3.11 – Extreme Temperatures Hazard Profile

The Extreme Temperature Hazard in New York State is often underestimated because other natural hazards occur more frequently (e.g., Floods, Tornadoes, Hurricanes) and its effects can vary based on region and vulnerable population within the State. The Mitigation Plan Development Team researched the extreme temperature hazard as it affects the State. Contents of this section result from research and outreach including the following sources:

- New York State Emergency Management Office, *New York State Comprehensive Emergency Management Plan Vol. II*
- National Weather Service, www.nws.noaa.gov/om//brochures/heat_wave.sthm
- Federal Emergency Management Agency, www.fema.gov/hazard/heat/heat_before.shtm
- New York City Office of Emergency Management, *New York City Heat Emergency Plan*
- City of Long Beach New York, http://www.longbeachny.org/index.asp?Type=B_BASIC&SEC=%7BF277C090-D853-4DA5-A92C-8D99AFB90965%7D
- National Climatic and Data Center, http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms
- State of California, *2007 Multi-Hazard Mitigation Plan.*

The following chart provides the definition of an extreme temperature event:

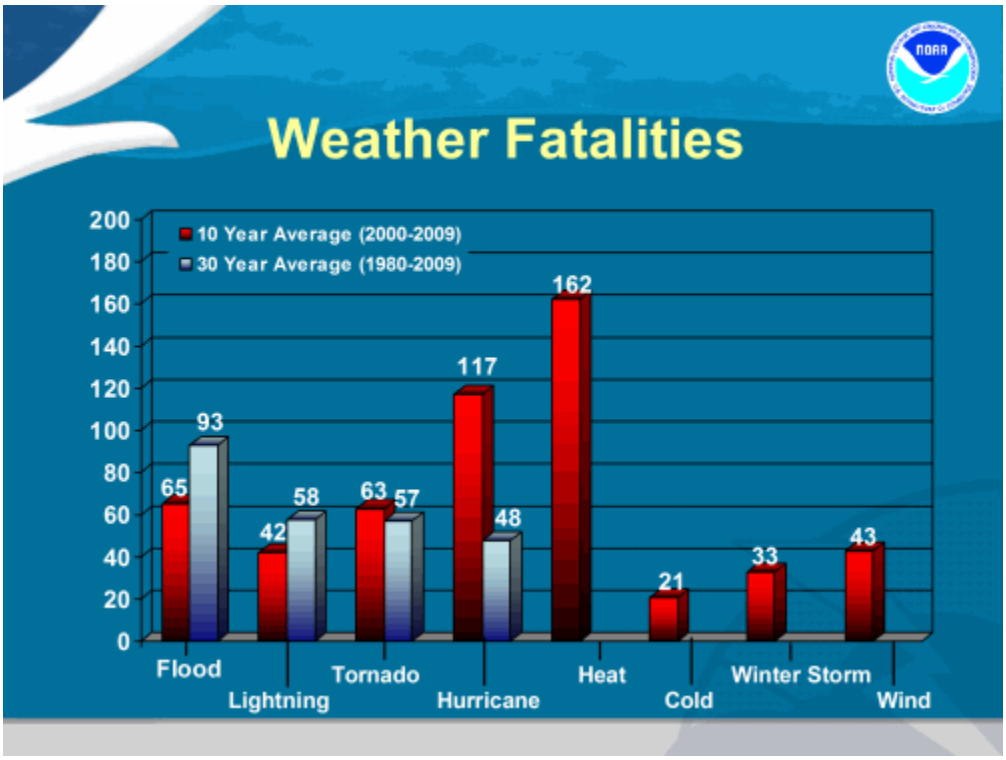
Term	Definition
Extreme Heat	Temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks are defined as extreme heat. Humid or muggy conditions, which add to the discomfort of high temperatures, occur when a "dome" of high atmospheric pressure traps hazy, damp air near the ground. Excessively dry and hot conditions can provoke dust storms and low visibility. Droughts occur when a long period passes without substantial rainfall. A heat wave combined with a drought is a very dangerous situation.
Extreme Cold	Although no specific definition exists for Extreme Cold, the following are characteristics of an Extreme Cold event: Temperatures at or below freezing for an extended period of time, for Northern States temperatures at or below zero degrees for an extended period of time. Note that Extreme Cold events are usually part of Winter Storm events but can occur during anytime of the year and have devastating effects on New York State agricultural production.

The Concept of Extreme Heat

Extreme heat is defined as temperatures which hover 10 degrees or more above the average high temperature for a region and last for several weeks, and though the event may not be as notable as other hazards which affect NYS, its effects can have devastating consequences. While it is hard to quantify the exact total number of deaths which are advanced by heat wave weather, in a normal year there are about 162 documented deaths due to summer heat.

Its annual fatality potential is matched by no other natural hazard profiled by NYS (**See Figure 3-117**). In a 40-year period from 1936 – 1975, nearly 20,000 people were killed in the United States by the effects of heat and solar radiation. In the disastrous heat wave of 1980, more than 1,250 people died as a result of extreme heat. In terms of New York State, from 1994 – 2006 there have been 86 fatalities as a result of extreme heat; 79 took place in a period of 7 years, ranging from 1999 - 2006.

Figure 3-117
Weather Fatalities



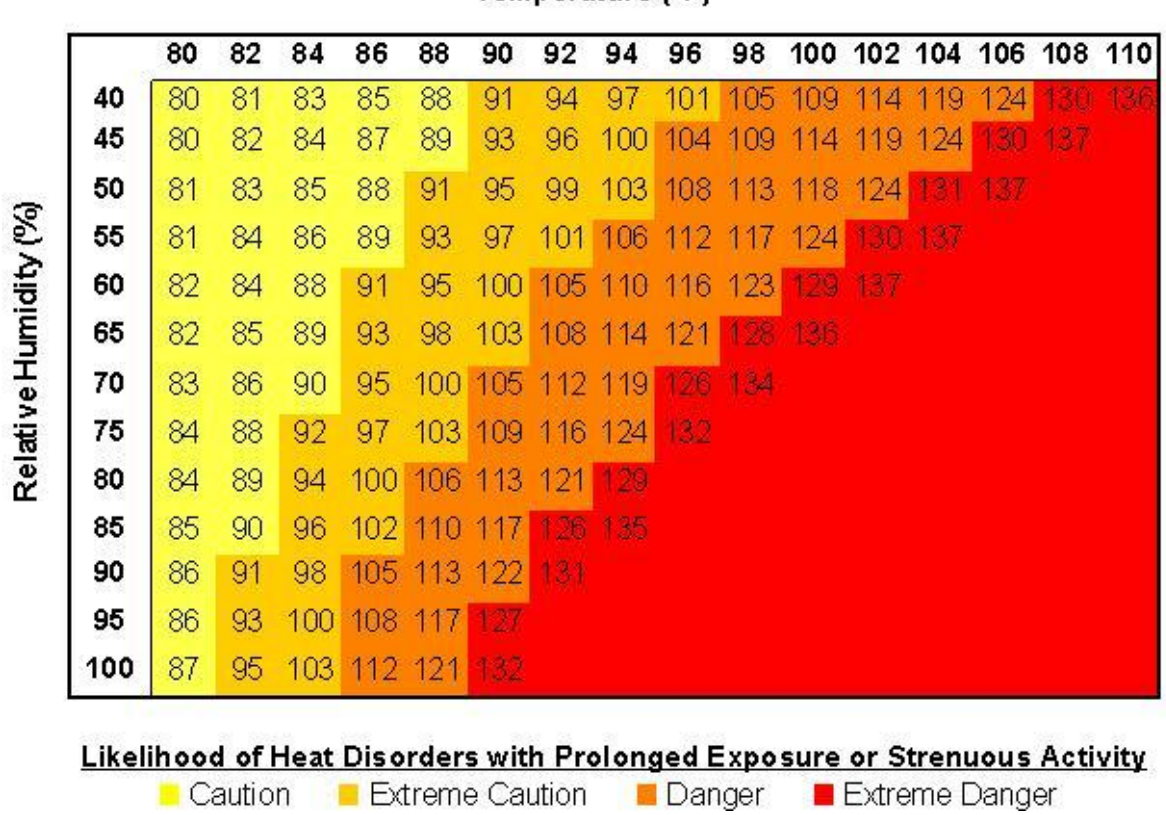
**Source: National Weather Service.*

Heat Index

Created by the National Weather Service, **Figure 3-118**, the Heat Index (HI), is a chart which accurately measures apparent temperature of the air as it increases with the relative humidity. The Heat Index can be used to determine what effects the temperature and humidity can have on the population. **Table 3-47** describes the adverse effects that prolonged exposures can have on individuals. To determine the Heat Index, you need the temperature and the relative humidity. Once both values are known, the Heat Index will be the corresponding number with both values. That number provides how it really feels. It is important to know that the Heat Index (HI) values are devised for shady, light wind conditions. Exposure to full sunshine can increase HI values by up to 15 degrees. Also, strong winds, particularly with very hot, dry-air can be extremely hazardous to individuals.

Figure 3-118

Heat Index
Accurate measurement of temperature during an extreme heat event



Source: National Weather Service

Table 3-47

Adverse Effects of Prolonged Heat Exposure

Category	Heat Index	Health Hazards
Extreme Danger	**130°F - Higher**	**Heat Stroke/ Sunstroke is likely with continued exposure.**
Danger	**105°F - 129°F**	**Sunstroke, muscle cramps, and/or heat exhaustion possible with prolonged exposure and /or physical activity.**
Extreme Caution	**90°F - 105°F**	**Sunstroke, muscle cramps, and/or heat exhaustion possible with prolonged exposure and /or physical activity.**
Caution	**80°F - 90°F**	**Fatigue possible with prolonged exposure and/or physical activity.**

The National Weather Service (NWS) provides alerts when Heat Indices approach hazardous levels. **Table 3-48** provides the alert procedures for the National Weather Service. In the event of an extreme heat advisory, The National Weather Service does the following:

- Includes HI values and city forecasts;
- Issues special weather statements including who is most at risk, safety rules for reducing risk, and the extent of the hazard and HI values;
- Provides assistance to State/Local health officials in preparing Civil Emergency Messages in severe heat waves.

Table 3-48

Product	Criteria
Heat Advisory (NYC)	The NWS issues a Heat Advisory within 24 hours of the onset of the following conditions: Heat Index of at least 100°F but less than 105°F for any period of time, or when nighttime lows are above 80°F for any period of time. (Note: This weather product was modified for New York City. The national definition places the heat index requirement at 105°F).
Excessive Heat Watch	The NWS issues an Excessive Heat Watch within 24 to 48 hours of the onset of the following conditions: Heat Index of at least 105ºF for more than 3 hours per day for 2 consecutive days, or a Heat Index of at least 115ºF for any period of time.
Excessive Heat Warning	The NWS issues an Excessive Heat Warning within 24 hours of the onset of the following conditions: Heat Index of at least 105°F for more than 3 hours per day for 2 consecutive days, or a Heat Index of more than 115°F for any time period.

***Source: NYC Heat Emergency Plan**

Health-related ailments

Exposure to excessive heat can pose a number of health risks to individuals. **Table 3-47** below defines different health hazards and some of the symptoms associated with extreme heat conditions.

Table 3-47

Health Hazard	Symptoms
Sunburn	Redness and pain. In severe cases: swelling of skin, blisters, fevers, and headaches.
Dehydration	Excessive thirst, dry lips and slightly dry mucous membranes
Heat Cramps	Painful spasms, usually in muscles of legs and abdomen, and possible heavy sweating
Heat Exhaustion	Heavy sweating; weakness; cold, pale and clammy skin; weak pulse; possible fainting and vomiting
Heat Stroke	High body temperature (104ºF or higher), hot and dry skin, rapid and strong pulse, and possible coma

Source: NYC Heat Emergency Plan,

Figure 3-119 below is an excerpt from the National Weather service pertaining to the effects of heat on the human body and risks of over exposure.

Figure 3-119

National Weather Service Publications: Heat Wave

How Heat Affects the Body

Human bodies dissipate heat by varying the rate and depth of blood circulation, by losing water through the skin and sweat glands and-as the last extremity is reached-by panting, when blood is heated above 98.6 degrees. The heart begins to pump more blood, blood vessels dilate to accommodate the increased flow, and the bundles of tiny capillaries threading through the upper layers of skin are put into operation. The body's blood is circulated closer to the skin's surface, and excess heat drains off into the cooler atmosphere. At the same time, water diffuses through the skin as perspiration. The skin handles about 90 percent of the body's heat dissipating function.

Sweating, by itself, does nothing to cool the body, unless the water is removed by evaporation; high relative humidity retards evaporation. The evaporation process itself works this way: the heat energy required to evaporate the sweat is extracted from the body, thereby cooling it. Under conditions of high temperature (above 90 degrees) and high relative humidity, the body is doing everything it can to maintain 98.6 degrees inside. The heart is pumping a torrent of blood through dilated circulatory vessels; the sweat glands are pouring liquid-including essential dissolved chemicals, like sodium and chloride onto the surface of the skin.

Too Much Heat

Heat disorders generally have to do with a reduction or collapse of the body's ability to shed heat by circulatory changes and sweating, or a chemical (salt) imbalance caused by too much sweating. When heat gain exceeds the level the body can remove, or when the body cannot compensate for fluids and salt lost through perspiration, the temperature of the body's inner core begins to rise and heat-related illness may develop.

Ranging in severity, heat disorders share one common feature: the individual has overexposed or over exercised for his age and physical condition in the existing thermal environment.

Sunburn, with its ultraviolet radiation burns, can significantly retard the skin's ability to shed excess heat. Studies indicate that, other things being equal, the severity of heat disorders tend to increase with age-heat cramps in a 17-year-old may be heat exhaustion in someone 40 and heat stroke in a person over 60.

Acclimatization has to do with adjusting sweat-salt concentrations, among other things. The idea is to lose enough water to regulate body temperature, with the least possible chemical disturbance.

The Concept of Extreme Cold

Extreme Cold conditions typically accompany Winter Storm events and it is recommended to review the Winter Storm hazard profile of this plan for additional information. NOAA notes the following:

> Exposure to cold can cause frostbite or hypothermia and become life-threatening. Infants and elderly people are most susceptible. What constitutes extreme cold varies in different parts of the country. In the South, near freezing temperatures are considered extreme cold. Freezing temperatures can cause severe damage to citrus fruit crops and other vegetation. Pipes may freeze and burst in homes that are poorly insulated or without heat. In the North, extreme cold means temperatures well below zero.

Table 3-50 provides National Weather Service terms to know for the Extreme Cold hazard.

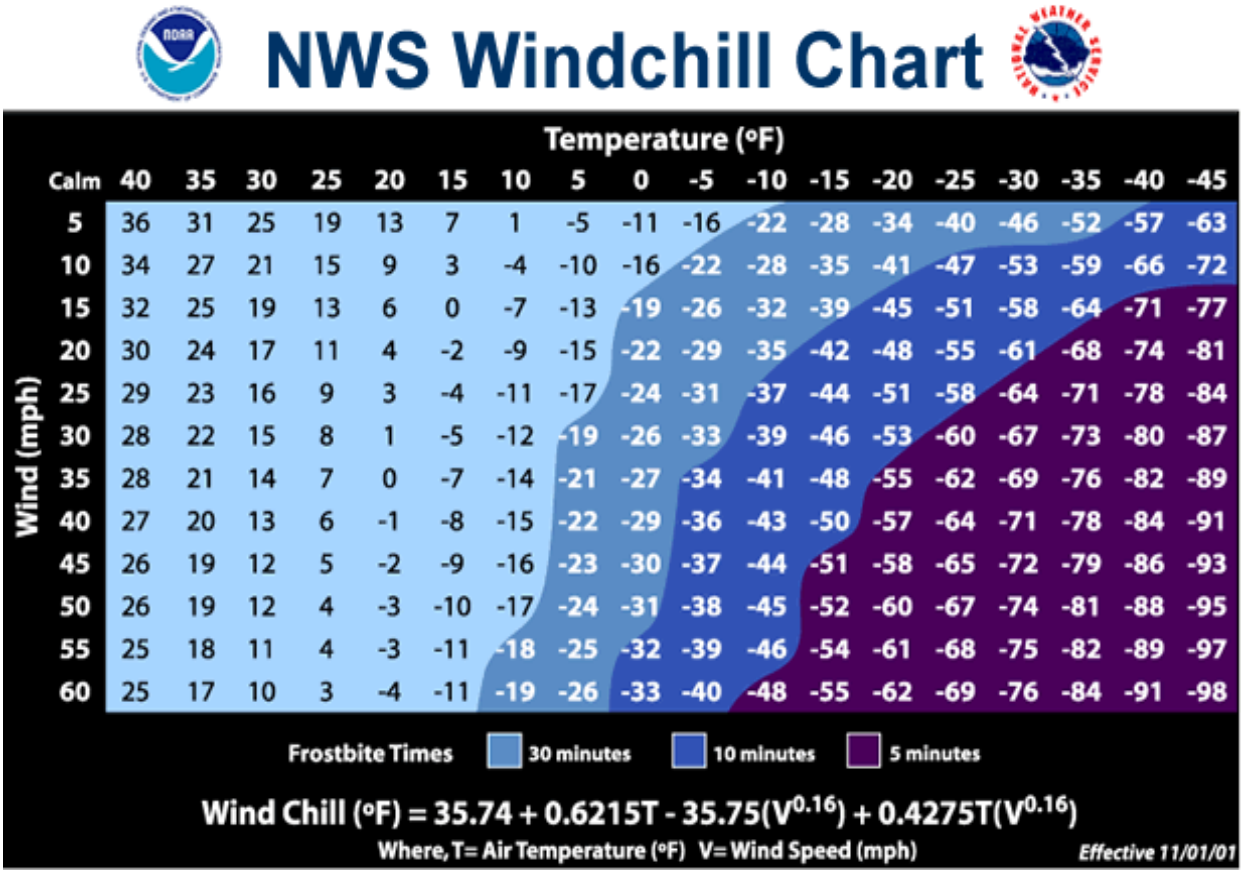
Table 3-50

Wind Chill	Is not the actual temperature but rather how wind and cold feel on exposed skin. As the wind increases, heat is carried away from the body at an accelerated rate, driving down the body temperature. Animals are also affected by wind chill; however, cars, plants and other objects are not.
Frostbite	Is damage to body tissue caused by extreme cold. A wind chill of -20 degrees Fahrenheit (F) will cause frostbite in just 30 minutes. Frostbite causes a loss of feeling and a white or pale appearance in extremities, such as fingers, toes, ear lobes or the tip of the nose. If symptoms are detected, get medical help immediately! If you must wait for help, slowly re-warm affected areas. However, if the person is also showing signs of hypothermia, warm the body core before the extremities.
Hypothermia	Is a condition brought on when the body temperature drops to less than 95 degrees Fahrenheit (F). It can kill. For those who survive, there are likely to be lasting kidney, liver and pancreas problems. Warning signs include uncontrollable shivering, memory loss, disorientation, incoherence, slurred speech, drowsiness and apparent exhaustion. Take the person's temperature. If below 95 degrees F, seek medical care immediately!

Source: NOAA

Figure 3-120, on the next page**,** depicts NOAA's Wind Chill Chart. NOAA's 2001 "Winter Storms The Deceptive Killers" preparedness guide documents that 50% of injuries related to the Cold happen to people over 60 years old, more than 75% happen to males, and about 20% occur in the home.

Figure 3-120



Previous Significant Occurrences

Table 3-51
National Climatic Data Center Recorded Extreme Temperature Events

Location or County	Date	Type	Dth	Inj	PrD
1 Areawide	02/01/1993	Extreme Cold	0	0	50K
2 Mid Hudson Valley	05/11/1993	Record Heat	0	0	0
3 Areawide	10/08/1993	Record Heat	0	0	0
4 Mohawk Valley	11/15/1993	Record Heat	0	0	0
5 WESTCHESTER	01/16/1994	Extreme Cold	1	0	0
6 Susquehanna Region	04/15/1994	Record Heat	0	0	0

7 Areawide	06/15/1994	Record Heat	0	50	0
8 Areawide	11/04/1994	Record Heat	0	0	0
9 Areawide	01/12/1995	Record Heat	0	0	0
10 Northern New York	03/08/1995	Record Heat	0	0	0
11 Northern New York	03/13/1995	Record Heat	0	0	0
12 Northern New York	03/14/1995	Record Heat	0	0	0
13 Areawide	06/19/1995	Record Heat	0	0	0
14 Northern	06/25/1995	Record Heat	0	0	0
15 KINGS	07/13/1995	Heat Wave	7	0	0
16 St. Lawrence Valley	07/13/1995	Record Heat	0	0	0
17 Areawide	07/14/1995	Record Heat	0	0	0
18 Southern Tier	07/15/1995	Record Heat	0	0	0
19 Southern Tier	08/03/1995	Record Heat	0	0	0
20 Southern Tier	08/18/1995	Record Heat	0	0	0
21 St Lawrence Co	10/20/1995	Record Warmth	0	0	0K
22 NYZ009 - 015>018 - 022>025 - 036>037 - 044>046 - 055>057 - 062	01/05/1996	Extreme Cold	0	0	0
23 NYZ032>033 - 038>043 - 047>054 - 058>061 - 063>066	01/06/1996	Extreme Cold	0	0	0
24 NYZ051>052	01/19/1996	Excessive Heat	0	0	0
25 NYZ056	02/04/1996	Extreme Cold	0	0	0
26 NYZ022>025 - 044>046 - 055>057 - 062	03/08/1996	Extreme Cold	0	0	0
27 NYZ022>025 - 044>046 - 055>057 - 062	05/07/1996	Extreme Cold	0	0	0
28 NYZ016>018	05/30/1996	Extreme Cold	0	0	0
29 NYZ009 - 015>018 - 022>025 - 036>037 - 044>046 - 055>057 - 062	10/04/1996	Extreme Cold	0	0	0
30 NYZ009 - 015>018 - 022>025 - 036>037 - 044>046 - 055>057 - 062	01/17/1997	Extreme Windchill	0	0	0

31 NYZ026>031 - 034>035	01/17/1997	Extreme Windchill	0	0	0
32 NYZ077	01/19/1997	Extreme Cold	1	0	0
33 NYZ026>031 - 034>035	01/19/1997	Extreme Cold	0	0	0
34 NYZ032>033 - 038>043 - 047>054 - 058>061 - 063>066	03/27/1998	Excessive Heat	0	0	0
35 NYZ032>033 - 038>043 - 047>054 - 058>061 - 063>066	12/02/1998	Record Warmth	0	0	0
36 NYZ026>031 - 034>035	12/30/1998	Extreme Cold	0	0	0
37 NYZ032>033 - 038>043 - 047>054 - 058>061 - 063>066	06/07/1999	Excessive Heat	0	0	0
38 NYZ067>081	07/04/1999	Excessive Heat	33	0	0
39 NYZ032>033 - 038>043 - 047>054 - 058>061 - 063>066	07/04/1999	Excessive Heat	0	0	0
40 NYZ032>033 - 038>043 - 047>053	01/17/2000	Extreme Cold	0	0	0
41 NYZ067>081	01/17/2000	Extreme Windchill	3	0	0
42 NYZ067>081	01/21/2000	Extreme Windchill	0	0	0
43 NYZ067>081	01/27/2000	Extreme Windchill	0	0	0
44 NYZ032>033 - 038>043 - 047>054 - 058>061 - 063>066	03/08/2000	Record Warmth	0	0	0
45 NYZ009 - 015>018 - 022>025 - 036>037 - 044>046 - 055>057 - 062	09/28/2000	Extreme Cold	0	0	0
46 NYZ009 - 015>018 - 022>025 - 036>037 - 044>046 - 055>057 - 062	08/01/2001	Excessive Heat	0	0	0
47 NYZ067>078 - 080	08/08/2001	Excessive Heat	4	1	0

48 NYZ038>040 - 049>050 - 052>054 - 058>061 - 064>066	08/08/2001	Excessive Heat	0	0	0
49 NYZ052	12/01/2001	Record Warmth	0	0	0
50 NYZ052	04/15/2002	Record Warmth	0	0	0
51 NYZ064>065	04/27/2002	Freeze	0	0	0
52 NYZ009 - 022>025 - 036>037 - 044>046 - 055>057	05/17/2002	Extreme Cold	0	0	63K
53 NYZ038>043 - 047>054 - 058>061 - 063>066	05/20/2002	Freeze	0	0	0
54 NYZ041>043 - 047>048 - 051 - 054 - 058 - 061 - 063	05/22/2002	Freeze	0	0	0
55 NYZ067>081	07/02/2002	Excessive Heat	0	0	0
56 NYZ067>081	07/29/2002	Excessive Heat	0	0	0
57 NYZ032>033 - 042	10/09/2002	Freeze	0	0	0
58 NYZ032>033 - 038>043 - 047>054 - 058>061 - 063>066	10/15/2002	Freeze	0	0	0
59 NYZ009 - 018 - 036>037 - 044>046	03/03/2003	Extreme Cold/wind Chill	0	0	0
60 NYZ009 - 015>018 - 022>025 - 036>037 - 044>046 - 055>057 - 062	01/10/2004	Extreme Cold/wind Chill	0	0	180K
61 NYZ026>031 - 034>035 - 087	01/13/2004	Extreme Cold/wind Chill	0	0	0
62 NYZ009 - 037	01/13/2004	Extreme Cold/wind Chill	0	0	20K
63 NYZ067>081	01/15/2004	Extreme Cold/wind Chill	0	0	0
64 NYZ032>033 - 038>043 - 047>054 - 058>061 - 063>066 - 082>084	01/15/2004	Extreme Cold/wind Chill	0	0	0

65 NYZ009 - 015>018 - 022>025 - 036>037 - 044>046 - 055>057 - 062	01/15/2004	Extreme Cold/wind Chill	0	0	220K
66 NYZ026>031 - 034>035 - 087	01/15/2004	Extreme Cold/wind Chill	0	0	0
67 NYZ087	01/26/2004	Extreme Cold/wind Chill	1	0	0
68 NYZ009	12/20/2004	Extreme Cold/wind Chill	0	0	0
69 NYZ009 - 037	01/18/2005	Extreme Cold/wind Chill	0	0	0K
70 NYZ026>031 - 034>035 - 087	01/18/2005	Extreme Cold/wind Chill	0	0	0
71 NYZ026>027	01/20/2005	Extreme Cold/wind Chill	0	0	0
72 NYZ009 - 016>018 - 023 - 025 - 036>037 - 044>046 - 056>057	01/21/2005	Extreme Cold/wind Chill	0	0	0K
73 NYZ009 - 015>018 - 022>025 - 036>037 - 044>046 - 055>057 - 062	01/21/2005	Extreme Cold/wind Chill	0	0	0K
74 NYZ009 - 015>018 - 022>025 - 036>037 - 044>046 - 055>057	01/23/2005	Extreme Cold/wind Chill	0	0	0K
75 NYZ026>031 - 034>035 - 087	01/23/2005	Extreme Cold/wind Chill	0	0	0
76 NYZ009 - 018 - 036>037 - 044>046 - 056>057	01/27/2005	Extreme Cold/wind Chill	0	0	0K
77 NYZ080>081	01/27/2005	Extreme Cold/wind Chill	3	0	0
78 NYZ010	07/13/2005	Excessive Heat	0	0	0
79 NYZ009 - 015>018 -	12/14/2005	Cold/wind	0	0	0K

022>025 - 036>037 - 044>046 - 055>057 - 062		Chill			
80 NYZ009 - 015>018 - 022>025 - 036>037 - 044>046 - 055>057 - 062	01/01/2006	Heat	0	0	0
81 NYZ026>031 - 034>035 - 087	01/15/2006	Extreme Cold/wind Chill	0	0	0
82 NYZ026>027 - 029>031 - 034 - 087	02/18/2006	Extreme Cold/wind Chill	0	0	0
83 NYZ028 - 035	02/18/2006	Extreme Cold/wind Chill	0	0	0
84 NYZ026>031 - 034>035 - 087	02/27/2006	Extreme Cold/wind Chill	0	0	0
85 NYZ026>031 - 034>035 - 087	08/01/2006	Excessive Heat	0	0	0
86 NYZ067>081	08/01/2006	Excessive Heat	42	0	0
87 NYZ026>031 - 034>035 - 087	01/25/2007	Extreme Cold/wind Chill	0	0	0K
88 NYZ032 - 038>043 - 047>054 - 058>061 - 063>066 - 082	01/25/2007	Cold/wind Chill	0	0	0K
89 NYZ072 - 075	02/04/2007	Extreme Cold/wind Chill	3	0	0K
90 NYZ026>031 - 034>035 - 087	03/06/2007	Extreme Cold/wind Chill	0	0	0K
91 NYZ073	03/06/2007	Extreme Cold/wind Chill	1	0	0K
92 NYZ026>031 - 034>035 - 087	03/09/2007	Extreme Cold/wind Chill	0	0	0K
93 NYZ018 - 056	10/05/2007	Excessive Heat	0	0	0K
94 NYZ049 - 052>053 -	06/09/2008	Heat	0	0	0K

059>060 - 064					
95 NYZ032 - 042	12/07/2008	Cold/wind Chill	0	0	0K
96 NYZ026>031 - 034>035 - 087	12/08/2008	Cold/wind Chill	0	0	0K
97 NYZ058 - 063	12/22/2008	Cold/wind Chill	0	0	0K
98 NYZ032 - 038>040 - 042 - 047>048 - 051 - 054 - 058 - 061 - 063 - 066 - 082	01/01/2009	Cold/wind Chill	0	0	0K
99 NYZ026>031 - 034>035 - 087	01/14/2009	Extreme Cold/wind Chill	0	0	0K
100 NYZ032 - 082	01/14/2009	Cold/wind Chill	0	0	0K
101 NYZ033 - 038>043 - 054 - 058 - 061 - 063 - 066 - 082	01/16/2009	Cold/wind Chill	0	0	0K
102 NYZ033 - 038>043 - 054 - 058 - 061 - 063 - 066 - 082	01/16/2009	Extreme Cold/wind Chill	0	0	0K
103 NYZ032 - 047 - 051 - 058 - 063 - 082	01/16/2009	Cold/wind Chill	0	0	0K
104 NYZ032 - 042>043 - 082	01/25/2009	Cold/wind Chill	0	0	0K
105 NYZ032 - 042>043 - 082	01/25/2009	Extreme Cold/wind Chill	0	0	0K
106 NYZ032 - 033	03/03/2009	Cold/wind Chill	0	0	0K
107 NYZ032 - 042	01/29/2010	Cold/wind Chill	0	0	0K
108 NYZ032 - 042 - 082	01/29/2010	Cold/wind Chill	0	0	0K
Total:			**99**	**51**	**533K**

Source: http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwevent~storms

Assessment of Local Vulnerability to Extreme Temperature Hazards

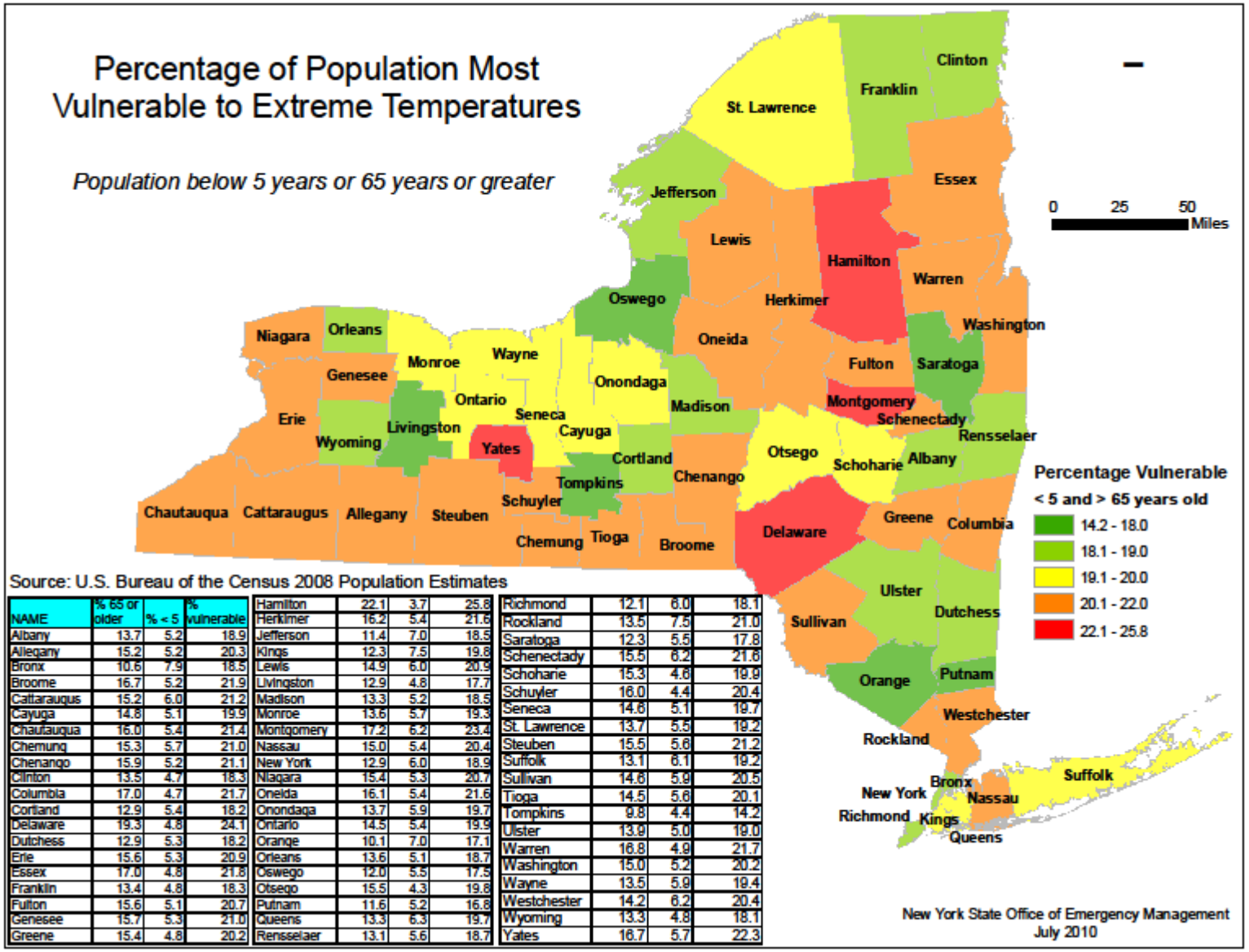
Vulnerable Populations

Situational and physical characteristics help to identify vulnerable populations that may not comfortably or safely access and use disaster resources. Specifically, when discussing heat related emergency preparedness, the following groups could be considered vulnerable or at greater risk in a heat emergency. Information on some of the following identified populations can be obtained from the United States Census Bureau website, http://www.census.gov/:

- Homeless
- Infants and small children under age five
- Women who are pregnant
- Elderly people (age 65 and older)
- Persons who have obesity
- Persons who are bedridden
- Persons with mental illness/disabilities
- Persons with cognitive disorders
- Persons with medical conditions (e.g., heart disease, diabetes, high blood pressure, insulin)
- Persons requiring life-saving medications (e.g., for high blood pressure, depression, insomnia)
- Persons who utilize medical equipment (e.g., ventilators, oxygen, G-tubes)
- Individuals with drug or alcohol addictions
- Persons who use mobility devices (e.g., wheelchairs, walkers, canes)
- Persons who are non-ambulatory
- Those with sensory impairments (blind/visually impaired or deaf/hard of hearing)
- Persons who are under extreme working conditions
- Persons who are poor
- Persons who are socially isolated
- Persons who do not speak English with minimal access to information

The following map contains a representation of vulnerable population by County. **Figure 3-121** contains information of individuals 65 and older and 5 and younger. This map contains a broad stroke of information for the Counties. When profiling Extreme Temperatures, it is incumbent upon Local Municipalities to investigate their Jurisdiction's number of vulnerable population to gain an accurate assessment of the represented age groups.

Figure 3-121



NAME	% 65 or older	% < 5	% vulnerable
Albany	13.7	5.2	18.9
Allegany	15.2	5.2	20.3
Bronx	10.6	7.9	18.5
Broome	16.7	5.2	21.9
Cattaraugus	15.2	6.0	21.2
Cayuga	14.8	5.1	19.9
Chautauqua	16.0	5.4	21.4
Chemung	15.3	5.7	21.0
Chenango	15.9	5.2	21.1
Clinton	13.5	4.7	18.3
Columbia	17.0	4.7	21.7
Cortland	12.9	5.4	18.2
Delaware	19.3	4.8	24.1
Dutchess	12.9	5.3	18.2
Erie	15.6	5.3	20.9
Essex	17.0	4.8	21.8
Franklin	13.4	4.8	18.3
Fulton	15.6	5.1	20.7
Genesee	15.7	5.3	21.0
Greene	15.4	4.8	20.2
Hamilton	22.1	3.7	25.8
Herkimer	16.2	5.4	21.6
Jefferson	11.4	7.0	18.5
Kings	12.3	7.5	19.8
Lewis	14.9	6.0	20.9
Livingston	12.9	4.8	17.7
Madison	13.3	5.2	18.5
Monroe	13.6	5.7	19.3
Montgomery	17.2	6.2	23.4
Nassau	15.0	5.4	20.4
New York	12.9	6.0	18.9
Niagara	15.4	5.3	20.7
Oneida	16.1	5.4	21.6
Onondaga	13.7	5.9	19.7
Ontario	14.5	5.4	19.9
Orange	10.1	7.0	17.1
Orleans	13.6	5.1	18.7
Oswego	12.0	5.5	17.5
Otsego	15.5	4.3	19.8
Putnam	11.6	5.2	16.8
Queens	13.3	6.3	19.7
Rensselaer	13.1	5.6	18.7
Richmond	12.1	6.0	18.1
Rockland	13.5	7.5	21.0
Saratoga	12.3	5.5	17.8
Schenectady	15.5	6.2	21.6
Schoharie	15.3	4.6	19.9
Schuyler	16.0	4.4	20.4
Seneca	14.6	5.1	19.7
St. Lawrence	13.7	5.5	19.2
Steuben	15.5	5.6	21.2
Suffolk	13.1	6.1	19.2
Sullivan	14.6	5.9	20.5
Tioga	14.5	5.6	20.1
Tompkins	9.8	4.4	14.2
Ulster	13.9	5.0	19.0
Warren	16.8	4.9	21.7
Washington	15.0	5.2	20.2
Wayne	13.5	5.9	19.4
Westchester	14.2	6.2	20.4
Wyoming	13.3	4.8	18.1
Yates	16.7	5.7	22.3

Mitigation Activities

At this time, it is impossible to stop an Extreme Heat event. Therefore, mitigation activities should be tailored towards protecting lives and preventing injury from an Extreme Heat event. The following are some sample mitigation activities which can save lives in the event of an Extreme Heat hazard:

- Identify location of vulnerable populations
- Establish cooling centers
- Issues advisories and warnings
- Conduct pre-season public information campaigns

As previously mentioned, it is up to Local Jurisdictions to accurately profile Extreme Heat as well as vulnerable populations that are more susceptible to excessive heat conditions. Preventing an extreme heat event is not plausible; however, limiting its effect on the population is feasible.