



Extreme Temperature Event Plan

10 Points

New Action November 2015

This Sustainable Jersey action, under the category of “Emergency Management and Resiliency,” is designed to help communities develop an Extreme Temperature Event Plan to prepare for expected changes in the frequency, magnitude and duration of extreme temperature events associated with our changing climate. This action focuses on avoiding severe human health impacts related to extreme heat or cold exposure resulting from heat waves, cold spells or disruptions to the grid that may prevent the normal functioning of residential heating and cooling systems. This action is related to a few other Sustainable Jersey actions focused on public health, extreme weather events, community preparedness planning, and emergency communications and outreach, including [Climate Adaptation: Flooding Risk](#) and [Health & Wellness: Building Healthier Communities](#).

Completion of this action will result in 10 points toward Sustainable Jersey certification.

Although plans will vary according to the specific circumstances of individual municipalities, each must contain a list of clearly defined extreme temperature event vulnerabilities and risks facing the community, resources available, and strategies to address these challenges, and methods of evaluation to demonstrate successful implementation. The municipalities must demonstrate the involvement of relevant stakeholders in the development of the plan.

To be awarded 10 points for this action, municipalities must develop an Extreme Temperature Event Plan consistent with the guidance in this document. The finalized plan must also be embedded within the locally appropriate governance or operations mechanism. For example, the Extreme Temperature Event Plan may become an event-specific chapter, section, or appendix of the local Emergency Operations Plan or Public Health Plan.

The Extreme Temperature Event Plan is good for 3 years, after which municipalities are expected to demonstrate progress in deploying strategies to better cope with extreme temperature events. Implementation success is expected to be evident through data collection and monitoring of progress in implementing the plan.

Why is it important?

Climate scientists project that extreme heat events will be likely to occur more frequently and last longer in the Middle Atlantic region as the climate continues to change. Extreme heat events often result in rolling blackouts or power outages due to increased demand. Calculating the exact number of individuals who were killed or harmed by extreme heat each year is challenging, but according to the New Jersey Department of Health and Senior Services, each year more than 1,200 New Jersey residents are treated for heat or sun exposure-related illness in emergency departments, and hundreds are hospitalized. In addition to the direct impacts of heat on the body, high heat days often coincide with high levels of ground-level ozone (sometimes referred to as smog) which forms during warm sunny days with stagnant air movement. Ozone is a harmful air pollutant, especially for sensitive populations like small children and the elderly, because it can trigger a variety of health problems from chest pain and asthma, to reduced lung function and even permanent scarring of lung tissue.

While warming is likely to decrease the intensity, number and duration of extreme cold events, they will still occur from time to time. And when these events combine with prolonged power outages caused by winter storms, large portions of the public can be left without electricity or fuel to provide warmth for extended periods. Exposure to cold temperatures,

especially when such temperatures are accompanied by high winds, can cause life-threatening health problems as heat rapidly leaves the body. Young, old and infirm individuals are generally at the greatest risk of experiencing health problems or fatalities as a result of exposure to the cold. Also at risk are individuals who are not accustomed to cold temperatures and those who lack shelter or access to a source of heat, as often occurs in the aftermath of strong storms when power lines are down or fuel supplies are interrupted. In the aftermath of Superstorm Sandy, cases of hypothermia increased as millions of residents found themselves without power while temperatures dropped close to freezing. There were also several instances of carbon monoxide poisoning from individuals using propane heaters or gas stoves to provide warmth. Of the 39 deaths attributed to Superstorm Sandy—the deadliest storm in New Jersey’s history—almost one third are a direct result of carbon monoxide exposure (7 cases) or hypothermia (4 cases).

Who should lead and be involved with this action?

In order to ensure that all viewpoints are represented by the final Extreme Temperature Event Plan, municipalities are required to engage a wide range of stakeholders in the process of developing, implementing and evaluating the plan. While a smaller, core group of community leaders will likely take the lead in writing the plan, these individuals should ensure they are working in close coordination with the local public health officer, the emergency management officer and other individuals who can assist in identifying those who may be particularly vulnerable to extreme heat or cold, as well as to air pollution that forms within stagnant air associated with high heat events. The municipal green team may choose to lead the plan’s development. However, ***it is required that a local public health official and a local emergency management stakeholder is actively involved in the plan development process.*** Depending on the community, expert advisers to the final plan may also include regional health officials, first responders and relevant medical personnel, municipal communications and outreach specialists, or representatives of community groups.

Where appropriate, municipal green teams are encouraged to collaborate with neighboring municipalities on the development of a multi-jurisdictional Extreme Temperature Event Plan.

Timeframe

The time needed to complete this action will vary depending on the extent and complexity of the Extreme Temperature Event Plan being developed. A simple plan could take a month or two to develop, while a more comprehensive plan—one with detailed strategies and a thorough analysis of community resources available to support plan implementation—could take up to six months or a year to complete. The complexity of the plan will be determined in part by the discussion of local population needs during extreme temperature events. For instance, if only a small amount of acreage in the community is vulnerable to severe heat events (due to, for example, historic building stock with poor central cooling systems, or limited green space available to help alleviate excessive nighttime temperatures in a given neighborhood), municipal officials may choose to focus plan strategies on the vulnerabilities identified in that segment of the municipality.

Project costs and resource needs

Project resources will depend on local needs. Plan development stakeholders from the community (emergency management officials, first responders and relevant medical personnel, municipal communications and outreach specialists, or representatives of community groups, etc.) who volunteer their time to the project will facilitate the development of an Extreme Temperature Event Plan at little or no cost. Additionally, technical assistance may be available through local and regional public health agencies. Green teams should consider how much of the plan development for this action could be completed using volunteer time, along with in-kind support from municipal staff and leaders of local or regional emergency response and public health organizations.

What to do, and how to do it (“How to”)

Below we have listed the requirements for earning points for this action.

From within 18 months of the June submission deadline, complete the following 3 steps:

Step 1: Identify key community representatives and form a team to complete the action

- Using the list provided in “Who should lead and be involved in this action,” identify those individuals with critical knowledge for responding to public health challenges as well as those best able to identify vulnerable individuals and

provide assistance during extreme temperature emergencies.

- Green teams **are required to work in close coordination with the local public health officer and emergency management coordinator when developing an Extreme Temperature Event Plan.** These public servants serve key positions to ensure plan recommendations are successful. They are also directly connected to a network of subject matter experts able to offer assistance in plan development, as needed.
- Coordinate those individuals into a team that will identify local health risks and the individuals and segments of the community particularly susceptible to those risks, as well as actions that can be taken to alleviate extreme temperature related symptoms.

Step 2: Conduct one or more discussion sessions to review extreme temperature related health risks and challenges, and brainstorm community solutions

- Assign a facilitator and note-taker to lead and document a group discussion on the elements required in the final Extreme Temperature Event Plan. **See Appendix #1 for suggested discussion prompts.**

Step 3: Develop an Extreme Temperature Event Plan and embed within a local plan or process

- The final Extreme Temperature Event Plan can be a few pages long or be comprised of a set of interrelated documents, but it should include, at a minimum:
 1. A description of the primary decision-making factors, values or principles used to select the strategies included in the plan.
 2. The person/title responsible for declaring heat/cold emergencies.
 3. A discussion of the criteria selected to define an extreme temperature event (both for heat waves and cold snaps) and who is responsible for identifying extreme temperature events.*
 4. A description of resources—people, buildings and equipment—that can be mobilized to implement the strategies in the plan.*
 5. A list of strategies selected to meet the needs of those determined to be most vulnerable during heat waves and cold snaps.*
 6. A compilation of communications' materials to be used for public outreach before and during extreme temperature events.*
 7. A summary of a recommended evaluation process to ensure success in carrying out the strategies outlined in the Plan and provide opportunities for continuous improvement.

See Appendix 1 for recommendations and guidelines on how to prepare these elements. (upload)

- The completed Extreme Temperature Event Plan must be incorporated or referenced in a municipal plan, such as a chapter, section or appendix of the local Emergency Operations Plan or Public Health Plan.

Step 4 (for second-time applicants): Evaluate success of the Extreme Temperature Event Plan

- After the first plan submission, municipalities can continue to earn points for Extreme Temperature Event Plans. To do so, municipalities will be required to review plan implementation success, and update their plan to reflect necessary administrative and programmatic improvements that came to light as a result of an analysis of the monitoring and evaluation indicators selected in Step 3.

We have provided guidance and recommendations in Appendix 1 for implementing Step 2 and part of Step 3 of this action. (You do not need to follow this guidance exactly as long as your final product meets the requirements.)

What to submit to earn points for this action

In order to earn points for this action, the following documentation must be submitted as part of the online certification application in order to verify that the action requirements have been met. The first time a municipality applies for credit for this action, the Extreme Temperature Event Plan must have been created within 18 months of the June submission deadline.

Description of Implementation: In the text box provided on the submission page for this action provide a short narrative (300 words or less) of what has been accomplished and general steps taken to accomplish it.

1. **Upload:** Sign-in sheet(s) from the meeting(s) hosted to review discussion items and develop plan strategies. The participant list must include a public health professional and a local emergency management official.
2. **Upload:** Extreme Temperature Event Plan. The plan must address the required eight elements identified in Step 3 of the What to do and how to do it section of this action.
3. **Upload:** Evidence of how the Extreme Temperature Event Plan has been locally adopted and approved. Examples include:
 - a. Letter from local Emergency Management Coordinator explaining how the Extreme Temperature Event Plan has been incorporated or referenced in the local Emergency Operations Plan.
 - b. Letter from local Public Health Official explaining how the Extreme Temperature Event Plan has been incorporated or referenced in the local Public Health Plan.
 - c. If either of the options above have not yet been completed, proof that the Extreme Temperature Event Plan has been reviewed and endorsed by the municipality's governing body.

Resubmission Requirements

This action will expire three years from the date of the plan originally submitted.

When resubmitting for this action, provide the following:

Description of Implementation: In the text box provided on the submission page for this action provide a short narrative (300 words or less) how the plan was implemented.

1. **Upload:** Evidence that a plan monitoring and evaluation process has been completed including a summary of overall trends from data analysis and needed updates to the plan. Please indicate if, and how, the municipality plans to take specific action(s) to address challenges uncovered through the monitoring and evaluation process.
2. **Upload:** List of local public health and emergency management officials included in the plan update process.
3. **Upload:** An updated Extreme Temperature Event Plan reflecting changes that emerged from the Plan monitoring and evaluation process.

IMPORTANT NOTES: You can upload up to six separate documents for each action. Each file can be a maximum of 20MB. Please excerpt relevant information from large documents. Please remember that your submissions will be viewable by the public as part of your certified report.

Resources

General Resources

U.S. Department of Health and Human Services and Centers for Disease Control and Prevention

Climate Change Communications Tools

<http://ephtracking.cdc.gov/showClimateChangeCommunicationTools.action>

U.S. Department of Health and Human Services and Centers for Disease Control and Prevention

Climate Change and Extreme Heat Events

<http://www.cdc.gov/climateandhealth/pubs/ClimateChangeandExtremeHeatEvents.pdf>

U.S. Department of Health and Human Services and Centers for Disease Control and Prevention

Extreme Cold: A Prevention Guide to Promote Your Personal Health and Safety

<http://emergency.cdc.gov/disasters/winter/pdf/extreme-cold-guide.pdf>

US Environmental Protection Agency

Excessive Heat Events Guidebook

http://www.epa.gov/hiri/about/pdf/EHEguide_final.pdf

New Jersey Public Health Resources

New Jersey Department of Environmental Protection

New Jersey's Air Monitoring Web Site

<http://www.nj.gov/health/epht/>

New Jersey Department of Health

Health Data Fact Sheet 2008

<http://www.state.nj.us/health/chs/monthlyfactsheets/heat.pdf>

New Jersey Department of Health

New Jersey Environmental Public Health Tracking Program

<http://www.nj.gov/health/epht/>

Extreme Temperature Event Communications & Education Resources

Centers for Disease Control and Prevention

Extreme Heat Infographic

<http://ephtracking.cdc.gov/images/extremeheat.jpg>

National Weather Service

Heat Safety Resources

<http://nws.noaa.gov/os/heat/index.shtml#resources>

New Jersey 2-1-1

List of Cooling Shelters

<http://nj211.org/images/Summer%20Heat/NJCoolingCenters.pdf>

New Jersey Department of Health

Heat Illness Training docs for Employers

<https://www.osha.gov/SLTC/heatillness/trainingresources.html>

Minnesota Department of Health

Extreme Heat Training Module

<http://www.health.state.mn.us/divs/climatechange/extremeheat.html#training>

U.S. Department of Health and Human Services and Centers for Disease Control and Prevention

Recognizing, Preventing and Treating Heat-Related Illness

http://www.cdc.gov/nceh/hsb/extreme/Heat_Illness/index.html

Weather Resources

National Weather Service

Extreme Heat Index

<http://www.nws.noaa.gov/os/heat/index.shtml>

National Weather Service

Office of Climate, Water and Weather Services

<http://www.nws.noaa.gov/os/heat/index.shtml>

National Weather Service

Windchill Chart

<http://www.nws.noaa.gov/om/windchill/>

Sample municipal plans:

Kings County, WA

Extreme Heat Emergency Plan

<http://www.countyofkings.com/home/showdocument?id=896>

Lambertville, NJ

Philadelphia, PA

Excessive Heat Plan

<http://oem.readyphiladelphia.org/HeatPlan>

Appendix #1

Recommended Discussion Prompts for Step 2 in the “What to Do” section:

Step 2: Conduct one or more discussion sessions to review extreme temperature related health risks and challenges, and brainstorm community solutions.

- Assign a facilitator and note-taker to lead and document a group discussion on the elements required in the final Extreme Temperature Event Plan. Suggested discussion prompts are provided below:
 - o Consider recent and historical extreme temperature events. In what ways was the municipality successful in responding to community needs? What challenges did you face?
 - o Describe the process currently used to respond to extreme temperature events. What are the highest priority improvements needed? What are the opportunities to replicate and build on previous successes?
 - o Who in the community is most vulnerable to heat waves and cold snaps? Are they geographically distributed, or located throughout the community? What specific challenges and opportunities arise when considering their needs during extreme temperature events?
 - o How can you engage and educate the public about preparing for extreme temperature events and protecting themselves? What barriers exist for the public to better prepare at the individual and household level to cope with extreme heat and cold events? How can municipal officials break down some of these barriers?
- After engaging in the above discussion(s), brainstorm solutions, strategies, actions and processes to include in your Extreme Temperature Event Plan.
 - o What are the most important factors, values or principles for your municipality when developing the strategies to include in an Extreme Temperature Event Plan?
 - o Who should be given responsibility for tracking meteorological and public health data to determine when an extreme temperature event is occurring? How will s/he identify if an extreme temperature event is imminent? How will s/he alert others in the municipality?
 - o What people, places and equipment are available to respond to an extreme temperature event? How can they be mobilized during times of need?
 - o How will you know if you’ve been successful in implementing the strategies developed? What kinds of metrics or indicators would you use to determine Plan success?

Recommended Guidelines and Practices for Plan Elements #4-8 listed in Step 3 in the “What to Do” section.

You do not need to follow this guidance exactly as long as your final product meets the requirements. Required Plan Element #4: A discussion of the criteria selected to define an extreme temperature event (both for heat waves and cold snaps) and who is responsible for identifying extreme temperature events. Criteria for identifying an extreme temperature event. In this section of the plan, address how an extreme temperature event will be identified, and who is responsible for determining that an extreme temperature event is imminent.

- Identify the municipal point of contact responsible for determining what criteria the municipality will use to define an extreme heat event. Such criteria may vary depending on local conditions and time of year. Very high temperatures are more dangerous earlier in the spring as people are not yet acclimated to the heat. Municipal leaders may select from a handful of different criteria:
 - i. Review the forecast daily high temperatures as compared to the historical distribution of temperatures for the week or month in question. One criterion for defining an extreme heat event could be “an actual or forecast daily high temperature that is equal to or exceeds the 95th percentile value from a historical distribution for a defined time period window.” (EPA Excessive Heat Events Guidebook, p. 9). For more information on defining heat stress, please see: <http://www.ncdc.noaa.gov/societal-impacts/heat-stress.php>.
 - ii. Review a composite measure of how hot it feels by comparing the temperature and relative humidity from the Heat Index chart developed by NOAA’s National Weather Service (available at <http://www.nws.noaa.gov/os/heat/index.shtml>). One criterion for defining an extreme heat event could be local Heat Index values that fall into the category of “danger” for three or more consecutive days.
 - iii. Use higher than average forecast nighttime low temperatures. Higher than average nighttime lows can exacerbate heat related morbidity and mortality since people are unable to get relief from the heat. Normal July and August nighttime lows in New Jersey range from 59F to 69F so consecutive nighttime lows in the high 70s can be as much as 30% above average depending on geographic location in New Jersey. (http://climate.rutgers.edu/stateclim_v1/norms/monthly/min.htm)
 - iv. Given the correlation between

high heat events and increased ozone concentrations, municipalities may also choose to define extreme heat events as periods when an air quality alert is issued for ozone. Air quality maps for the state of NJ are available at <http://www.njaqinow.net/>. One criterion for defining an extreme heat event may be a proxy measure of days ranked as “Unhealthy for Sensitive Groups” for the monitoring station closest to your municipality.

- Identify the municipal point of contact responsible for determining what criteria the municipality will use to define an extreme cold event. While normal winter weather temperatures do not constitute an “extreme” event, in the aftermath of a storm or other event that affects the power grid and impedes the movement of fuel in the region, normal winter temperatures can become hazardous to human health. Municipalities may select from a few different criteria for defining an extreme cold event: i. The National Weather Service has developed a tool for determining extreme cold based on how cold it feels to the average person when exposing skin (face, neck, etc.) to winter weather for prolonged periods of time (see: <http://www.nws.noaa.gov/om/windchill/>). One criterion for defining an extreme cold event could be frostbite times of 10 minutes or longer. ii. Given local experiences following Hurricane Sandy, another criterion for defining an extreme cold event could be any day in which daytime highs are not expected to exceed 50F and there are disruptions to the electricity or fuel supply. iii. In an analog to the EPA Excessive Heat Events Guidebook, municipalities may define an extreme cold event as an actual or forecast daily low temperature equal to or exceeding the 95th percentile value from an historical distribution for a defined time period.
- When selecting criteria for identifying extreme temperature events, consider using a combination of locally available data regarding meteorological conditions as well as public health metrics. This process can help ensure that when heating and cooling shelters are opened, they are best situated to meet public health needs unique to your municipality. For example, municipalities with ozone pollution challenges are encouraged to ensure that the air quality criteria is included as a factor for determining when to issue heat wave alerts.

Required Plan Element #5: A description of resources—people, buildings and equipment—that can be mobilized to implement the strategies in the plan.

- Identification of warming and cooling centers. Identify community assets, including both public and private facilities that can be used as heating and cooling centers in extreme temperature events. In identifying cooling and warming centers, it’s important to also determine what capabilities these centers have (e.g., are medical personnel available if needed?) and make sure residents understand their symptoms and know where to go for the right kind of help.
- Libraries, recreation centers, and schools may serve as cooling centers but malls, movie theaters, and other private stores that serve as areas of public gathering may also serve as cooling or warming centers. Extending the hours that such facilities are open may be an easy way to keep at-risk individuals comfortable during the peak of an extreme temperature event. At least one center should be open around the clock during extreme temperature events. Policies should be in place to ensure that everyone has access to a cooling or warming center.
- Public pools, lakes, and spray grounds can serve as an important resource to help residents stay cool; however the cost of membership may be prohibitive. Municipalities should consider providing free or substantially reduced fees for access to families whose children qualify for free or reduce-price lunch.
- Best practices for selecting cooling and warming centers include:
 - o Locating Emergency centers in close proximity to vulnerable populations – those that are most likely to need them.
 - o Whenever possible, allocate transportation resources, such as a jitney service, to bring individuals with limited mobility to and from cooling and warming centers.
 - o Developing neighborhood maps showing cooling and warming centers and their relationship to well-known landmarks.

- o Insuring that cooling and warming centers have a backup source of power in the event of a power outage. Ideally, the backup power source should be green, such as a solar powered generator.

Required Plan Element #6: A list of strategies selected to meet the needs of those determined to be most vulnerable during heat waves and cold snaps.

- Special consideration of at-risk populations. Identify areas and populations that may be especially vulnerable to extreme heat or cold events. Research has shown that certain demographic, behavioral, or regional characteristics may increase the risk of experiencing extreme heat- or cold-related illness or death (and/or the health effects from exposure to ozone). These groups include minorities, the elderly, people living near or below the poverty line, people with physical constraints that prevent them from increasing circulation or perspiration during extreme temperature events (particularly the very young and very old or those taking certain medications), people with cognitive impairments and economic constraints, those who work outdoors, and socially isolated individuals. Also at high risk during extreme heat events are people living in urbanized areas or on the higher floors of buildings due to the urban heat island effect and the effect of heat rising within buildings.
- Determine which persons or populations will be considered to be at especially high risk of adverse health reactions during such an event.
- Identify location(s) of high risk individuals. In some places, this may mean developing a database of high-risk individuals who can opt in to be checked on during an extreme temperature event. In some communities, it may be useful to use the Social Vulnerability Index mapping to identify areas where high-risk individuals reside.
- Coordinate with vulnerable community care facilities (e.g., daycares, summer camps, senior centers, etc.) to

make sure staff and volunteers are educated about the symptoms of heat and/or ozone exposure, and the precautions that should be taken to protect their sensitive communities. • Targeted outreach to community service agencies. Provide additional, targeted outreach to community facilities and organizations serving those at high-risk. This may include giving special attention to communicating with entities such as homeless shelters, nurseries, multiservice agencies with close ties to non-English speaking populations. • Determine which persons or populations will be considered to be at especially high risk of adverse health reactions during such an event. Required Plan Element #7: A compilation of communications materials to be used for public outreach before and during extreme temperature events. • Early Warning System. Identify communications systems that can be used to alert residents about extreme temperature events in real-time. Municipal responses may range from traditional avenues of information dissemination (telephone trees or door-to-door visits) to more technical tools (reverse-911, Nixle, social media, etc.). Propose outreach approaches that best match the needs of your residents. • Information dissemination and education. Use this section of the plan to select what information materials should be distributed in anticipation of an extreme temperature event, as well as how vulnerable or impacted populations will be communicated with during an extreme heat event or weather event that may cause prolonged exposure to cold. The plan should also determine where information materials regarding extreme heat and cold events and associated health concerns should be distributed and/or posted (e.g., key organizational websites, social media, email lists, public broadcast, etc.). These materials should provide information about what actions individuals can take to protect themselves, as well as what public services are available for those who need assistance. • Develop a list of symptoms that individuals should look for (for extreme heat: labored breathing, red skin, elevated temperature, rapid heartbeat, dizziness, nausea, muscle cramps, difficulty breathing, etc. For extreme cold: shivering, exhaustion, slurred speech, confusion, drowsiness, fumbling hands, bright red skin in infants, gray or yellowish skin, numbness), and indicate which are serious enough to seek medical attention immediately. • Remind individuals to take specific precautions for extreme temperature events. Examples of such announcements are available at <http://ephtracking.cdc.gov/images/extremeheat.jpg> and <http://nws.noaa.gov/os/heat/index.shtml#resources>. Some common public health messages include: Heat: o Avoid direct sunlight if possible. o Wear light-colored clothing. o Drink lots of water and avoid alcoholic beverages. o Eat light, low protein foods. o Take frequent breaks. o Stay in air-conditioned environments. o Check on at-risk individuals. o Reschedule outdoor events and meetings. Cold: o Dress warmly (in layers) and stay dry. o Avoid alcohol. o Drink warm beverages if possible. o Insulate dwelling. o Avoid going outdoors if possible. • Inform the public about how they can seek assistance in a heat or cold emergency. Several programs and interventions have been developed by communities across the country who have begun tackling extreme temperature events (primarily related to heat waves) challenges already. A few models to emulate are listed below • NJ 2-1-1 regularly updates a list of warming and cooling shelters located throughout the state. This resource is posted in the “Special Bulletins” section on the home page of the NJ 2-1-1 website: <http://www.nj211.org/>. • Dedicated heat emergency phone lines have been used in several cities with great success. The City of Philadelphia, PA provides a “HeatLine,” which provides information and resources to residents <http://oem.readyphiladelphia.org/Heat>. • Several programs exist to support low-income residents pay for increased home energy bills. Inform the public of sources of assistance, such as Low Income Home Energy Assistance Program (LIHEAP, information is available at <http://www.acf.hhs.gov/programs/ocs/programs/liheap>). • Inform the public of their rights to avoid utility shut offs during hot or cold weather. Water and electricity are particularly important to maintaining health during extreme temperature events. The New Jersey Board of Public Utilities administers a program to ensure that certain individuals in protected categories cannot be subject to having their utilities cut off during the winter months or when the daytime high temperature is forecast to exceed 95F. More information is available at http://www.njleg.state.nj.us/2002/Bills/PL02/62_.PDF • Community members may face other challenges that were identified in the extreme temperature event planning discussion sessions (as described in step 2). Identify opportunities to provide public resources to address weather events, such as providing reduce-fee pool membership for low-income individuals, or providing healthy meals at cooling centers for those who cannot cook in their homes due to the heat. Consider whether there are local ordinances that prevent residents from having access to cost-effective heating and cooling resources within their residences. For example, we have learned, anecdotally, that some New Jersey residents can face local ordinances that make it difficult for renters to install air conditioners in their homes. Brainstorm ways to decrease this area of vulnerability. • Cancellation of public events during a heat or cold emergency. Provide guidance on the cancellation of public events such as festivals, sporting events, races or other activities where individuals may be particularly susceptible to suffering health effects from exposure to heat or cold (e.g., instead of a “rain date”, you could have a “adverse weather date” which could encompass ozone alert days, etc.).

- Access to on-going training and education opportunities for key officials and community leaders. The effects of extreme heat and cold on vulnerable individuals can be difficult to imagine for those who have not experienced this personal stressor. To help build up the level of understanding of the issues addressed in the plan among your community leaders, consider a training and education process. This can help to elevate their willingness to support response activities. • Developed training modules are available at <http://www.health.state.mn.us/divs/climatechange/extremeheat.html#training> and http://www.cdc.gov/nceh/hsb/extreme/Heat_Illness/index.html. • There are a panoply of challenges that temperature-related climate stressors can exacerbate. Consider creating a forum for community leaders to learn about these challenges, including:
 - o Challenges with food preparation: During extreme heat events, indoor cooking becomes impractical since it increases the temperature in residents without access to air conditioning.
 - o Cost of access to public pools or swimming beaches: In some areas this leads residents to swim in unguarded rivers and ponds.
 - o Transportation: Residents who rely upon public transportation, bicycling, and walking to get to work or school may find themselves exposed to extreme temperatures and poor air quality during their commute.

Required Plan Element #8: A summary of the recommended evaluation process to ensure success carrying out the strategies outlined in the plan and provide opportunities for continuous improvement. • Suggested evaluation and continuous improvement approaches. Consider how to incorporate the lessons learned by your municipality to help you fine-tune your approach to addressing extreme heat and cold events. This section should address, but not be limited to: • A proposed timeline for reviewing and adopting new criteria for identifying when an extreme temperature event is imminent. • A proposed timeline for re-assessing community assets that could be used in times of need. • Identify a minimum of two performance measurement indicators will commit to track over the next 3 years. Develop your own performance measurement indicators to track, or select from the some of the suggested options listed below:

- Desired outcome: Improved outreach to vulnerable populations
Indicator: Performance self-assessment of effectiveness of outreach to most at-risk segments of community
Data source: Feedback collected from community members representative of at-risk segments of local population (as defined in the Extreme Temperature Event Plan)
Process: Engage target audiences (and/or relevant social services agency representatives) in an evaluation process to determine the effectiveness of your outreach. Requesting direct feedback from members of the most at-risk communities allows municipal officials to uncover “bright spots” as well as areas for improvement. Additionally, monitoring and evaluation techniques that involve targeted public outreach provide the added benefit of continuing to build awareness about municipal efforts in preparing for extreme temperature events. Two of the most commonly used feedback methodologies include questionnaires and focus groups. When drafting questions for either method, consider engaging a risk communications expert to solicit the most nuanced input from your evaluation responses. For example, municipalities that have identified residents over 65 as being among the most at-risk, may include questions on the accessibility of heating and cooling centers to residents with limited mobility. Similarly, if a municipality has determined that residents who do not speak English are among those most at-risk, they may ask about the clarity of the talking points covered in radio ads or the extent to which they understood informational materials distributed in preparation for summer heat waves.
- Desired outcome: Decreased number of emergency distress calls from individuals suffering of extreme heat/cold exposures
Indicator: Number of emergency distress calls due to extreme temperature events.
Data source: Local Emergency Medical Services (EMS) agencies (such as fire and police departments, volunteer ambulance corps, rescue squads, etc.).
Process: Partner with local EMS agency(ies) to establish a protocol for tagging distress calls related to extreme hot/cold weather exposure. When first responders arrive to deliver emergency medical services, ask them to document a wide range of observations, both medical (patient vital signs, symptoms list, relevant medical history, etc.) and clerical (time of day, street address, etc.). At the community’s request, the EMS responders could also document weather observations (temperature, precipitation, etc.) or whether or not the distress call took place during an official extreme temperature event (yes/no question). The data should be collected from EMS agencies on an annual basis, at a minimum, and incidence dates should be cross-referenced with extreme temperature events to analyze trends. Some factors to review include understanding the most commonly requested medical interventions, or the geographic areas where EMS professionals are most in demand during extreme temperature events. Note: EMS agencies using paper-based systems will likely find this kind of indicators’ monitoring a challenge. Municipal officials may consider encouraging EMS agency leaders to upgrade their operations to adopt an electronic charting system, if they’ve not already done so. The New Jersey Department of Health offers a program to support EMS agencies in establishing a free electronic platform that can bring national EMS information management standards and best practice to NJ municipalities. (Contact Tim Seplaki at the NJ Department of Health Office of Emergency Medical Services for more information.)
- Desired outcome: Improved community education regarding extreme temperature events
Indicator: Number and

variety of informational and educational materials and resources related to extreme temperature events. Data source: Local public health official and/or public outreach specialist. Process: Partner with local public health officials and/or public outreach specialist(s) to review the types and kinds of outreach efforts being used to education residents and community stakeholders about personal preparedness for coping with extreme hot/cold weather events and municipal resources available to assist individuals in need. The effectiveness of engaging and educating community members should be analyzed periodically.

To do so, establish local focus groups with whom to: a) “pre-test” talking points, messaging frames, and draft materials and/or b) review recent education and outreach campaigns to solicit feedback and suggestions for improved communications tools and strategies.

Municipal officials and partners should use a variety of outreach methodologies to disseminate important information to residents and to promote available support services for those in need. Consider innovative community engagement strategies in addition to existing, traditional forms of outreach. These may include emergency communications technologies (e.g., Nixle), social media platforms (e.g., Facebook, Twitter), Community Emergency Response Teams, and “block leaders” from neighborhood associations and community-based organizations. Each avenue for information dissemination will reach a slightly different audience and include a different set of metrics to track. iv. Desired outcome: Increased usage of heating and cooling shelters Indicator: Debrief regarding usage (number of visitors and perceived quality of the experience) of heating and cooling centers. Data source: Municipal staff, social service agencies and volunteers involved in activating heating and cooling shelters during extreme temperature events. Process: Establish a structured debriefing process and performance measurement categories for heating and cooling centers. Encourage shelter staff and volunteers to listen for anecdotes which can shed light as to why residents are using (or not using) municipal heating and cooling centers during extreme temperature events. Municipal officials may find that heating and cooling shelters are under-used for reasons that are not completely clear without further exploration. Potential users may perceive overnight shelters to be unsafe or unappealing. A sampling of a typical visitor’s experience can provide important raw data when evaluating overall success in planning for and coping with extreme temperature events. Solicit ideas from key informants on potential improvements to shelter operations.