

# Preparing for Climate Change:

## A Strategic Plan to Address the Health Impacts of Climate Change in New Hampshire

REPORT: July 2010



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## 1. INTRODUCTION

There is widespread scientific consensus that the world's climate is changing, and these changes are already beginning to manifest themselves around the globe including here in New Hampshire. From higher average temperatures to more variable weather, to heavy precipitation events and flooding, to more intense storms such as tornados and hurricanes, to sea level rise - climate change is impacting our lives and can affect our health both directly and indirectly. Recognizing this, the Governor's *Climate Change Task Force* recommended in its March 2009 NH Climate Action Plan,<sup>1</sup> that the State take immediate steps to develop a *Climate Change Adaptation Plan* for New Hampshire. The Intergovernmental Panel on Climate Change defines adaptation as "adjustments in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderate harm or exploit beneficial opportunities."<sup>2</sup> One of the main purposes of this *Adaptation Plan* is to ensure that public health systems have the capacity to anticipate, prepare for, prevent and address these human health threats.

As a first step in the planning process, the NH Department of Health and Human Services (DHHS), Division of Public Health Services (DPHS) together with the Department of Environmental Services (DES) applied for and received a climate change and public health capacity building grant from the Association of State and Territorial Health Officials (ASTHO) in June 2009. The main purpose of this grant was to conduct a Needs Assessment, and using the results, begin the process of creating a *Strategic Plan* to prepare for and address the public health impacts of climate change. The Needs Assessment process was initiated in February 2010, and a report summarizing the results of the Needs Assessment and recommendations to address the identified needs was published in May 2010.<sup>3</sup> Using the Needs Assessment results, DPHS and DES immediately began the process of convening a Climate Change and Health Improvement Planning Committee to develop a *Strategic Plan* to prioritize and address the identified needs. The Committee met in June, 2010. A list of the Committee members is presented in Appendix B. This report provides a summary of the results of the strategic planning process.

## 2. THE STATE PUBLIC HEALTH SYSTEM

From the very beginning of this strategic planning process, it was clear that New Hampshire's success in proactively addressing the health impacts of climate

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<sup>1</sup> New Hampshire Climate Change Policy Task Force (Thomas S. Burack, Chair); *The New Hampshire Climate Action Plan: A Plan for New Hampshire's Energy, Environmental and Economic Development Future*. March 2009; ARD-09-1.

[http://des.nh.gov/organization/divisions/air/tsb/tps/climate/action\\_plan/index.htm](http://des.nh.gov/organization/divisions/air/tsb/tps/climate/action_plan/index.htm)

<sup>2</sup> Smit, B., O. Pilifosova, I. Burton, B. Challenger, S. Huq, R.J.T. Klein and G. Yohe, 'Adaptation to Climate Change in the context of sustainable development and equity', *Climate Change 2001: Impacts, Adaptation and Vulnerability*. Contribution of the Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, pp. 877-912, 2001.

<sup>3</sup> *Building Public Health Resilience in a Changing Environment: An Assessment of New Hampshire's Public Health System Capacity to Address the Health Impacts of Climate Change*. NH Department of Environmental Services, May 2010.

change cannot be achieved by DPHS alone, but rather will depend on the collaboration and coordination of a variety of partner organizations from around the state. The Institute of Medicine (IOM) describes the *Public Health System* as:

*“... a complex network of individuals and organizations that have the potential to play critical roles in creating the conditions for health. They can act individually, but when they work together toward a health goal, they act as a system—a public health system.”*<sup>4</sup>

The contributors to this strategic plan include a diverse array of partners including but not limited to: state and local health departments; other State agencies (including the Department of Safety [DOS], Department of Environmental Services [DES]; Department of Agriculture, Markets and Food, Fish & Game Department, and others); community coalitions; health associations; community health centers; community-based health, mental health and social service agencies; health care providers; insurers; philanthropic and non-profit organizations; public health institutes; academic centers; and hospitals. The collective contributions of these groups are synergistic, and are greater than the sum of their parts. Consequently, when this document refers to the *State Public Health System* (SPHS) it is describing the entire system – not just the State public health agency; and is defined as:

*“the state public health agency working in partnership with other state governmental agencies, statewide associations of local public health agencies, hospitals & health professionals, schools and universities, state chapters of voluntary or non-profit organizations, transportation providers, environmental organizations and many others.”*<sup>5</sup>

### **3. STRATEGIC PLANNING OVERVIEW**

Strategic planning is a tool for organizing what you need to do today to achieve what you want to accomplish in the future. Bryan W. Barry defines strategic planning as *“the process of determining 1) what your organization intends to accomplish, and 2) how you will direct the organization and its resources toward accomplishing these goals over the coming months and years.”*<sup>6</sup> A strategic plan should answer four key questions:

1. Where are we now? (i.e.: needs assessment - weaknesses, threats)
2. What do we have to work with? (i.e.: needs assessment - strengths, opportunities)
3. Where do we want to be? (i.e.: vision statement)

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<sup>4</sup> IOM (Institute of Medicine); *The Future of Public Health in the 21st Century*, Washington, DC, National Academy Press 2003.

<sup>5</sup> Centers for Disease Control and Prevention. *National Public Health Performance Standards Program, State Public Health System Performance Assessment Model Standards*, Version 2.0; U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; October 15, 2008; <http://www.cdc.gov/od/ocphp/nphpsp/documents/state/State.BookletA.pdf>.

<sup>6</sup> Bryan, W. Barry (1997). *“Strategic Planning Workbook for Non-profit Organizations”* Fieldstone Alliance, Saint Paul, MN; Revised and Updated edition (May 1, 1997).

#### 4. How do we get there? (i.e.: strategic priorities and action steps)

The first two questions were addressed as part of the Needs Assessment process conducted in February 2010 in which more than 50 public health stakeholders from both the public and private sectors met in five focus groups to assess the capacity and performance of New Hampshire's public health system to anticipate, prepare for, and address the adverse health impacts associated with climate change. Using a structured, facilitated process recommended by the Centers for Disease Control and Prevention (CDC) National Public Health Performance Standards Program (NPHPSP)<sup>5</sup> the participants engaged in candid dialogue and deliberation to assess the strengths, weaknesses, opportunities, and threats of the SPHS to address the health impacts of climate change in New Hampshire.

The NPHPSP is a collaborative effort of seven national public health organizations that has developed national performance standards for state and local public health systems and for public health governing bodies. The mission of the program is "to improve the quality of public health practice and performance of public health systems" through the development and promotion of national performance standards.

The purpose for undertaking a performance assessment is to reinforce and improve the public health system by identifying strengths and weaknesses in order to prioritize and address weaknesses and maintain areas of strength.

Four concepts are applied in the NPHPSP:

1. The standards are designed around the Ten Essential Public Health Services
2. The standards focus on the overall public health system, rather than a single organization
3. The standards describe an optimal level of performance
4. The standards are intended to support a process of quality improvement

For this exercise, the State Public Health Assessment instrument (version 2) and the Ten Essential Public Health Services were modified to specifically assess the State's ability to identify, prepare for, address, and prevent the public health implications of climate change. The modified climate change adaptation-specific Essential Services were those developed by the California Department of Public Health<sup>7</sup>; and the climate change adaptation-specific assessment instrument was created by DPHS and DES by adapting the standard State Public Health Assessment instrument questions to specifically assess the State Public Health System's capacity to address climate-related health impacts. The modified Essential Services are presented in Table 1 (below). A report summarizing the results of the Needs Assessment and recommendations to address the identified needs was published in May 2010.<sup>3</sup>

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<sup>7</sup> Modified Essential Services provided by Dr. Paul English, California Department of Public Health in email from Daniel Sinclair, Senior Analyst, Environmental Health, Association of State and Territorial Health Officials to ASTHO Climate Change Adaptation grantees dated 10/01/2009

**Table 1 – Standard and Climate-Specific Essential Public Health Services**

<b>Standard Essential Public Health Services</b>	<b>Modified Climate-Specific Essential Services</b>
1. Monitor health status to identify and solve community health problems	1. Monitor <b><u>environmental</u></b> and health status to identify and solve community <b><u>climate change</u></b> problems
2. Diagnose and investigate health problems and health hazards in the community	2. Diagnose and investigate <b><u>climate change</u></b> public health problems and hazards at the community level
3. Inform, educate, and empower people about health issues	3. Inform, educate, and empower people <b><u>and communities</u></b> about <b><u>climate change</u></b> public health issues
4. Mobilize partnerships and actions to identify and solve health problems	4. Mobilize partnerships to identify and solve <b><u>climate change</u></b> public health problems
5. Develop policies and plans that support individual and statewide health efforts	5. Develop policies and plans that support individual and community level <b><u>climate change risk reduction</u></b> efforts
6. Enforce laws and regulations that protect health and ensure safety	6. Enforce laws and regulations that protect <b><u>the public from climate change threats</u></b>
7. Link people to needed health services and assure the provision of health care when otherwise unavailable	7. Link people to needed <b><u>climate change risk reduction services</u></b> and assure the provision of these services when otherwise unavailable
8. Assure a competent public and personal health care workforce	8. Assure a competent workforce <b><u>that is trained in climate change-related science, adaptation, and mitigation activities</u></b>
9. Evaluate the effectiveness, accessibility, and quality of personal and population-based health services	9. Evaluate effectiveness, accessibility, and quality of <b><u>environmental health services related to climate change</u></b>
10. Research for new insights and innovative solutions to health problems	10. Research for new insights and innovative solutions to <b><u>reduce climate change public health risks</u></b>

In order to address the last two questions, DPHS and DES identified and invited a subset of the *Needs Assessment* participants to become part of a statewide Climate Change and Health Improvement Planning Committee. The role of the Planning Committee is to reconvene after completion of the Needs Assessment and begin the process of prioritizing the identified needs and beginning the strategic planning process. The Planning Committee met on Wednesday June 23, 2010 for a ½-day meeting to: 1) create a Vision Statement for where we intend to be over the next 3–5 years, 2) review and discuss the Needs Assessment results to set improvement priorities, 3) identify and address any priority-setting barriers that may be encountered, 4) narrow the list to 3–5 strategic priorities, and 5) identify goals, objectives, strategies, responsibilities and timeline for addressing each strategic priority. The results of the strategic planning process are described below.

#### **4. WHERE ARE WE NOW?**

The results of the *Needs Assessment* demonstrated that while New Hampshire’s State Public Health System (SPHS) already has much of the **capacity** in place to address climate-related health threats, there currently is little recognition that



climate change is specifically a driver of public health, and there is little or no coordinated effort to modify existing systems to address climate-related health impacts or focus on climate change in our public health planning (i.e. need to improve planning, coordination, outreach, education and resources).

The Needs Assessment identified numerous existing activities, systems, and processes already in place that are capable of assisting the SPHS in climate change and public health adaptation planning, preparedness, and response. However, these existing resources have not yet been ***adapted*** to focus on climate change and health preparedness, and this Needs Assessment represents the first activity to develop some coordination related to adaptive or preparedness interventions in New Hampshire. The capabilities and gaps identified by the focus groups are summarized in Table 2, below.

**Table 2 - Summary of Identified Climate & Health Capabilities and Gaps**

<b>Provider Orgs</b>	<b>Current Capability</b>	<b>Identified Gaps</b>
<b>1. Monitor environmental and health status to identify and solve climate change problems</b>		
<u>State:</u> DPHS, DES, HSEM, F&G, Dept Ag, UNH <u>Fed:</u> USGS, EPA, NOAA <u>Local:</u> MHD, NPHCS, PHNs <u>Other:</u> Hubbard Brook, CACP	<u>Data:</u> meteorological, air quality, water quality, snow pack, river and lake levels, agricultural production, ED and hosp. discharge, food, water, vector, illnesses, deaths, wildlife diseases, TEMSIS, claims data, EPHT. <u>Reporting/Surveillance:</u> asthma, air quality, water quality, food/water/vector-borne disease, deaths	<ul style="list-style-type: none"> <li>no pollen &amp; mold spore data</li> <li>no vaccination registry</li> <li>no occupational health surveillance data</li> <li>lack of standard data reporting platform/ systems integration</li> <li>lack of information dissemination</li> <li>lack of training on data use</li> <li>no coordination around climate change</li> </ul>
<b>2. Diagnose and investigate climate change public health problems and health hazards</b>		
<u>State:</u> DPHS, DES, HSEM, F&G <u>Fed:</u> CDC <u>Local:</u> MHD, NPHCS, PHNs	<u>Investigation Capacity:</u> food/water/vector-borne disease investigations, communicable disease investigations, health risk assessment, disease cluster investigations, laboratory services	<ul style="list-style-type: none"> <li>no coordination around climate change</li> <li>no long-term trend analysis</li> </ul>
<u>Provider Orgs</u>	<u>Current Capability</u>	Identified Gaps
<b>3. Inform, educate, and empower about climate change public health issues</b>		
<u>State:</u> DES, DPHS, HSEM, F&G, UNH <u>Fed:</u> CDC, EPA <u>Local:</u> MHD, NPHCS, PHNs <u>Other:</u> NHPHA, APHA, ASTHO, TFAH, BreatheNH, ALANH, CACP	<u>Education/Information Systems:</u> air quality alerts, Health Alert Network, heat advisory alerts, emergency alerts, health officer listserve, fact sheets, press releases, Twitter messaging, website messaging AHHR risk communications	<ul style="list-style-type: none"> <li>no coordination around climate change</li> <li>current systems not focused on primary prevention</li> </ul>
<b>4. Mobilize partnerships to identify and solve climate change public health problems</b>		
<u>State:</u> DES, DPHS, HSEM <u>Local:</u> MHD, NPHCS, PHNs <u>Other:</u> NHPHA, CACP	some partnership agreements/MOAs, PHN planning, PHEP program, coastal adaptation planning, mosquito tracking/spraying, NHPHA policy committee, EPH legislative council	<ul style="list-style-type: none"> <li>current partnerships not focused on climate change</li> <li>need to engage other partners (ie: local energy committees, regional planning, DOT, etc.)</li> <li>no specific funding/resources</li> </ul>

**Table 2 (cont.)-Summary of Identified Climate & Health Capabilities and Gaps**

<b>Provider Orgs</b>	<b>Current Capability</b>	<b>Identified Gaps</b>
<b>5. Develop policies &amp; plans that support climate change risk reduction efforts</b>		
State: DES, DPHS, HSEM, OEP Fed: CDC, FEMA Local: MHD, NPHCS, PHNs	NH climate change action plan, arboviral surveillance & control plan, food health emergency response plan, drought mgmt plan, dam operations plan, state energy plan, PHIAP, state/local hazard mitigation plans, emergency prep plans, PHEP, COOPs, laboratory coordination plans.	<ul style="list-style-type: none"> <li>currently no planning/policies directly focused on climate change health impacts</li> <li>currently no mechanism to collaborate on climate change adaptation</li> <li>flood maps need to be updated</li> <li>lack of plan for food production/availability</li> </ul>
<b>6. Enforce laws and regulations that protect the public from climate change threats</b>		
State: DES, DPHS, HSEM, DOT Fed: EPA Local: MHD, NPHCS, other municipalities	<u>Laws/Regs Enforced:</u> air pollution, water pollution, dam maintenance, building codes, construction stds, food protection, public health emergency powers	<ul style="list-style-type: none"> <li>no laws specifically focused on climate-change related issues</li> <li>local health officials often lack training, willingness or authority to enforce health-related ordinances</li> </ul>
<b>7. Link people to climate change risk reduction services and assure services are provided</b>		
State: DES, DPHS, HSEM Fed: CDC, FEMA Local: MHD, NPHCS, municipalities Other: community health centers	NH functional needs plan, 211, emergency after-action plans, air quality alerts, water quality alerts, reverse 911, translation services, transportation services, vulnerable population services, mental health services, elderly services, NH Stay Warm Prog	<ul style="list-style-type: none"> <li>need to improve translation/interpretation services</li> <li>no coordination around climate change</li> <li>no system to specifically identify/link people vulnerable to climate related health issues</li> <li>cooling centers(?)</li> </ul>
<b>8. Assure a competent workforce trained in climate change-related science and adaptation activities</b>		
State: DES, DPHS, HSEM, UNH, KSC Fed: CDC, EPA Local: MHD, NPHCS, PHNs Other: NHPHA, APHA, ASTHO, NACCHO, NEWWA, Dartmouth College	NH Institute for Local Public Health Practice training, NIMS/ICS, UNH MPH, NHHOA training, AHHR training, APHA climate change & public health webinar series, NPHPA training, water systems operators training, asthma training, medical provider training	<ul style="list-style-type: none"> <li>no coordination specifically around</li> <li>current training not focused on climate change</li> <li>current climate change training focused on mitigation – not adaptation</li> </ul>
<b>9. Evaluate effectiveness and quality of environmental health services related to climate change</b>		
State: DES, DPHS, HSEM, UNH Fed: CDC, EPA Local: MHD, NPHCS, PHNs	public health & environmental laboratory QA/QC programs, DES quality assurance system, EPA QA program, CDC evaluation program, asthma evaluation committee, PHIAP, NH Energy & Climate Collaborative	<ul style="list-style-type: none"> <li>current evaluation efforts are not directed specifically to climate change</li> <li>current climate-related evaluation systems are not coordinated</li> </ul>
<b>10. Research new insights and innovative solutions to reduce climate change public health risks</b>		
State: DES, DPHS, F&G, UNH, KSC, PSU Fed: CDC, EPA, NOAA Other: Dartmouth College	Research collaboration with UNH, PSU, Dartmouth on climate change and public health issues.	<ul style="list-style-type: none"> <li>academic institution research agendas not aligned with specific SPHS needs</li> </ul>

Specifically, the three lowest scoring climate related essential services (e.g. greatest needs) were: 1) *Mobilize partnerships to identify and solve climate change public health problems*, 2) *Inform, educate, and empower about climate change public health issues*, and 3) *Assure adequate climate change and public health capacity and resources*. Descriptions of these identified needs are discussed below.

## Identified needs:

### **Mobilize partnerships to identify and solve climate change public health problems**

- We need to organize and coordinate our interventions and activities
- We need to determine which climate-related health threats are occurring or likely to occur in New Hampshire
- We need to identify which populations, communities and geographic areas are most at risk for the identified health threats
- We need to develop a coordinated action plan and timeline to address identified health threats, vulnerabilities and education needs at both the state and local levels
- We need to implement the action plan

### **Inform, educate, and empower about climate change public health issues**

- We need to educate public health professionals about climate-related health impacts and preparedness planning
- We need to educate the general public about climate-related health threats and preparedness planning

### **Assure adequate climate change and public health capacity and resources**

- We need to identify and obtain funding/resources necessary to support and sustain activities above

## 5. WHAT DO WE HAVE TO WORK WITH?

During the strategic planning session, the Planning Committee discussed the SPHS's existing strengths for addressing the health impacts of climate change identified during the Needs Assessment process. The results of the *Needs Assessment* demonstrated that while NH's SPHS is not currently focused on climate change in our public health planning, and does not currently have a system in place to coordinate efforts to specifically address climate-related health impacts, we do already have much of the **capacity** in place to address climate-related health threats. The Committee acknowledged the specific current SPHS capabilities listed in Table 2, and identified the following SPHS strengths that already exist that can be utilized to improve our ability to address climate-related health threats:

### **Identified Strengths and Opportunities:**

- New Hampshire already has in place much of the **capacity** to:
  - ✓ monitor diagnose, investigate, and develop plans to address and prevent climate-related health threats.

- ✓ educate, empower, and link people regarding climate-related health information and services, and
  - ✓ train and enable the public health workforce to address and prevent climate-related health problems.
- The small size and limited resources of the New Hampshire SPHS encourages collaboration and creativity, and many cross-organizational and state-local partnerships already exist that may be beneficial in effectively and efficiently focusing existing resources on addressing and preventing climate-related health issues.
  - There are many valuable research and technical assistance resources in the State at academic centers, state agencies, and not-for-profit foundations and institutes that can potentially be employed to quantify and address identified climate change and health needs.
  - Recent progress in establishing a regional public health infrastructure will help facilitate climate-related public health planning at the local level.

## 6. WHERE DO WE WANT TO BE?

The Planning Committee created a Vision Statement to define where we want New Hampshire to be in the next 3–5 years with respect to identifying, preventing, preparing for, and responding to health threats associated with climate change. A Vision Statement outlines what an organization or enterprise wants to be, or how it wants the world in which it operates to be. It concentrates on the future. It is a source of inspiration. It provides clear decision-making criteria. The approved Vision Statement is as follows:

*New Hampshire and its local communities have organized, coordinated and effective systems in place to identify, prevent, prepare for, and respond to health hazards associated with our changing climate.*

## 7. HOW DO WE GET THERE?

Based upon the lowest scoring climate-related essential services and needs identified in Section 4 above, the Committee set three strategic priorities each with several goals and objectives designed to address each priority. In addition, the Committee identified leaders, partners, broad aims, action steps and a timeline for accomplishing each goal. The identified strategic priorities and goals are listed below and are illustrated in Figure 1. The partners, action steps and timeline for accomplishing each goal as identified by the Committee are summarized below and are presented in Appendix C. A timeline for accomplishing major action steps is summarized in Figure 2.

### **Strategic Priority 1: Mobilize partnerships to identify and solve climate change public health problems**

**Goal 1.** Establish an organizational structure to coordinate interventions and activities

Leaders: DPHS, DES

Partners: Multiple (see Appendix B for complete list)

Action Steps:

Step 1. Survey other states to identify successful organizational structures

Step 2. Survey potential organizational members to determine interest, availability, roles and responsibilities

Step 3. Establish organizational structure

Timeline: Organizational structure created and established in 6 months

**Goal 2.** Identify and prioritize direct and indirect climate-related health threats for New Hampshire

Leaders: DPHS, DES, Homeland Security and Emergency Management (HSEM)

Partners: Multiple (see Appendix B for complete list)

Action Steps:

Step 1. Conduct Health Impact Assessment for New Hampshire using local health statistics and environmental data

Step 2. Establish sub-committee and set priorities for New Hampshire

Timeline: Begin in fall, 2010 and complete in 6 months.

**Goal 3.** Conduct vulnerability assessment(s) to identify populations, communities and geographic areas most at risk for the identified health threats

Leaders: DPHS, DES, HSEM, Regional Planning Commissions

Partners: Public Health Networks, local health departments, NH Office of Energy and Planning, local emergency management directors, NH Hospital Association, UNH, social service agencies, Office of Minority Health, Minority Health Coalition

Action Steps:

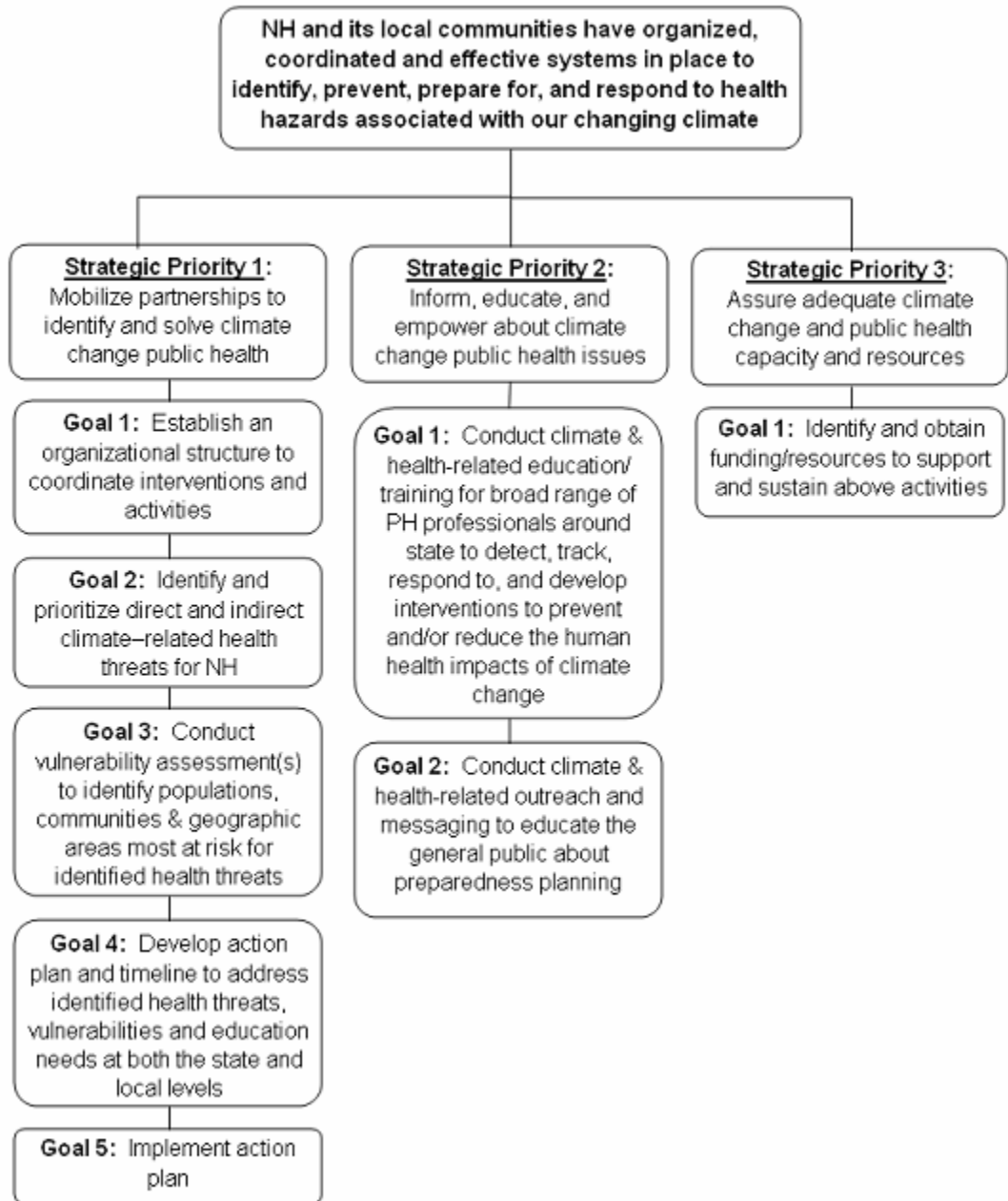
Step 1. Complete goal 2

Step 2. Form vulnerability subcommittee to gather CDC data and health effects and vulnerable pops

Step 3. Complete vulnerability assessment with maps and priority areas

Timeline: Begin after completion of Goal 2 and ongoing for 6-9 months

**Figure 1 - Strategic Map: 2010-2015**  
**Strategic Plan to Address the Health Impacts of Climate Change in NH**



**Goal 4.** Develop an action plan and timeline to address identified health threats, vulnerabilities and education needs at both the state and local levels

Leaders: DPHS, DES, HSEM, Manchester Health Department and other potential pilot sites

Partners: Nashua Health Dept, CDC, applicable experts, Environmental Public Health Tracking (EPHT), Clean Air Cool Planet (CACP).

Action Steps:

- Step 1. Subcommittee forms groups to create Statewide plan
- Step 2. Statewide plan created and approved by oversight committee
- Step 3. Roll out of plan – outreach and education
- Step 4. Identify pilot sites

Timeline: September 2011 - statewide action plan created including local community needs

**Goal 5.** Implement the action plan

Leaders: DPHS, DES, HSEM, Manchester Health Department and other potential pilot sites

Partners: Nashua Health Dept, CDC, applicable experts, EPHT, CACP.

Action Steps:

- Step 1. Begin statewide plan implementation
- Step 2. Establish a pilot community
- Step 3. Test rollout of plan in pilot community
- Step 4. Evaluate, modify, revise plan as appropriate
- Step 5. Develop tool kit to assist state-wide roll out
- Step 6. Roll out plan and tool kit to other communities

Timeline: Statewide plan implemented over 3-year period. Local pilot project completed in 1.5 years; 2 other communities by the end of 3rd year

**Strategic Priority 2: Inform, educate, and empower about climate change public health issues**

**Goal 1.** Conduct climate and health-related education/training for broad range of public health professionals around State to detect, track, respond to, and develop interventions to prevent and/or reduce the human health impacts of climate change

Leaders: DPHS, DES,

Partners: EPHT, Manchester Health Department (MHD) Institute for Local Public Health Practice, DPHS health messaging group, all partners listed in Strategic Priority 1, Goal 1.

Action Steps:

- Step 1. Establish an education and training sub-committee
- Step 2. Establish a comprehensive education and training plan for public health professionals around the state.
- Step 3. Institutionalize climate change goals and education into DPHS' strategic plan and chronic disease plan (health messaging group)

- Step 4. Institutionalize climate change goals and education into community based training programs and allow it to count as continuing education credits
- Step 5. Create a list of potential places/events to give climate change talks (i.e. TRAIN, Public Health Nurses, etc.).

Timeline: ongoing and continuous

**Goal 2.** Conduct climate and health-related outreach and messaging to educate the general public about the public health implications of climate change (including mitigation, prevention and preparedness planning)

Leaders: DPHS, DHHS-Public Information Office (PIO), DES, HSEM

Partners: UNH Coop Extension, Department of Education, ReadyNH, media, social media, all partners listed in Strategic Priority 2, Goal 1.

Action Steps:

- Step 1. Investigate options to assess community knowledge (BRFSS, UNH survey, focus groups, etc)
- Step 2. Develop main messages/action items
- Step 3. Develop social marketing plan
- Step 4. Implement plan; determine a method to assess effectiveness of messages
- Step 5. Evaluate plan

Timeline: ongoing and continuous

**Strategic Priority 3: Assure adequate climate change and public health capacity and resources**

**Goal 1.** Identify and obtain funding/resources to support and sustain above activities

Leaders: DPHS, DHHS, DES

Partners: CACP, HSEM, legislature, regional organizations, other federal programs (i.e. EPA, CDC, EJ grants, energy efficiency/weatherization)

Action Steps:

- Step 1. Form a subcommittee to search out and inventory potential funding sources
- Step 2. Research opportunities to work cooperatively with climate mitigation efforts
- Step 3. Explore creating an e-newsletter to publicize funding opportunities for local health professionals
- Step 4. Align/coordinate all existing funding sources

Timeline: ongoing and continuous



**Figure 2 – Anticipated 3-year Timeline of Major Activities  
Strategic Plan to Address the Health Impacts of Climate Change in NH**

Task Description	2010			2011					2012					2013										
	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Organize and Convene the <i>NH Climate Change and Public Health Taskforce</i>	█	█																						
Conduct statewide health impact assessment		█	█	█																				
Create statewide <i>Climate Change and Public Health Implementation Plan</i>								█	█	█														
Implement <i>Implementation Plan</i>										█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Select & work with local PHN to develop & implement regional <i>Implementation Plan</i>							█	█	█	█	█	█	█	█	█	█								
Develop & implement skills/training to reduce health effects of climate change.	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Develop and begin implementing <i>Evaluation Plan</i>									█	█	█													
Monitor performance indicators identified in the <i>Evaluation Plan</i>												█	█	█	█	█	█	█	█	█	█	█	█	█
Work with 2 additional local PHNs to develop regional Implementation Plans												█	█	█	█	█	█	█	█	█	█	█	█	█
Encourage and assist other PHNs to begin developing and implementing local plans																								
Develop Climate Change & Public Health Sustainability Plan																								█

**8. LINKING WITH OTHER INITIATIVES**

From the very beginning of this process, it was clear that solid partnerships with public health stakeholders from around the State would be key to the success of any initiative to address the health impacts of climate change. Consequently we plan to continue to engage and inform our state and local partners throughout the process of implementing this Strategic Plan. In addition, New Hampshire has been developing adaptation plans and working with stakeholders in other climate-related sectors related to impacts on: the State’s coastal areas (New Hampshire Coastal Adaptation Workgroup); and the State’s ecosystems and wildlife (New Hampshire Ecosystem and Wildlife Adaptation Workgroup); and plans to begin to address adaptation strategies affecting the State’s economy in the near future. We recognize that each of these workgroups’ adaptation plans will have many issues and implementation strategies that overlap with public health adaptation, and we plan to develop a system to coordinate our work activities. The formation of an overall Adaptation Advisory Board is being discussed to oversee the coordination of all of the sector-based climate change adaptation initiatives to assure that we are working in concert with and are integrating areas of common concern.

## 9. NEXT STEPS

Using the resources provided through the ASTHO climate change and public health capacity building grant, New Hampshire has been able to make significant progress in achieving the goal of developing the public health portion of the Climate Change Adaptation Plan for NH as recommended in the March 2009 New Hampshire Climate Action Plan. The process has not only allowed New Hampshire to identify the State's current strengths and weakness for addressing the health implications of climate change and develop this strategic plan, but also to engage and enlist a broad array of stakeholders to actively participate in the process of assuring that *New Hampshire and its local communities have organized, coordinated and effective systems in place to identify, prevent, prepare for, and respond to health hazards associated with our changing climate.*

In order to keep the momentum and enthusiasm developed through this process moving forward, we plan to immediately begin work to conduct the following steps identified above: 1) establish a Climate Change and Health organizational structure to coordinate the interventions and activities proposed above; 2) continue to offer educational and training opportunities for public health professionals as well as members of the public across the State; and 3) seek to obtain funding and resources to support and sustain above activities.

**APPENDIX A**  
**Definitions of Acronyms**

**Preparing for Climate Change:  
A Strategic Plan to Address the Health Impacts of Climate Change in New  
Hampshire**

**Definitions of Acronyms**

ALANH – American Lung Association of NH  
APHA – American Public Health Association  
ASTHO – Association of State and Territorial Health Officials  
BreatheNH - An organization committed to eliminating lung disease and improving the quality of life for those living with lung disease in NH  
CACP – Clean Air Cool Planet  
CDC – Centers for Disease Control and Prevention  
Dept Ag – Department of Agriculture  
DES – Department of Environmental Services  
DPHS – Division of Public Health Services  
DOT – Department of Transportation  
EPA - Environmental Protection Agency  
F&G - NH Fish and Game Department  
FEMA – Federal Emergency Management Agency  
HSEM – Homeland Security and Emergency Management  
Hubbard Brook – (Experimental forest and research organization that promotes the understanding and stewardship of ecosystems through scientific research, long-term monitoring, and education; and develops new initiatives linking ecosystem science and public policy).  
KSC – Keene State College  
MHD – Manchester Health Department  
NACCHO – National Association of County and City Health Officials  
NEWWA – New England Water Works Association  
NHPHA – NH Public Health Association  
NOAA – National Oceanic and Atmospheric Administration  
NPHCS – Nashua Division of Public Health and Community Services  
OEP – Office of Energy and Planning  
PHNs – Public Health Networks  
PSU – Plymouth State University  
TFAH – Trust for America’s Health  
UNH – University of New Hampshire  
USGS – United States Geological Survey

## **APPENDIX B**

### **List of Climate Change and Health Improvement Planning Committee Members**

## Climate Change and Health Improvement Planning Committee Attendees

NAME	TITLE	AFFILIATION	ADDRESS	PHONE	EMAIL
Philip Alexakos	Environmental Health Program Manager	Manchester Health Department	1528 Elm St., Manchester, NH 03101	(603) 624-6466	<a href="mailto:palexako@manchester.nh.gov">palexako@manchester.nh.gov</a>
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**Climate Change and Health Improvement Planning Committee Attendees  
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**APPENDIX C**  
**Strategic Planning Worksheets**



## **Strategic Priority 1: Mobilize partnerships to identify and solve climate change public health problems**

**Goal 1:** *Establish an organizational structure to coordinate interventions and activities*

**Partners:** Who should be involved?

- Leader(s): DHHS (DPHS), DES  
Partners – Clean Air Cool Planet, MHD, HSEM, NHPHA, NH Charitable Foundation, THE (transportation, housing & energy), ALA, Breathe NH, EPHT, Nashua Health Dept, NH Hospital Association, Foundation for Healthy Communities, Academic Institutions, Nature Conservancy, Sierra Club, Forest Society, Physicians for Social Responsibility, NH Gov's Office, OEP, Climate & Energy Collaborative, ESU (emergency services unit), Schools, Faith Based Groups, Interfaith Council, Council of Churches, Public Health Network Regions, Health Officers Assoc, EPA, CDC, Asthma Regional Council, other regional organizations (NESCAUM, NEIWPPC NEWMOA, ASTHO, NACCHO), chambers of commerce, legislators, legislative oversight committee (Rep Batula), Dept of Ag, DOT, NHMS, medical clinicians/societies, RPCs. NHACC,

**Action Steps:** How will we get there?

**Step 1:** Look at other states to see what they are doing.

**Step 2:** Determine interest/reach out to potential partners. See if they are already doing things in this area. Survey to assess interest/accomplishments for membership

**Step 3:** Establish organizational structure etc

**Accomplishments:** What are we already doing?

We are here! List of interested parties/already met in focus groups.

CAP gives us direction

Established partnerships – move quicker

NHPHA has climate change as a priority

**Next Steps:**

Survey partners to gauge interest/availability/accomplishments

Meet in fall 2010

See if we get CDC grant

Re-evaluate

**Timeline:**

Organizational structure will be established in 6 months

**Strategic Priority 1: Mobilize partnerships to identify and solve climate change public health problems**

**Goal 2:** *Identify and prioritize direct and indirect climate-related health threats for NH*

**Partners:** Who should be involved?

- Leader(s): HSEM, DPHS, DES,
- Partners: EPHT, DHHS, NHPHA, Dept of Ag, CDC, EPA, NHMS, medical clinicians, infectious disease program, MHD, same as above as needed

**Action Steps:** How will we get there?

**Step 1:** Look at CDC's list; look at NH data (state epidemiologists, hospitals, Jodi Dept State Epidemiologist & Dr.@ Dartmouth),

**Step 2:** Establish sub-committee & set priorities for NH

**Step 3:**

**Accomplishments:** What are we already doing?

Ongoing surveillance

EPHT indicators

CDC has priority list

MHD's data, Nashua's data, & other data that is available

**Next Steps:**

Form sub-committee to look at data and determine priorities

**Timeline:**

Start in fall 2010 complete in a month or 2.

**Strategic Priority 1: Mobilize partnerships to identify and solve climate change public health problems**

**Goal 3:** *Conduct vulnerability assessment(s) to identify populations, communities and geographic areas most at risk for the identified health threats*

**Partners:** Who should be involved?

- Leader(s): HSEM, DPHS, DES, RPCs
- Partners: Public Health Networks, local health depts, OEP (census data), EM Directors, NH Hosp Assoc, UNH, social service agencies (disabilities, NH Health Care Assoc, ) office of minority health, minority health coalition

**Action Steps:** How will we get there?

**Step 1:** Complete goal 2

**Step 2:** From vulnerability subcommittee to gather CDC data & health effects and vulnerable pops

**Step 3:** Complete vulnerability assessment with maps and or priority areas

**Accomplishments:** What are we already doing?

Local Emergency Plans

Hazard Mitigation Plans

State functional needs guidance

DPHS's vulnerable populations' information

**Next Steps:**

**Timeline:** After goal 2 and ongoing for 6-9 months

**Strategic Priority 1: Mobilize partnerships to identify and solve climate change public health problems**

**Goal 4:** *Develop action plan and timeline to address identified health threats, vulnerabilities and education needs at both the state and local levels*

**Partners:** Who should be involved?

- Leader(s): DPHS, DES, MHD and any other potential pilots sites
- Partners: Nashua Health Dept, CDC, applicable experts, EPHT, CACP

**Broad Aim:** What do we need to do?

Develop a useful plan for communities/schools/ public health networks etc... to develop a public health climate change adaptation plan

**Action Steps:** How will we get there?

**Step 1: Create title for plans (acronym has to be good)**

**Step 2: Subcommittee from groups to create plan**

**Step 3: Roll out of plan – outreach and education**

**Step 4: Identify pilot sites**

**Accomplishments:** What are we already doing?

Applied for additional grant for implementation – CDC

Kresge grant to CACP for assistance in implementation

**Next Steps:**

**Timeline:**

September 2011- statewide plan created with room for individual community needs

**Strategic Priority 1: Mobilize partnerships to identify and solve climate change public health problems**

**Goal 5: Implement Action Plan**

**Partners:** Who should be involved?

- Leader(s): same as above including pilot communities
- Partners: same as above

**Broad Aim:** What do we need to do?

Establish pilot community to test drive the plan

**Action Steps:** How will we get there?

**Step 1: Establish pilot community**

**Step 2: Test roll out of plan in pilot community**

**Step 3: Evaluation and modification/revision of plan**

**Step 4: Develop tool kit to assist state-wide roll out**

**Step 5: Roll out plan & tool kit to other communities**

**Accomplishments:** What are we already doing?

**Next Steps:**

**Timeline:** pilot project – end of 1.5 years; 4 other communities by the end of 3 years

**Strategic Priority 2: Inform, educate, and empower about climate change public health issues**

**Goal 1:** *Conduct climate & health-related education/training for broad range of PH professionals around the state to detect, track, respond to, and develop interventions to prevent and/or reduce the human health impacts of climate change*

**Partners:** Who should be involved?

- Leader(s): DPHS, DES
- Partners: EPHT, Institute for local public health practice, all partners listed in goal 1, DPHS health messaging group

**Broad Aim:** What do we need to do?

Get all partners proficient in the relationship of climate change and public health impacts. Common messaging established. Help partners build capacity to detect, track, respond to, and develop interventions to prevent and/or reduce the human health impacts of climate change.

**Action Steps:** How will we get there?

Step 0: Establish an education and training sub-committee

**Step 1: See grant application – amen! More than just webinars**

**Step 2: get climate change into DPHS' strategic plan & chronic disease's plan (health messaging group)**

**Step 3: get Climate Change into community based training programs & allow it to count as continuing ed credits**

**Step 4: Create a list of potential places/events to give climate change talks (TRAIN-Tom Flynn), Pam Hill has another**

**Accomplishments:** What are we already doing?

Legislative breakfast presentations, presentations to UNH (public health program), presentations at HSEM annual meeting,

**Next Steps: talk to Laura about responding to emerging issues (strategic map box)**

**Timeline: ongoing & continuous**

**Strategic Priority 2: Inform, educate, and empower about climate change public health issues**

**Goal 2:** *Conduct climate & health-related outreach and messaging to educate the general public about the public health implications of climate change (including mitigation, prevention & preparedness planning)*

**Partners:** Who should be involved?

- Leader(s): DPHS, DHHS-PIO, DES, HSEM,
- Partners: UNH Coop Extension, Dept of Ed, ReadyNH?, media, social media, as above as needed, civic organizations

**Action Steps:** How will we get there?

**Step 1: Investigate options to assess community knowledge (BRFSS, UNH survey Focus groups etc)**

**Step 2: Develop main messages/action items**

**Step 3: Develop social marketing plan**

**Step 4: Implement plan; determine a method to assess effectiveness of messages**

**Step 5: Evaluate plan**

**Accomplishments:** What are we already doing?

**Next Steps:**

**Timeline:** ongoing

**Strategic Priority 3: Assure adequate climate change and public health capacity and resources**

**Goal 1:** *Seek and obtain funding/resources to support and sustain above activities*

**Partners:** Who should be involved?

- Leader(s): DPHS, DHHS, DES
- Partners: CACP, HSEM, legislature, regional organizations NESCAUM etc... any other federal programs, EPA, Fed DHHS, EJ grants, energy efficiency grants/weatherization (co-benefits of removing lead etc)

**Action Steps:** How will we get there?

**Step 1: form a subcommittee to search out and inventory potential funding sources**

**Step 2: research what is available-pay attention**

**Step 3: explore creating a webpage/newsletter/social media/listserves to announce funding opportunities for local health folks (add this to ed piece too)**

**Step 4: align existing funding sources**

**Accomplishments:** What are we already doing?

Tapping into available funding (CDC grant), partnering with others who have resources (CACF), presenting to the Collaborative regarding barriers, in-kind services from existing stakeholders

**Next Steps:**

**Timeline:** ongoing