways

Health benefits...	...are associated with these improvements to home conditions.	Strength of evidence*
General Health		High
Productivity		High
Social Health		High
Upper Respiratory		High
Asthma		Medium
Cardiovascular		Medium
Financial Stress		Medium
Mental Health		Medium
Health Care Utilization & Costs		Medium
Accidental Injury		Low
Infectious Disease		Low
Neurological		Low

## Weatherization in action: Vermont case studies

### Referrals to Health Services

The Vermont Weatherization Assistance Program (VT WAP) provides free Wx services to income-qualifying households across Vermont. About 20 percent of its funding is used to address critical health and safety issues like electrical or combustion hazards.

VT WAP also uses One Touch, an electronic referral system that connects clients to health, housing and energy programs. The One Touch questionnaire, used during the energy audit, automatically refers clients to local partners for help with asthma management, accessibility needs, and other health-related issues.

### Partnering with Hospitals

NeighborWorks of Western Vermont runs a HEAT Squad program that provides low-to-moderate income residents with low-cost energy audits and assistance in identifying, contracting, and financing Wx improvements.

The HEAT Squad began partnering with Rutland Regional Medical Center (RRMC) in 2016 to provide Wx+Health services to RRMC patients with respiratory issues and mobility limitations. Through this partnership, the HEAT Squad and RRMC deliver services that help keep residents healthy and out of the hospital.

### Evaluating Health Impacts

Efficiency Vermont (EV) is a public energy efficiency utility that provides energy efficiency services and financial incentives to market-rate clients across Vermont.

EV launched a *Healthy Homes* pilot study in 2018 in partnership with Northeastern Vermont Regional Hospital (NVRH). EV and NVRH will deliver Wx+Health services to 10 low-income households with at least one person managing a chronic respiratory condition. Data will be collected from each home to evaluate the health benefits of Wx+Health services.

## What weatherization can do for Vermonters' health: costs and benefits

### Low Costs but Limited Funding

The current weatherization rate of 900 low-income homes each year is far below what is needed to meet the state's statutory goal of weatherizing 80,000 homes by 2020, including 20,000 low-income homes. The average cost of a VT WAP project is \$8,500, and funding is one barrier to doing more.

This is a missed opportunity for low-income Vermonters, who spend more of their income on energy and whose health is more likely to be affected by asthma, cold and heat.

### Substantial Benefits for Household and Public Health

Weatherizing 2,000 low-income homes in Vermont would help prevent an estimated 223 emergency department visits, 13 hospitalizations, and 0.5 deaths over a 10-year period, associated with reduced health impacts caused by asthma, cold and heat.\*

Wx also benefits public health by reducing fine particulate emissions from heating systems. The estimated 10-year value of energy and health benefits is at least \$24,757 per household, or about three times the initial cost. Larger benefits are expected if Wx+Health services are offered to people with existing chronic health conditions.

**The estimated 10-year economic benefit per household is nearly three times greater than the initial expense.**

Benefit category	Primary beneficiary	First-year benefit	10-year benefit
Thermal and electric energy cost savings	Household	\$1,174	\$11,740
Reduced impacts of asthma, cold, and heat*	Household	\$276	\$2,762
Reduced fine particulate emissions	Public	\$1,026	\$10,255
<b>Total</b>	<b>Household + public</b>	<b>\$2,476</b>	<b>\$24,757</b>

\*More benefits are expected but could not be quantified, such as better mental and social health, fewer accidental injuries, and increased productivity.

Visit [healthvermont.gov/climate](https://healthvermont.gov/climate) to learn more about these findings and estimated impacts.