



# Feeling the Heat

Global Warming and Rising Temperatures in the United States





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# Acknowledgments

Written by Emily Figdor of the Environment America Research & Policy Center, October 2008.



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# Executive Summary

Globally, the year 2007 tied for the second warmest year on record, behind the record warmth of 2005. This warmth is part of a long-term trend toward rising temperatures and extreme weather events resulting from global warming.

Global average surface temperatures have increased by more than 1.4°F since the mid-19<sup>th</sup> century. In 2007, the United Nations' Intergovernmental Panel on Climate Change concluded that the evidence of global warming is "unequivocal" and that human activities are responsible for most of this rise in temperature.

To examine recent temperature patterns in the United States, we compared temperature data for the years 2000–2007 with the historical average, or "normal," temperature for the preceding 30 years, 1971–2000. Our data were collected at 255 weather stations—those with the highest quality data—in all 50 states and Washington, DC. Overall, we found that temperatures were above the 30-year average across the country, indicating pervasive warming.

## 2007: 10th Warmest Year on Record for the United States

The 2007 average temperature for the continental United States was the 10<sup>th</sup> warmest on record, according to the National Climatic Data Center. Nearly every state in the Lower 48 experienced above normal temperatures in 2007. Our analysis of 2007 temperature data at the local level showed:

- In 2007, the average temperature was at least 0.5°F above the 30-year average at 84 percent of the weather stations. The Mountain West and Southeast in particular experienced warmer-than-normal average temperatures in 2007. In Helena, Montana, the average temperature during 2007 was 4.6°F above the 30-year average. Average temperatures soared 4.0°F above the 30-year average in Reno, Nevada and 3.0°F or more above normal in six cities in Tennessee.
- The average maximum temperature—the peak temperature on any given day—was at least 0.5°F above the 30-year average at 71 percent of the weather stations. Warmer-than-average days hit the Southeast and parts of the West the hardest in 2007, with average peak temperatures soaring 4°F or more above normal in Greenville-Spartanburg, South Carolina; Chattanooga, Knoxville, and Nashville, Tennessee; Rapid City, South Dakota; Helena, Montana; and Louisville, Kentucky.
- Rising temperatures resulted in extremely hot days in 2007 where temperatures peaked at or above 90°F at locations across the country. Nearly three-fourths (71 percent) of the locations examined recorded more frequent days with peak temperatures of at least 90°F compared with the historical average. Raleigh, North Carolina experienced 45 more 90°F or warmer days than normal in 2007.
- The average minimum temperature—the lowest temperature recorded on a given day, usually at night—was at least 0.5°F above the 30-year average in 2007 at 79 percent of the stations examined. Minimum temperatures were particularly mild in the Mountain

West, Midwest, and parts of the East. The average minimum temperature soared 5.5°F above the 30-year average in Reno, Nevada.

## 2000–2007: Temperatures Rising

The above-average temperatures of 2007 are part of a warming trend across the United States. Our analysis of local temperature data for 2000–2007 showed:

- The average temperature from 2000–2007 was at least 0.5°F above the 30-year average at 89 percent of the locations studied. Average temperatures in Alaska were the most anomalous, with Talkeetna near Denali National Park averaging nearly 4°F above the 30-year average.
- The average maximum temperature from 2000–2007 was at least 0.5°F above the 30-year average at nearly three-fourths (74 percent) of the locations studied. Talkeetna, Alaska also experienced the most above-normal maximum temperature (2.9°F) over the eight-year period.
- Between 2000 and 2007, the average minimum temperature was at least 0.5°F above the 30-year average at 82 percent of the locations studied. In Reno, Nevada, the average minimum temperature was 5.3°F above normal.

The latest climate science tells us that the United States and the world must break its dependence on fossil

fuels and transition rapidly to 100 percent clean, renewable energy if we hope to avoid the most catastrophic effects of global warming. The United States should immediately take the following first steps:

- Adopt mandatory, science-based caps on global warming pollution. At minimum, those caps should reduce total U.S. emissions by 20 percent below today's levels by 2020 and by 80 percent below today's levels by 2050. Revenues from any program that puts a price on global warming pollution should be used to aid in the transition to a clean energy economy and to reduce the cost of emission reductions to consumers.
- Make energy efficiency improvements and accelerated development of renewable energy the centerpiece of our environmental and economic development policies. Advanced building energy codes; strong energy efficiency standards for buildings, appliances, and vehicles; and mandatory targets for renewable power generation and energy efficiency savings are among the policies that can reduce global warming pollution and put the nation on a clean energy path.
- Make global warming and fossil fuel dependence central considerations in land-use planning and public sector investment decisions. America should increase its investment in public transportation and rail transportation to reduce emissions from transportation. All new public buildings should meet rigorous standards for energy efficiency and the use of clean energy.



# Human Activities Are Causing Global Warming

In February 2007, the Intergovernmental Panel on Climate Change, a United Nations body charged with assessing the scientific record on global warming, concluded that the evidence of global warming is “unequivocal” and stated, with near certainty, that human activities are responsible for most of the observed increase in global average temperatures since the mid-19<sup>th</sup> century.<sup>1</sup>

Incoming radiation from the sun heats the earth; heat-trapping gases prevent some of the heat from escaping back to space. The critical mix of water vapor, carbon dioxide, and other heat-trapping gases in the atmosphere warm the planet enough for life to flourish. Without these gases, the earth would be too cold for life to survive, and water would be frozen at the surface.

In the last 150 years, however, human activities—primarily the burning of fossil fuels—have substantially increased the concentration of these gases in the atmosphere. As a result, more heat is being trapped close to the earth’s surface, causing global average surface temperatures to rise. Since 1750, the concentration of carbon dioxide in the atmosphere has increased by 35 percent. Concentrations of other global warming gases have increased as well.<sup>2</sup>

The burning of fossil fuels—coal, oil, and natural gas—produces the majority of U.S. emissions of heat-trapping gases. Carbon dioxide (CO<sub>2</sub>) emissions comprised 84 percent of U.S. global warming emissions in 2006 (*Figure A*). Other global warming pollutants include methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and per-fluorocarbons (PFCs), hydrofluorocarbons (HFCs), and sulfur hexafluoride (SF<sub>6</sub>).<sup>3</sup>

Power plants are the nation’s largest source of carbon dioxide emissions from energy consumption, contributing nearly 40 percent of U.S. emissions in 2006 (*Figure B*). Just over a third (34 percent) of domestic carbon dioxide emissions come from the transportation sector. The remaining 27 percent of U.S. emissions results from the direct consumption of fossil fuels in the commercial, industrial, and residential sectors.<sup>4</sup>

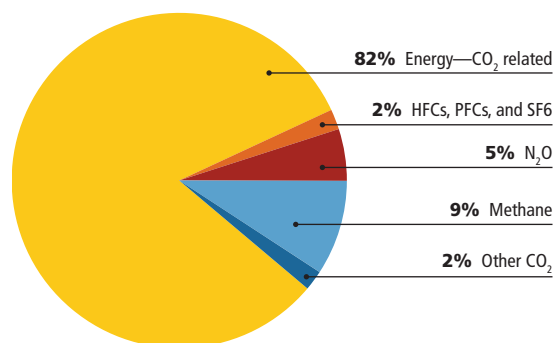


Figure A. U.S. Global Warming Emissions, 2006<sup>5</sup>

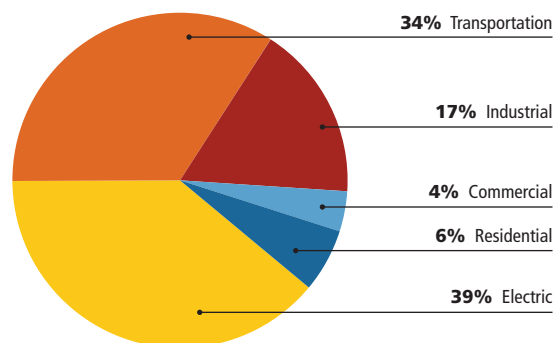


Figure B. Sources of U.S. Carbon Dioxide Emissions from Energy Consumption, 2006<sup>6</sup>

According to initial government estimates of 2007 emissions, energy-related carbon dioxide emissions grew by 1.6 percent in 2007. From 1990 to 2007, total U.S. carbon dioxide emissions from energy use increased by approximately 19 percent.<sup>7</sup>

The United States is responsible for far more of the carbon dioxide in the atmosphere than any other country. From the beginning of the Industrial Revolution

through 2005, the United States emitted approximately 28 percent of the carbon dioxide released into the earth's atmosphere. The next largest contributors, Russia and China, each accounted for 8 percent of the world's total historical emissions.<sup>8</sup>

On an annual basis, China's yearly emissions surpassed those of the United States in 2006 and 2007.<sup>9</sup>

# The Consequences of Global Warming

## Early Signs of Global Warming

Global average surface temperatures have increased by more than 1.4°F (0.8°C) since the mid-19<sup>th</sup> century.<sup>10</sup> Globally, 2007 tied with 1998 for second warmest year in the instrumental record, behind the record warmth of 2005.<sup>11</sup> Seven of the eight warmest years on record globally have occurred since 2001.<sup>12</sup>

In the continental United States, 2007 was the 10<sup>th</sup> warmest year on record, while 2006 was the second warmest year on record (*Table 1*).<sup>13</sup> These record U.S. temperatures are part of a steady, long-term increase in average temperatures over the last century, with temperatures rising at a faster rate near 0.6°F per decade over the last three decades (*Figure C*).<sup>14</sup>

Table 1. Top 10 Warmest Years in the United States<sup>15</sup>

RANK	YEAR
1	1998
2	2006
3	1934
4	1999
5	1921
6	1931
7	2001
8	1990
9	2005
10	2007

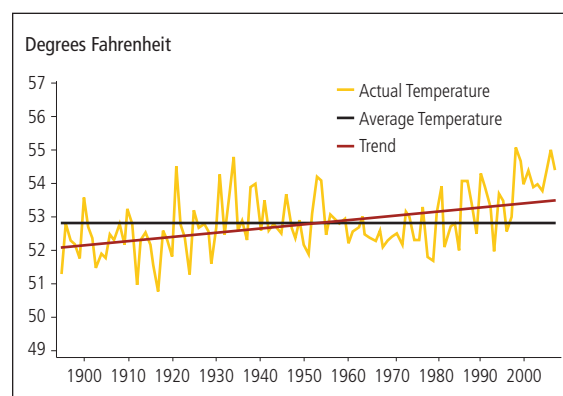


Figure C. Rising Average Annual Temperatures in the United States: 1895–2007<sup>16</sup>

## Consequences of Increased Warming

In April 2007, the Intergovernmental Panel on Climate Change released a consensus report on the recent and projected impacts of global warming. The report concluded “with high confidence” that human-caused warming over the last three decades “has had a discernible influence on many physical and biological systems.”<sup>17</sup>

The IPCC estimated that temperatures could rise by an additional 2°F to 11.5°F (1.1°C to 6.4°C) by the end of the century if historical trends in emissions continue and warned of increasing droughts, floods, heat waves, water stress, forest fires, and coastal flooding in the United States.<sup>18</sup>

A July 2008 report by the Bush administration's U.S. Climate Change Science Program found that global warming will pose substantial threats to human health in the coming decades. The report said "it is very likely" that more people will die during extremely hot periods in future years (*see box*).<sup>19</sup> Other dangers to human health identified by the report include increased air pollution, more powerful hurricanes and other storms, wildfires, and the increased spread of diseases contracted through food and water. The report found that the burden of these and other climate impacts will vary by region but that the risks are substantial in every region of the country (*Table 2*).<sup>20</sup>

Fortunately, the IPCC report concluded that "many impacts [of global warming] can be avoided, reduced, or delayed" by quickly and significantly reducing emissions.<sup>22</sup> Yet, despite the gravity of the problem and the urgency to reduce emissions, relatively little progress has been made so far. Indeed, a September 2008 report by the Global Carbon Project, an international consortium of scientists,

estimated that worldwide carbon dioxide emissions in 2007 were at the very high end of the scenarios outlined by the IPCC and could translate into a global temperature rise of more than 11°F by the end of the century.<sup>23</sup>

Time is running out for the United States and world to begin to achieve real and sustained reductions in global warming emissions. Many scientists and policymakers have identified a 3.6°F rise in global average temperature over pre-industrial levels (which is equivalent to 2°C or about another 2°F of warming) as a rough threshold between damaging and catastrophic global warming.<sup>24</sup> Even below a 3.6°F increase, significant impacts from global warming are likely, such as damage to many ecosystems, decreased water resources, sea level rise, and the widespread loss of coral reefs.<sup>25</sup>

To have a reasonable chance of keeping global temperatures from rising by more than 3.6°F *global* emissions must peak no later than 2015 and decline by 50 to 85 percent below 2000 levels by 2050, according to the IPCC.<sup>26</sup>

Table 2. Summary of Regional Vulnerabilities to Climate-Related Impacts<sup>21</sup>

UNITED STATES CENSUS REGIONS	CLIMATE-RELATED IMPACTS								
	Early Snowmelt	Degraded air quality	Urban Heat Island	Wildfires	Heat Waves	Drought	Tropical Storms	Extreme Rainfall with Flooding	Sea Level Rise
New England ME VT NH MA RI CT	•	•	•		•	•		•	•
Middle Atlantic NY PA NJ	•	•	•		•	•	•	•	•
East North Central WI MI IL IN OH	•	•	•		•	•		•	
West North Central ND MN SD IA NE KS MO	•		•		•	•		•	
South Atlantic WV VA MD MC SC GA FL DC		•	•	•	•	•	•	•	•
East South Central KY TN MS AL					•	•	•		•
West South Central TX OK AR LA		•	•	•	•	•	•	•	•
Mountain MT ID WY NV UT CO AZ NM	•	•	•	•	•	•			
Pacific AK CA WA OR HI	•	•	•	•	•	•	•	•	•

## Health Effects of Extreme Heat

Scientists have observed widespread changes in extreme temperatures over the last five decades. According to the Intergovernmental Panel on Climate Change, cold days, cold nights, and frost have become less frequent, while hot days, hot nights, and heat waves have become more frequent, like the record-breaking heat wave that hit the United States in August 2007. The IPCC also predicts that it is “very likely that hot extremes, heat waves and heavy precipitation events will continue to become more frequent.”<sup>27</sup>

A 2007 NASA study warned that the eastern United States faces a future of extremely hot summertime temperatures. Average summer daily high temperatures could increase by 10°F by the 2080s throughout the region. In extreme seasons of below-normal rainfall, July and August daily high temperatures could average between 100°F and 110°F in Chicago, Washington, DC, Atlanta, and other major cities.<sup>28</sup>

Heat waves have serious implications for human health, causing heat stroke, heat exhaustion and even death. The August 2007 heat wave killed at least 50 Americans.<sup>29</sup> In 2003, a scorching heat wave killed 22,000 to 35,000 people in Europe, where air conditioning is less common. Researchers estimate that human influences on the climate system more than doubled the probability of such a heat wave occurring.<sup>30</sup> In late June 2007, a summer heat wave in Greece, Italy and Romania caused dozens of deaths, as temperatures climbed as high as 115°F.<sup>31</sup>

Most deaths from heat waves occur among people with preexisting cardiovascular disease or chronic respiratory diseases, with elderly people, especially women, most affected.<sup>32</sup> People on some psychiatric medications that hinder sweating also are susceptible to heat-related illness.<sup>33</sup> The disproportionate rise in nighttime temperatures exacerbates the public health impacts of heat waves, as people need relief at night to recover from excessive daytime heat exposure.<sup>34</sup>

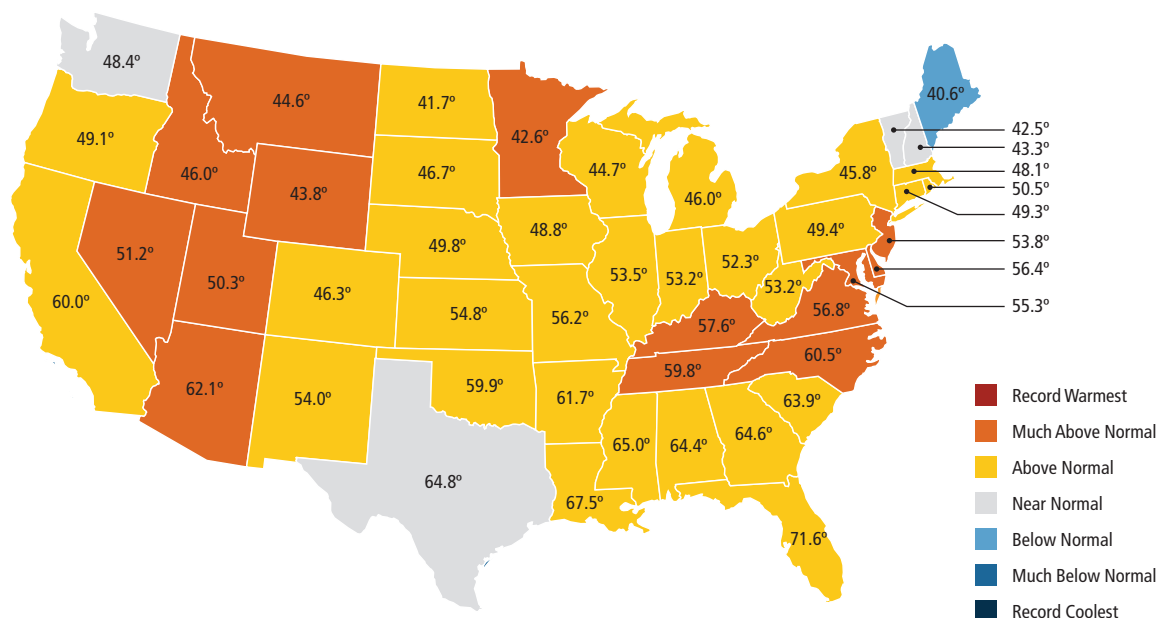
# Overview of 2007 Temperatures in the United States

According to the National Climatic Data Center, in 2007, the average temperature for the contiguous United States was the 10<sup>th</sup> warmest on record. The 2007 average temperature was 54.2°F, which is 1.4°F above the 20<sup>th</sup> century mean.<sup>35</sup> Nearly every state in the Lower 48—with the exceptions of Maine, New Hampshire, Texas, Vermont, and Washington—experienced “above normal” or “much above normal” average annual temperatures in 2007. Temperatures were “much above normal” across much of the Mountain West and parts of the East. The average annual temperature was “near normal” in New Hampshire, Texas, Vermont, and Washington and “below normal” only in Maine (*Figure D*).<sup>36</sup>

The above-average temperatures in 2007 are consistent with the trend toward rising temperatures in states across the country. For example, between 2000 and 2007, Arizona experienced its 3<sup>rd</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, and 10<sup>th</sup> warmest years on record; Colorado its 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, and 9<sup>th</sup> warmest years; New Mexico its warmest, 4<sup>th</sup> warmest, and 9<sup>th</sup> warmest years; and Utah its 2<sup>nd</sup>, 3<sup>rd</sup>, 5<sup>th</sup>, and 6<sup>th</sup> warmest years, just to name a few examples.<sup>37</sup> *Table 3* shows the 39 states that experienced at least one of their 10 warmest years on record since 2000.

A snapshot of U.S. temperatures in 2007 shows erratic winter weather followed by an unseasonably warm spring, summer, and fall.

Figure D. Average Temperature for 2007, in Degrees Fahrenheit<sup>38</sup>



STATE	YEAR	RANK SINCE 1895	DEGREES ABOVE HISTORICAL AVERAGE (°F)
Arizona	2000	6th Warmest	2.8
Arizona	2001	10th Warmest	2.2
Arizona	2002	8th Warmest	2.3
Arizona	2003	3rd Warmest	3.0
Arizona	2007	7th Warmest	2.5
California	2003	8th Warmest	1.6
Colorado	2000	5th Warmest	2.5
Colorado	2001	6th Warmest*	2.2
Colorado	2003	4th Warmest	2.6
Colorado	2005	6th Warmest*	2.2
Colorado	2006	9th Warmest	1.9
Connecticut	2002	8th Warmest	2.3
Connecticut	2006	5th Warmest	2.7
Delaware	2002	4th Warmest	2.6
Delaware	2006	3rd Warmest	2.8
Idaho	2003	2nd Warmest	3.2
Idaho	2007	6th Warmest	2.0
Iowa	2006	5th Warmest	2.7
Kansas	2006	7th Warmest	2.4
Kentucky	2007	4th Warmest	1.9
Louisiana	2006	8th Warmest	1.3
Maine	2006	3rd Warmest	2.7
Maryland	2002	5th Warmest	2.3
Maryland	2006	3rd Warmest	2.5
Maryland	2007	10th Warmest	1.6
Massachusetts	2001	8th Warmest*	1.7
Massachusetts	2002	8th Warmest*	1.7
Massachusetts	2006	4th Warmest	2.4
Michigan	2001	6th Warmest	2.4
Michigan	2006	5th Warmest	2.5
Minnesota	2001	6th Warmest	2.5
Minnesota	2005	8th Warmest	2.4
Minnesota	2006	4th Warmest	3.8
Missouri	2006	9th Warmest	2.1
Montana	2006	3rd Warmest	2.9
Montana	2007	10th Warmest	2.5
Nebraska	2006	7th Warmest	2.3
Nevada	2000	7th Warmest	2.2
Nevada	2001	8th Warmest	2.1
Nevada	2003	2nd Warmest	2.9
New Hampshire	2002	8th Warmest	2.0

STATE	YEAR	RANK SINCE 1895	DEGREES ABOVE HISTORICAL AVERAGE (°F)
New Hampshire	2006	3rd Warmest	2.8
New Jersey	2002	6th Warmest	2.3
New Jersey	2006	2nd Warmest	3.1
New Mexico	2000	4th Warmest	2.1
New Mexico	2001	9th Warmest*	1.5
New Mexico	2003	1st Warmest	2.4
New Mexico	2005	9th Warmest*	1.5
New York	2001	9th Warmest*	2.0
New York	2002	9th Warmest*	2.0
New York	2006	4th Warmest	2.7
North Carolina	2007	9th Warmest	1.4
North Dakota	2006	3rd Warmest	4.3
Ohio	2002	8th Warmest*	2.0
Ohio	2006	8th Warmest*	2.0
Oklahoma	2006	4th Warmest	2.2
Oregon	2003	3rd Warmest	2.4
Oregon	2004	6th Warmest	1.7
Pennsylvania	2002	9th Warmest	1.6
Pennsylvania	2006	8th Warmest	1.8
Rhode Island	2001	5th Warmest	2.6
Rhode Island	2002	7th Warmest	2.4
Rhode Island	2006	4th Warmest	2.7
South Dakota	2005	9th Warmest	2.5
South Dakota	2006	4th Warmest	3.2
Tennessee	2007	5th Warmest	1.9
Texas	2000	10th Warmest	1.4
Texas	2006	4th Warmest	2.0
Utah	2000	3rd Warmest	3.1
Utah	2001	5th Warmest	2.7
Utah	2003	2nd Warmest	3.2
Utah	2007	6th Warmest	2.4
Vermont	2006	4th Warmest	3.0
Virginia	2007	8th Warmest	1.7
Washington	2003	6th Warmest	2.0
Washington	2004	5th Warmest	2.1
Wisconsin	2001	7th Warmest	2.5
Wisconsin	2005	10th Warmest	2.0
Wisconsin	2006	5th Warmest	3.0
Wyoming	2003	10th Warmest	2.1
Wyoming	2006	5th Warmest*	2.3
Wyoming	2007	5th Warmest*	2.3

Table 3. States in the Lower 48 Experiencing at Least One of Their 10 Warmest Years between 2000 and 2007<sup>39</sup>

\* This year ties with another year since 2000 for one of the 10 warmest years on record in the state.

## Erratic Winter Weather

Overall, the December 2006-February 2007 winter season was the 39<sup>th</sup> warmest on record in the continental United States.<sup>40</sup> Rising global temperatures contribute to unpredictable and erratic weather patterns, and the United States experienced both unusually warm and cold temperatures over the course of the winter. December 2006 was the 11<sup>th</sup> warmest December on record in the United States. And much of the eastern part of the United States experienced spring-like temperatures during the first half of January 2007. In February, however, the average U.S. temperature was 1.8°F below the 20<sup>th</sup> century average, and the eastern two-thirds of the nation—36 states—experienced cooler than average temperatures (*Figure F*).<sup>41</sup>

## Warmer-Than-Average Spring

Following the colder-than-normal February, March 2007 was more than 5.5°F warmer than the 20<sup>th</sup> century average, making it the second warmest March on record in the continental United States (*Figure G*).<sup>42</sup> In early April 2007, however, near-record to record cold temperatures returned to parts of the central Plains and much of the Southeast. Freezing temperatures broke or tied more than 1,500 daily minimum temperature records between April 4 and April 10.<sup>43</sup>

Despite this cold snap, the 2007 spring season of March, April, and May ended as the eighth warmest spring on record for the continental United States.<sup>44</sup>

## August Heat Wave

Warm spring temperatures persisted into the summer, leading to the sixth warmest summer (June-August) and second warmest August on record for the continental United States.<sup>45</sup> The summer ended with a long-lasting heat wave across the southern and central United States. Average temperatures during the warmest periods—from August 7-11 and again from August 15-17—were more than 10°F warmer than average in many parts of the country.<sup>46</sup> The heat wave set more than 2,000 new daily high temperature records and tied or broke more than 30 all-time high temperature records. Eight eastern states (West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Alabama, and Florida) and Utah had their warmest August on record.<sup>47</sup>

## Warmer-Than-Average Fall

The 2007 fall season (September-November) ranked sixth warmest on record.<sup>48</sup> Unseasonably warm temperatures affected most of the country in September and October.<sup>49</sup> Delaware, Maryland, New Jersey, Pennsylvania, and Rhode Island had their warmest October on record.<sup>50</sup> November temperatures were somewhat closer to normal in the East but warm in the West.<sup>51</sup>

The year ended with the average U.S. temperature for December near the 20<sup>th</sup> century mean, though the Southeast was much warmer than average, while 11 states—from the Upper Midwest to the West Coast—were cooler than average.<sup>52</sup>



Figure E. Average Temperature, February 2007, in Degrees Fahrenheit<sup>53</sup>

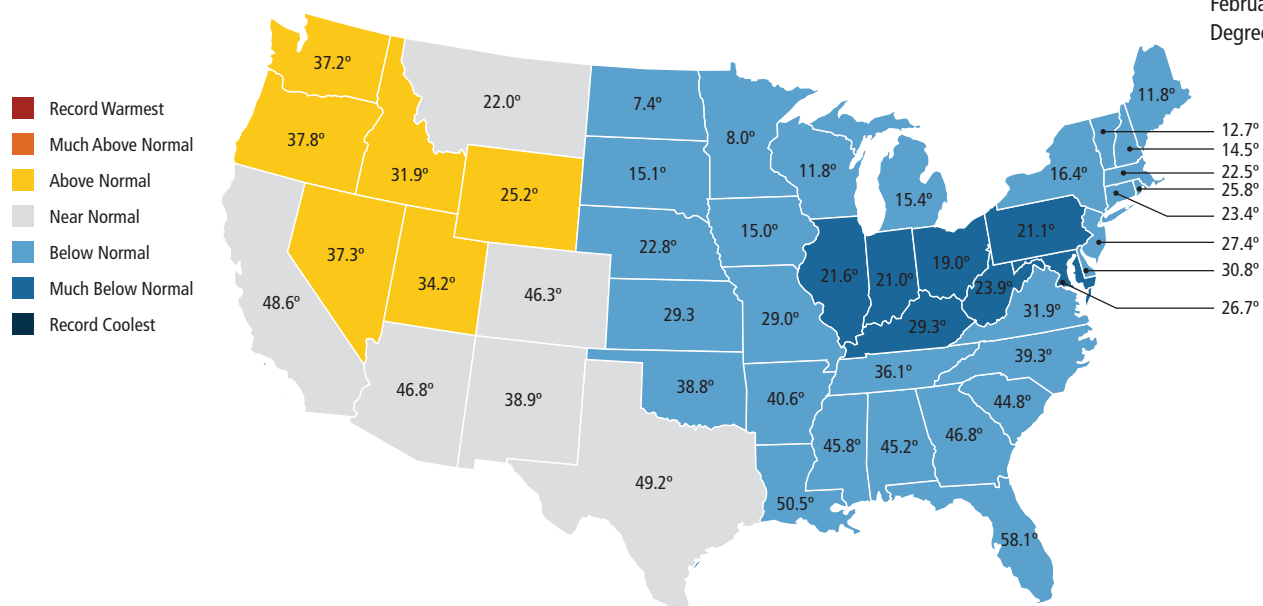
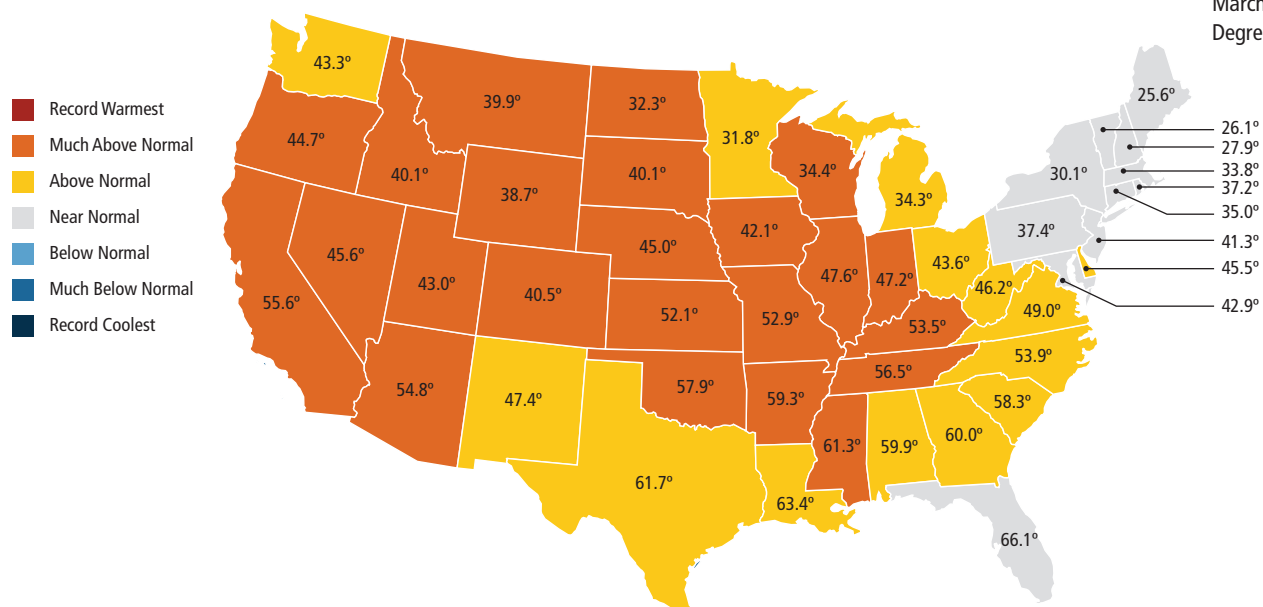


Figure F. Average Temperature, March 2007, in Degrees Fahrenheit<sup>54</sup>



# Report Findings: Temperatures Rising

To examine how recent temperature patterns at the local level compare with temperatures over the last 30 years, we looked at data from “First Order” weather stations for the years 2000–2007. First Order stations are those staffed in whole or in part by National Weather Service personnel and therefore provide the highest quality data. These stations also are good sources because of their geographical coverage, long periods of record, and fewer data gaps than other sites. The 255 stations are located in all 50 states and Washington, DC. We compared this recent data to the climatological “normals,” or the 30-year average, from the stations for the three decades spanning 1971–2000. Overall, we found that temperatures since 2000 have been above the 30-year average in most parts of the country.

## Average, Maximum, and Minimum Temperatures: A Primer

The average **maximum temperature** reflects how warm days are getting, on average. The weatherman would call this the day’s “high.”

The average **minimum temperature** reflects how cool nights are getting, on average. The weatherman would call this the day’s “low.”

The **average temperature** is the average of the maximum and minimum temperatures.

## 2007: 10<sup>th</sup> Warmest Year on Record

### WARMER AVERAGE TEMPERATURES

With an unseasonably warm early January and March, a record-breaking August heat wave, and unusually warm weather persisting into September and October, 2007 was abnormally warm as a whole.

In 2007, the average temperature was at least 0.5°F above the 30-year average at 215 (84 percent) of the 255 stations examined. The average temperature was at least 2°F above the 30-year average in 85 (33 percent) of the weather stations.

The Mountain West and Southeast in particular experienced above-average temperatures in 2007. In Helena, Montana, the average temperature during 2007 was 4.6°F above the 30-year average, the most anomalous increase in the United States. Average temperatures also soared 4.0°F above the 30-year average in Reno, Nevada (*Table 4*) and 3.0°F or more above normal in six cities in Tennessee.

See *Appendix A* for the average mean temperature in 2007 for all weather stations.

### WARMER DAYS ON AVERAGE

The average maximum temperature—the peak temperature on any given day—was well-above the 30-year average in many parts of the country in 2007. Maximum temperatures averaged at least 0.5°F above the 30-year average at 180 (71 percent) of the weather stations examined. The average maximum temperature was at least 2°F above the 30-year average in 70 (28 percent) of the locations; in seven of these

RANK	STATE	CITY	LOCATION	NORMAL AVERAGE TEMP. (°F): 1971–2000	AVERAGE TEMP. (°F): 2007	DEGREES ABOVE NORMAL (°F)
1	MT	HELENA	HELENA AIRPORT	44.0	48.6	4.6
2	NV	RENO	CANNON INTERNATIONAL AIRPORT	51.3	55.3	4.0
3	MS	TUPELO	TUPELO MUNI/LEMONS AIRPORT	61.3	65.1	3.8
4	TN	NASHVILLE	METROPOLITAN AIRPORT	58.9	62.6	3.7
5	TN	CHATTANOOGA	LOVELL FIELD	60.0	63.6	3.6
5	KY	LOUISVILLE	STANDIFORD FIELD	56.9	60.5	3.6
7	NC	GREENSBORO-WINSTON-SALEM	GREENSBORO REGIONAL AIRPORT	58.1	61.6	3.5
8	SC	GREENVILLE-SPARTANBURG	GREER AIRPORT	60.0	63.4	3.4
8	AL	BIRMINGHAM	INTERNATIONAL AIRPORT	62.2	65.6	3.4
8	TN	MEMPHIS	INTERNATIONAL AIRPORT	62.3	65.7	3.4

Table 4. 10 Weather Stations Recording Average Temperatures that Deviate Most from the 30-Year Average, 2007

locations, the average maximum temperature was at least 4°F above the 30-year average.

Warmer-than-average days hit the Southeast and parts of the West the hardest in 2007. Average peak temperatures soared 4°F or more above the 30-year average in Greenville-Spartanburg, South Carolina; Chattanooga, Knoxville, and Nashville, Tennessee; Rapid City, South Dakota; Helena, Montana; and Louisville, Kentucky (Table 5).

See Appendix B for the average peak temperature in 2007 for all weather stations.

Rising temperatures resulted in days in 2007 where temperatures peaked at or above 90°F at locations across the country. Of the 235 weather stations examined outside of Alaska,\* 168 (71 percent) recorded a higher frequency of days in 2007 where the temperature reached at least 90°F, when compared with the historical average.\*\* Many locations experienced dozens more 90°F or warmer days than normal, particularly in the

Southeast. In North Carolina, the weather station in Raleigh recorded 83 days where the temperature hit at least 90°F in 2007—45 days more than the historical average. Similarly, Key West experienced 91 days where the temperature peaked at 90°F or higher, which is 42 days more than the historical average. Three locations in the Southeast—Charlotte, North Carolina; Greenville-Spartanburg, South Carolina; and Memphis, Tennessee—recorded 38 more days than normal with temperatures at or above 90°F (Table 6).

See Appendix C for the frequency of 90°F or warmer days in 2007 for all weather stations.

#### WARMER NIGHTS ON AVERAGE

Globally, temperatures are not dropping at night as much now as they did in the past. Researchers have documented a marked increase in the occurrence of warm nighttime temperatures during the last century, with the strongest change in the last few decades.<sup>55</sup> Worldwide minimum

RANK	STATE	CITY	LOCATION	NORMAL AVERAGE MAX. TEMP. (°F): 1971–2000	AVERAGE MAX. TEMP. (°F): 2007	DEGREES ABOVE NORMAL (°F)
1	SC	GREENVILLE-SPARTANBURG	GREER AIRPORT	70.4	74.5	4.1
1	TN	CHATTANOOGA	LOVELL FIELD	70.8	74.9	4.1
1	TN	KNOXVILLE	MC GHEE TYSON AIRPORT	68.3	72.4	4.1
4	SD	RAPID CITY	RAPID CITY REGIONAL AIRPORT	59.1	63.1	4.0
4	TN	NASHVILLE	METROPOLITAN AIRPORT	69.0	73.0	4.0
4	MT	HELENA	HELENA AIRPORT	56.7	60.7	4.0
4	KY	LOUISVILLE	STANDIFORD FIELD	66.0	70.0	4.0
8	GA	ATHENS	MUNICIPAL AIRPORT	72.0	75.9	3.9
8	TN	BRISTOL-JHNSN CTY-KN	TRI-CITY AIRPORT	66.3	70.2	3.9
10	AL	HUNTSVILLE	INTNL/JONES FIELD	71.1	74.9	3.8

Table 5. 10 Weather Stations Recording Average Maximum Temperatures that Deviate Most from the 30-Year Average, 2007

\* Alaska does not experience temperatures exceeding 90°F.

\*\* The "normal" annual frequency of 90°F or warmer days for each location is based on a varying number of years of climatological data. This ranges from 120 years of climatological data for Blue Hill, MA to 27 years of data for Redding, CA. The median number of years of climatological data used to compute the historical average is 44 years.

Table 6. Frequency of Occurrence of Days with Temperatures Peaking at 90°F or Warmer: 2007 vs. the Historical Average\*\*\*

RANK	STATE	CITY	LOCATION	NORMAL AVERAGE FREQUENCY OF 90°F+ DAYS: HISTORICAL AVERAGE	FREQUENCY OF 90°F+ DAYS (2007)	NUMBER OF 90°F+ DAYS ABOVE AVERAGE
1	NC	RALEIGH	RALEIGH-DURHAM AIRPORT	38	83	45
2	FL	KEY WEST	INTERNATIONAL AIRPORT	49	91	42
3	NC	CHARLOTTE	DOUGLAS INTERNATIONAL AIRPORT	38	76	38
3	SC	GREENVILLE-SPARTANBURG	GREER AIRPORT	36	74	38
3	TN	MEMPHIS	INTERNATIONAL AIRPORT	66	104	38
6	MS	TUPELO	TUPLO MUNI/LEMONS AIRPORT	63	99	36
7	AL	HUNTSVILLE	INTNAL/JONES FIELD	47	82	35
7	KY	LOUISVILLE	STANDIFORD FIELD	32	67	35
7	NC	GREENSBORO-WINSTON-SALEM	GREENSBORO REGIONAL AIRPORT	29	64	35
7	OH	COVINGTON/CINCINNATI	CINCINNATI/NORTHERN KY INT	19	54	35

temperatures—the lowest temperatures recorded on a given day, usually at night—are increasing at nearly twice the pace of maximum temperatures.<sup>56</sup> During the summer, these warmer nighttime temperatures exacerbate the public health effects of extreme heat, since people need cooler nighttime temperatures to recover from excessive heat exposure during the day (see box on page 7).<sup>57</sup>

In 2007, average minimum temperatures—the lowest temperatures recorded on a given day, usually at night—were above average at the 255 weather stations examined. Minimum temperatures averaged at least 0.5°F above the 30-year average at 202 (79 percent) of the weather stations. The average minimum temperature was at least 2°F above the 30-year average in 70 (27 percent) of the locations; in 14 of these locations, the average minimum temperature was at least 3°F above the 30-year average.

Nighttime temperatures were particularly mild on average in the Mountain West, Midwest, and parts of

the East. Minimum temperatures soared 5.5°F above the 30-year average in Reno, Nevada and 4.8°F above normal in Helena, Montana (Table 7).

See Appendix D for the average minimum temperature in 2007 for all weather stations.

2000–2007: Trends in Rising Temperatures

AVERAGE TEMPERATURES RISING

The above-normal temperatures in 2007 were part of a broader trend toward rising temperatures.

Between 2000 and 2007, the average temperature was at least 0.5°F above the 30-year average at 228 (89 percent) of the stations examined.

Greater warming has occurred near the poles and at high-altitude and high-latitude locations—both due in part to the “albedo (reflectivity) feedback loop.” This

Table 7. 11 Weather Stations Recording Average Minimum Temperatures that Deviate Most from the 30-Year Average, 2007

RANK	STATE	CITY	LOCATION	NORMAL AVERAGE MIN. TEMP. (°F): 1971–2000	AVERAGE MIN. TEMP. (°F): 2007	DEGREES ABOVE NORMAL (°F)
1	NV	RENO	CANNON INTERNATIONAL AIRPORT	35.2	40.7	5.5
2	MT	HELENAt	HELENA AIRPORT	31.2	36.0	4.8
3	NV	LAS VEGAS	MCCARRAN INTERNATIONAL AIRPORT	56.3	60.2	3.9
4	SD	SIOUX FALLS	FOSS FIELD	33.0	36.8	3.8
5	DC	WASHINGTON DC/DULLES	DULLES INTERNATIONAL AIRPORT	42.6	46.2	3.6
5	AL	BIRMINGHAM	INTERNATIONAL AIRPORT	50.9	54.5	3.6
7	MS	TUPELO	TUPELO MUNI/LEMONS AIRPORT	49.9	53.4	3.5
8	VA	ROANOKE	WOODRUM AIRPORT	45.4	48.8	3.4
8	MO	COLUMBIA	COLUMBIA REGIONAL AIRPORT	43.1	46.4	3.3
8	MN	MINNEAPOLIS-ST. PAUL	INTERNATIONAL AIRPORT	35.9	39.2	3.3
8	TN	MEMPHIS	INTERNATIONAL AIRPORT	52.5	55.8	3.3

\*\*\* The “normal” annual frequency of 90°F or warmer days for each location is based on a varying number of years of climatological data. This ranges from 120 years of climatological data for Blue Hill, MA to 27 years of data for Redding, CA. The median number of years of climatological data used to compute the historical average is 44 years.

## Is Urbanization Causing the Rise in Temperatures?

The few remaining global warming contrarians, many of whom have direct links to the fossil fuel industry, have argued that urban “heat islands”—where the air temperature is several degrees warmer than surrounding rural areas—may be responsible for a substantial portion of the average temperature increase linked to global warming. Compared with rural areas, urban areas have more dark surfaces (such as pavement) that absorb heat from the sun and less vegetation to provide shade and cool the air. Because these urban heat islands raise nighttime temperatures more than daytime temperatures compared with non-urban areas, some have argued that urbanization is to blame for data indicating rising global temperatures.

Several studies have shown, however, that the urban heat island effect has minimal impact on rising global temperatures. In a 1997 study, David Easterling of the National Climatic Data Center examined data from 5,400 weather stations, of which 1,300 were located in urban areas. He found that urban effects on globally averaged temperature data were “negligible” and did not exceed about 0.05°C over the period 1900–1990.<sup>58</sup> These results confirm the conclusions of a similar 1990 study.<sup>59</sup> David Parker of the UK’s Hadley Centre also found that global temperatures have risen as much on windy nights (when the urban heat island effect is diminished) as on calm nights (when the effect is at its strongest). He concluded that “overall warming is not a consequence of urban development.”<sup>60</sup>

occurs when snow or ice, which reflects sunlight, melts and exposes dark ground or water (e.g., a lake or ocean) that now absorbs most of the sunlight. The extra heat accelerates further melting of snow and ice.

Average temperatures in Alaska were the most above normal during this eight-year period. In Talkeetna, near Denali National Park, the average temperature between 2000 and 2007 was nearly 4°F above the 30-year average.

Locations outside of Alaska reporting the most above-normal average temperatures include Reno, Nevada;

Helena, Montana; Cheyenne, Wyoming; Marquette and Sault Ste. Marie, Michigan; and Rochester, St. Cloud, and Minneapolis-St. Paul, Minnesota (Table 8).

See *Appendix A* for the average mean temperature for all weather stations for the eight years spanning 2000–2007.

### DAYTIME TEMPERATURES INCREASING

Between 2000 and 2007, the average maximum temperature was at least 0.5°F higher than the 30-year average at 186 (74 percent) of the stations examined.

RANK	STATE	CITY	LOCATION	NORMAL AVERAGE TEMP. (°F): 1971–2000	AVERAGE TEMP. (°F): 2000–2007	DEGREES ABOVE NORMAL (°F)
1	AK	TALKEETNA	TALKEETNA STATE ARPT	33.9	37.7	3.8
2	NV	RENO	CANNON INTERNATIONAL AP	51.3	54.8	3.5
3	MT	HELENA	HELENA AIRPORT	44.0	46.8	2.8
4	WY	CHEYENNE	MUNICIPAL AIRPORT	44.9	47.4	2.5
4	AK	BETHEL	BETHEL AIRPORT	29.9	32.4	2.5
4	MI	MARQUETTE	COUNTY AIRPORT	38.7	41.2	2.5
7	MI	SAULT STE. MARIE	SAULT STE MARIE MUNI AIRPORT	40.1	42.5	2.4
7	MN	ROCHESTER	MUNICIPAL AIRPORT	43.4	45.8	2.4
9	MN	SAINT CLOUD	MUNICIPAL AIRPORT	41.8	44.1	2.3
10	MN	MINNEAPOLIS-ST. PAUL	INTERNATIONAL AIRPORT	45.4	47.6	2.2
10	AK	BARROW	BARROW W POST-W ROGERS AIRPORT	10.4	12.6	2.2

Table 8. 11 Weather Stations Recording Average Temperatures that Deviate Most from the 30-Year Average, 2000–2007

Alaska also experienced some of the highest above-normal maximum temperatures from 2000 to 2007. Talkeetna, Bethel, and King Salmon, Alaska reported maximum temperatures averaging 2.9°F, 2.6°F, and 2.5°F above the 30-year average, respectively.

Locations outside of Alaska experiencing the most above-normal average maximum temperatures between 2000 and 2007 include Rapid City, South Dakota; Goodland, Kansas; Marquette, Michigan; and Pueblo, Colorado (*Table 9*).

See *Appendix B* for the average peak temperature for all weather stations for the eight years spanning 2000–2007.

## NIGHTS GETTING WARMER

The average minimum temperature between 2000 and 2007 was at least 0.5°F above the 30-year average at 210 (82 percent) of the stations examined. Between 2000 and 2007, the average minimum temperature in Reno, Nevada was 5.3°F above the 30-year average, the highest in the United States. Talkeetna, Alaska’s average minimum temperature from 2000 to 2007 was 4.2°F above normal, and the average minimum temperature was also 3°F or more above normal in Helena, Montana; Sault Saint Marie, Michigan; Albuquerque, New Mexico; and Sioux Falls, South Dakota (*Table 10*).

See *Appendix D* for the average minimum temperature for all weather stations for the eight years spanning 2000–2007.

Table 9. 11 Weather Stations Recording Average Maximum Temperatures that Deviate Most from the 30-Year Average, 2000–2007

RANK	STATE	CITY	LOCATION	NORMAL AVERAGE MAX. TEMP. (°F): 1971–2000	AVERAGE MAX. TEMP. (°F): 2000–2007	DEGREES ABOVE NORMAL (°F)
1	AK	TALKEETNA	TALKEETNA STATE AIRPORT	43.3	46.2	2.9
2	SD	RAPID CITY	RAPID CITY REGIONAL AIRPORT	59.1	61.8	2.7
3	KS	GOODLAND	RENNER FIELD	63.9	66.5	2.6
3	AK	BETHEL	BETHEL AIRPORT	36.6	39.2	2.6
5	AK	KING SALMON	KING SALMON AIRPORT	42.4	44.9	2.5
5	MI	MARQUETTE	COUNTY AIRPORT	48.0	50.5	2.5
5	CO	PUEBLO	MEMORIAL AIRPORT	67.4	69.9	2.5
8	NE	GRAND ISLAND	HALL COUNTY REGIONAL AIRPORT	61.1	63.5	2.4
8	CO	ALAMOSA	SAN LUIS VALLEY RGNL AIRPORT	58.6	60.9	2.3
8	TX	BROWNSVILLE	BROWNSVILLE AIRPORT	82.0	84.3	2.3
8	AZ	WINSLOW	WINSLOW AIRPORT	70.4	72.7	2.3

Table 10. 10 Weather Stations Recording Average Minimum Temperatures that Deviate Most from the 30-Year Average, 2000–2007

RANK	STATE	CITY	LOCATION	NORMAL AVERAGE MIN. TEMP. (°F): 1971–2000	AVERAGE MIN. TEMP. (°F): 2000–2007	DEGREES ABOVE NORMAL (°F): 2000–2007
1	NV	RENO	CANNON INTERNATIONAL AIRPORT	35.2	40.5	5.3
2	AK	TALKEETNA	TALKEETNA STATE AIRPORT	24.5	28.7	4.2
3	MT	HELENA	HELENA AIRPORT	31.2	34.4	3.2
4	MI	SAULT STE. MARIE	SAULT STE MARIE MUNI AIRPORT	30.5	33.6	3.1
5	NM	ALBUQUERQUE	INTL AIRPORT-KIRTLAND AFB	43.2	46.2	3.0
5	SD	SIOUX FALLS	FOSS FIELD	33.0	36.0	3.0
7	MN	MINNEAPOLIS-ST. PAUL	INTERNATIONAL AIRPORT	35.9	38.8	2.9
8	NV	LAS VEGAS	MCCARRAN INTERNATIONAL AIRPORT	56.3	59.0	2.7
9	WY	CHEYENNE	MUNICIPAL AIRPORT	32.3	34.8	2.5
10	AK	BIG DELTA	BIG DELTA ALLEN AAF	19.7	22.1	2.4

# Recommendations

Global warming is the defining challenge of our time. The latest climate science tells us that the United States and the world must break its dependence on fossil fuels and transition rapidly to 100 percent clean, renewable energy if we hope to avoid the most catastrophic effects of global warming.<sup>61</sup> The United States should immediately take the following first steps:

**First, the United States should establish mandatory, science-based caps on global warming pollution. The caps should be set at levels consistent with what science tells us is necessary to prevent the worst impacts of global warming. At minimum, we should reduce total U.S. emissions by 20 percent below current levels by 2020 and by 80 percent below current levels by 2050.**

To use our resources most effectively, any emission trading program used to comply with a global warming emission cap must auction, rather than give away, emission allowances and use the proceeds of that auction to accelerate the transition to a clean energy economy and reduce the cost of the program to consumers. With so much to do, and so little time, America cannot afford large financial giveaways to polluters. Instead, we should invest much of proceeds of the program in measures such as energy efficiency improvements, renewable energy, and expansion of low-carbon infrastructure, while also using some of the proceeds to ease any cost burden on consumers.

**Second, the United States should adopt strong public policies designed to accelerate the transition to 100 percent clean, renewable energy.**

Those policies should include:

- Strong energy efficiency standards for vehicles and appliances.
- Strong building energy codes designed to improve the efficiency of homes and businesses. The federal government should also encourage the construction of green buildings and zero-energy buildings that go “beyond code” and should adopt measures to encourage or require the use of small-scale renewable energy technologies like solar water heaters, geothermal heat pumps, or solar panels on all residential and commercial buildings.
- Renewable electricity standards that will ensure that America gets at least 25 percent of its energy from renewable sources by 2020.
- Energy efficiency resource standards for electric utilities that require that energy efficiency improvements play an important role in meeting future energy needs.
- Transportation and land-use policies that encourage the development of compact, walkable neighborhoods where automobile use is an option, not a requirement.
- Policies to reduce global warming pollution and promote sustainable practices in other parts of the economy, including policies to encourage recycling, sustainable agriculture, and more energy efficient industrial practices and to reduce emissions of global warming pollutants other than carbon dioxide.

**Third, the United States should make global warming a central consideration in public infrastructure investment decisions and should increase investment in the technologies and human resources needed to address global warming.**

Investing the revenues from a global warming cap-and-trade program in clean energy solutions can provide an immediate infusion of resources. But the federal government should also adjust its investments in other ways, including:

- Increase investment in low-carbon transportation infrastructure, such as public transportation, rail transportation, and pedestrian and bicycling improvements. Evaluate all transportation investments for their impact on global warming.
- Require all new public buildings to meet strong energy efficiency standards and incorporate renewable energy where possible. Require that government agencies receive a portion of their electricity from renewable sources.
- Boost investment in federal research and development programs for energy efficiency and renewable energy technologies.
- Launch “green jobs” training programs designed to train the workforce necessary to make the transition to a clean energy economy a reality.



# Methodology

We obtained First Order Summary of the Day data (DS-3210) directly from the National Climatic Data Center (NCDC) of the National Oceanic & Atmospheric Administration (NOAA) in August 2006 for the years 2000-2005 and the first six months of 2006. We obtained data for the remainder of 2006 in April 2007. And we obtained data for 2007 in July 2008. This data set contains daily observations for a range of meteorological elements, including maximum, minimum, and mean temperature.

We looked at data from 255 major weather stations. We generated this list of 255 stations from a list of “First Order” stations in the continental United States, obtained from Weather 2000,<sup>62</sup> a meteorological consulting firm. “First Order” stations are staffed in whole or in part by National Weather Service (Civil Service) personnel and therefore provide the most comprehensive and reliable data. Because the Weather 2000 list did not include stations in Alaska or Hawaii, we used NOAA’s *Comparative Climatic Data* report to add stations for these states.<sup>63</sup>

We only included stations in our analysis with baseline historical data for temperature averages (referred to as “normals”). The historical data for maximum, minimum, and mean temperature “normals” are defined here as the 30-year average values computed by NOAA from observed temperature data during the period 1971–2000. “Normals” are updated decennially.<sup>64</sup>

The “normal” annual frequency of 90°F or warmer days for each location is based on a varying number of years of climatological data. This ranges from 120 years of climatological data for Blue Hill, MA to 27 years of data for Redding, CA. The median number of years of climatological data used to compute the historical average is 44 years.<sup>65</sup>

NCDC did not provide normal maximum temperature data for the Ronald Reagan National Airport and Dulles International Airport in the Washington, DC area. NCDC did provide normal average and minimum temperature data for these locations.

In addition, the DS-3210 data set was missing some monthly temperature data for specific stations. For these stations, we calculated the averages without this information. Specifically:

- The Kotzebue, Bettles, and Barrow stations in Alaska were missing temperature data for June 2007.
- The Kotzebue, Alaska station was missing temperature data for October 2006.
- The Oak Ridge station in Tennessee was missing temperature data for July 2001.

# Appendix A

## Average Mean Temperatures (2000–2007) Compared with Historical Normals (1971–2000): By Weather Station

STATE	CITY AND LOCATION	MEAN TEMPERATURE (°F)				
		NORMAL: 1971–2000	2007	2000–2007 AVERAGE	DEGREES ABOVE NORMAL, 2007	DEGREES ABOVE NORMAL, 2000–2007
AK	ANCHORAGE, ANCHORAGE INTL AP	36.2	37.0	38.2	0.8	2.0
AK	ANNETTE, ANNETTE ISLAND AP	46.0	46.1	47.0	0.1	1.0
AK	BARROW, BARROW W POST-W ROGERS ARPT	10.4	11.8	12.6	1.4	2.2
AK	BETHEL, BETHEL AIRPORT	29.9	32.9	32.4	3.0	2.5
AK	BETTLES, BETTLES FIELD	22.9	21.2	24.0	(1.7)	1.1
AK	BIG DELTA, BIG DELTA ALLEN AAF	28.6	29.7	30.7	1.1	2.1
AK	COLD BAY, COLD BAY ARPT	38.4	38.1	39.5	(0.3)	1.1
AK	FAIRBANKS, FAIRBANKS INTL ARPT	26.7	27.9	28.6	1.2	1.9
AK	GULKANA, GULKANA INTERMEDIATE FIELD	27.1	29.0	29.2	1.9	2.1
AK	HOMER, HOMER ARPT	38.1	37.7	39.8	(0.4)	1.7
AK	JUNEAU, JUNEAU INT'L ARPT	41.5	41.2	42.2	(0.3)	0.7
AK	KING SALMON, KING SALMON ARPT	34.5	34.9	36.5	0.4	2.0
AK	KODIAK, KODIAK	40.5	39.4	41.4	(1.1)	0.9
AK	KOTZEBUE, KOTZEBUE RALPH WEIN MEMORIAL	21.8	21.6	23.8	(0.2)	2.0
AK	MCGRATH, MCGRATH ARPT	26.9	28.8	29.0	1.9	2.1
AK	NOME, NOME MUNICIPAL ARPT	27.1	28.1	28.5	1.0	1.4
AK	ST. PAUL ISLAND, ST PAUL ISLAND ARPT	35.0	34.8	36.7	(0.2)	1.7
AK	TALKEETNA, TALKEETNA STATE ARPT	33.9	35.7	37.7	1.8	3.8
AK	VALDEZ, VALDEZ	38.3	38.5	39.8	0.2	1.5
AK	YAKUTAT, YAKUTAT STATE ARPT	39.5	39.4	40.8	(0.1)	1.3
AL	BIRMINGHAM, INTERNATIONAL AIRPORT	62.2	65.6	63.8	3.4	1.6
AL	HUNTSVILLE, INTNAL/JONES FIELD	60.6	63.9	62.0	3.3	1.4
AL	MOBILE, BATES FIELD	66.8	68.0	67.9	1.2	1.1
AL	MONTGOMERY, DANNELLY FIELD	65.0	67.1	65.9	2.1	0.9
AR	FORT SMITH, MUNICIPAL AIRPORT	61.2	62.9	62.6	1.7	1.4
AR	LITTLE ROCK, ADAMS FIELD	62.1	64.4	63.2	2.3	1.1
AZ	FLAGSTAFF, PULLIAM AIRPORT	46.2	47.5	47.2	1.3	1.0
AZ	PHOENIX, SKY HARBOR INTL AIRPORT	74.2	76.6	75.9	2.4	1.7
AZ	TUCSON, INTERNATIONAL AIRPORT	68.7	70.7	70.3	2.0	1.6
AZ	WINSLOW, WINSLOW AIRPORT	55.2	57.3	56.6	2.1	1.4
CA	BAKERSFIELD, KERN COUNTY AIR TERMINAL	65.0	65.5	65.8	0.5	0.8
CA	BISHOP, BISHOP AIRPORT	56.2	57.4	56.9	1.2	0.7
CA	EUREKA, DOWNTOWN	52.9	52.6	53.3	(0.3)	0.4
CA	FRESNO, FRESNO AIR TERMINAL	63.2	64.8	65.0	1.6	1.8
CA	LONG BEACH, LONG BEACH AIRPORT	65.3	65.2	64.5	(0.1)	(0.8)
CA	LOS ANGELES, DOWNTOWN L.A./USC CAMPUS	66.2	65.8	65.5	(0.4)	(0.7)
CA	LOS ANGELES, INTERNATIONAL AIRPORT	63.3	62.9	63.1	(0.4)	(0.2)
CA	REDDING, REDDING MUNICIPAL	61.6	63.0	63.1	1.4	1.5
CA	SACRAMENTO, EXECUTIVE AIRPORT	61.1	61.2	61.6	0.1	0.5
CA	SAN DIEGO, LINDBERGH FIELD	64.4	63.1	63.8	(1.3)	(0.6)
CA	SAN FRANCISCO, DOWNTOWN SF	58.3	57.5	57.8	(0.8)	(0.5)
CA	SAN FRANCISCO, INTERNATIONAL AIRPORT	57.3	57.8	58.4	0.5	1.1
CA	SANTA MARIA, SANTA MARIA PUBLIC AIRPORT	57.7	59.1	58.1	1.4	0.4
CA	STOCKTON, METROPOLITAN AIRPORT	61.8	63.3	62.3	1.5	0.5

MEAN TEMPERATURE (°F)						
STATE	CITY AND LOCATION	NORMAL: 1971–2000	2007	2000–2007 AVERAGE	DEGREES ABOVE NORMAL, 2007	DEGREES ABOVE NORMAL, 2000–2007
CO	ALAMOSA, SAN LUIS VALLEY RGNL APT	40.8	41.9	42.9	1.1	2.1
CO	COLORADO SPRINGS, COLORADO SPRINGS MUNICIPAL AP	47.8	49.9	49.9	2.1	2.1
CO	DENVER, DENVER INTERNATIONAL AP	50.1	50.9	51.1	0.8	1.0
CO	GRAND JUNCTION, WALKER FIELD	51.8	53.8	53.9	2.0	2.1
CO	PUEBLO, MEMORIAL AIRPORT	51.7	52.0	53.0	0.3	1.3
CT	BRIDGEPORT, SIKORSKY MEMORIAL AIRPORT	52.1	52.9	52.8	0.8	0.7
CT	HARTFORD, BRADLEY INTERNATIONAL AIRPORT	50.2	51.3	50.9	1.1	0.7
DC	WASHINGTON DC, RONALD REAGAN NATIONAL AP	57.5	59.2	58.4	1.7	0.9
DC	WASHINGTON DC/DULLES, DULLES INTERNATIONAL AIRPORT	54.2	57.0	55.7	2.8	1.5
DE	WILMINGTON, NEW CASTLE COUNTY APRT	54.4	55.9	55.0	1.5	0.6
FL	DAYTONA BEACH, INTERNATIONAL AIRPORT	71.0	72.4	71.5	1.4	0.5
FL	FORT MYERS, PAGE FIELD	74.9	76.1	75.0	1.2	0.1
FL	GAINESVILLE, REGIONAL AIRPORT	68.6	69.5	69.2	0.9	0.6
FL	JACKSONVILLE, INTERNATIONAL AIRPORT	68.0	69.1	68.7	1.1	0.7
FL	KEY WEST, INTERNATIONAL AIRPORT	78.1	79.8	78.2	1.7	0.1
FL	MIAMI, INTERNATIONAL AIRPORT	76.7	78.1	77.3	1.4	0.6
FL	ORLANDO, INTERNATIONAL AIRPORT	72.8	73.8	73.0	1.0	0.2
FL	PENSACOLA, PENSACOLA REGIONAL AIRPT	68.2	69.4	68.7	1.2	0.5
FL	TALLAHASSEE, MUNICIPAL AIRPORT	68.0	69.1	68.3	1.1	0.3
FL	TAMPA, INTERNATIONAL AIRPORT	73.1	74.7	73.7	1.6	0.6
FL	VERO BEACH, MUNICIPAL AIRPORT	73.2	74.5	73.4	1.3	0.2
FL	WEST PALM BEACH, PALM BEACH INTERNATIONAL AP	75.3	76.7	75.9	1.4	0.6
GA	ATHENS, MUNICIPAL AIRPORT	61.5	64.1	62.6	2.6	1.1
GA	ATLANTA, HARTSFIELD ATLANTA INTL AP	62.1	64.6	63.0	2.5	0.9
GA	AUGUSTA, BUSH FIELD	63.2	65.7	64.1	2.5	0.9
GA	COLUMBUS, METROPOLITAN AIRPORT	65.1	66.7	66.3	1.6	1.2
GA	MACON, MIDDLE GA REGIONAL AIRPORT	63.7	65.4	65.1	1.7	1.4
GA	SAVANNAH, MUNICIPAL AIRPORT	66.2	67.5	66.6	1.3	0.4
HI	HILO, HILO INTERNATIONAL AP	73.9	74.4	74.5	0.5	0.6
HI	HONOLULU, HONOLULU INTL ARPT	77.5	78.2	78.3	0.7	0.8
HI	KAHULUI, KAHULUI AIRPORT	75.8	76.3	76.1	0.5	0.3
HI	LIHUE, LIHUE AIRPORT	75.7	77.0	76.5	1.3	0.8
IA	DES MOINES, INTERNATIONAL AIRPORT	50.0	51.6	51.7	1.6	1.7
IA	DUBUQUE, MUNICIPAL AIRPORT	46.9	48.0	48.1	1.1	1.2
IA	SIOUX CITY, MUNICIPAL AIRPORT	48.3	49.4	49.7	1.1	1.4
IA	WATERLOO, L.B. MUNICIPAL AIRPORT	47.2	48.1	48.6	0.9	1.4
ID	BOISE, BOISE AIR TER. (GOWEN FLD.)	51.9	54.4	53.5	2.5	1.6
ID	LEWISTON, LEWISTON-NEZ PERCE COUNTY AP	52.4	54.0	53.8	1.6	1.4
ID	POCATELLO, MUNICIPAL AIRPORT	46.5	48.0	47.1	1.5	0.6
IL	CHICAGO, OHARE INTERNATIONAL AIRPORT	49.1	51.3	50.8	2.2	1.7
IL	MOLINE, QUAD CITY AIRPORT	50.2	52.3	51.9	2.1	1.7
IL	PEORIA, GREATER PEORIA AIRPORT	50.8	53.5	52.9	2.7	2.1
IL	ROCKFORD, GREATER ROCKFORD AIRPORT	47.9	50.6	49.7	2.7	1.8
IL	SPRINGFIELD, CAPITAL AIRPORT	52.7	54.7	53.8	2.0	1.1
IN	EVANSVILLE, DRESS REGIONAL AIRPORT	56.0	58.6	57.0	2.6	1.0
IN	FORT WAYNE, BAER FIELD	49.9	51.6	50.9	1.7	1.0
IN	INDIANAPOLIS, INTERNATIONAL AIRPORT	52.5	55.2	54.0	2.7	1.5
IN	SOUTH BEND, MICHIANA REGIONAL AIRPORT	49.5	51.3	50.6	1.8	1.1
KS	CONCORDIA, BLOSSER MUNICIPAL AIRPORT	53.5	54.5	55.1	1.0	1.6
KS	DODGE CITY, DODGE CITY REGIONAL ARPT	55.2	55.8	56.2	0.6	1.0
KS	GOODLAND, RENNEN FIELD	50.7	51.3	52.5	0.6	1.8
KS	TOPEKA, MUNICIPAL(PHILIP BILLARD)AP	54.3	56.7	56.3	2.4	2.0
KS	WICHITA, MID-CONTINENT AIRPORT	56.4	57.7	57.9	1.3	1.5
KY	JACKSON, JULIAN CARROLL AP	55.9	58.5	57.3	2.6	1.4
KY	LEXINGTON, BLUE GRASS FIELD	55.2	57.6	56.2	2.4	1.0
KY	LOUISVILLE, STANDIFORD FIELD	56.9	60.5	58.7	3.6	1.8
KY	PADUCAH, BARKLEY REGIONAL ARPT	56.8	59.7	58.4	2.9	1.6
LA	BATON ROUGE, RYAN AIRPORT	67.0	69.6	68.5	2.6	1.5
LA	LAKE CHARLES, MUNICIPAL AIRPORT	67.9	69.0	69.1	1.1	1.2
LA	NEW ORLEANS, NEW ORLEANS INT'L AIRPORT	68.8	70.3	70.2	1.5	1.4
LA	SHREVEPORT, SHREVEPORT REGIONAL AIRPORT	65.7	67.7	66.9	2.0	1.2
MA	BLUE HILL, MILTON OBS	49.0	50.2	49.9	1.2	0.9
MA	BOSTON, GEN LOGAN INTERNATIONAL AP	51.6	51.8	51.8	0.2	0.2
MA	WORCESTER, WORCESTER REGIONAL AIRPORT	47.2	48.5	48.4	1.3	1.2
MD	BALTIMORE, BALTIMORE-WASHINGTON INT'L AP	54.6	56.6	55.9	2.0	1.3

MEAN TEMPERATURE (°F)						
STATE	CITY AND LOCATION	NORMAL: 1971–2000	2007	2000–2007 AVERAGE	DEGREES ABOVE NORMAL, 2007	DEGREES ABOVE NORMAL, 2000–2007
ME	CARIBOU, MUNICIPAL AIRPORT	39.2	39.0	40.1	(0.2)	0.9
ME	PORTLAND, PORTLAND INTERNATIONAL JETPORT	45.7	46.3	46.7	0.6	1.0
MI	ALPENA, PHELPS COLLINS AIRPORT	42.5	44.9	44.5	2.4	2.0
MI	DETROIT, METROPOLITAN AIRPORT	49.7	51.2	50.9	1.5	1.2
MI	FLINT, BISHOP AIRPORT	46.8	48.8	48.5	2.0	1.7
MI	GRAND RAPIDS, KENT COUNTY AIRPORT	47.6	50.4	49.1	2.8	1.5
MI	HOUGHTON LAKE, ROSCOMMON COUNTY APRT	43.1	44.6	44.5	1.5	1.4
MI	LANSING, CAPITAL CITY AIRPORT	46.8	48.9	48.3	2.1	1.5
MI	MARQUETTE, COUNTY AIRPORT	38.7	41.5	41.2	2.8	2.5
MI	MUSKEGON, MUSKEGON COUNTY AIRPORT	47.1	49.4	48.9	2.3	1.8
MI	SAULT STE. MARIE, SAULT STE MARIE MUNI APT	40.1	42.7	42.5	2.6	2.4
MN	DULUTH, INTERNATIONAL AIRPORT	39.1	40.8	40.6	1.7	1.5
MN	INTERNATIONAL FALLS, FALLS INTERNATIONAL AP	37.4	38.0	38.5	0.6	1.1
MN	MINNEAPOLIS-ST.PAUL, INTERNATIONAL AIRPORT	45.4	48.1	47.6	2.7	2.2
MN	ROCHESTER, MUNICIPAL AIRPORT	43.4	46.2	45.8	2.8	2.4
MN	SAINT CLOUD, MUNICIPAL AIRPORT	41.8	44.5	44.1	2.7	2.3
MO	COLUMBIA, COLUMBIA REGIONAL AIRPORT	54.0	56.8	55.6	2.8	1.6
MO	KANSAS CITY, INTERNATIONAL AIRPORT	54.2	55.9	55.9	1.7	1.7
MO	SPRINGFIELD, REGIONAL AIRPORT	56.2	58.3	57.2	2.1	1.0
MO	ST. LOUIS, INTERNATIONAL AIRPORT	56.3	58.6	57.8	2.3	1.5
MS	JACKSON, ALLEN C THOMPSON FIELD	64.1	66.5	65.4	2.4	1.3
MS	MERIDIAN, KEY FIELD	64.7	65.2	64.7	0.5	(0.0)
MS	TUPELO, TUPELO MUNI/LEMONS AIRPORT	61.3	65.1	63.1	3.8	1.8
MT	BILLINGS, INTERNATIONAL AIRPORT	47.4	49.4	48.9	2.0	1.5
MT	GLASGOW, INT'L AIRPORT	42.6	45.4	43.8	2.8	1.2
MT	GREAT FALLS, INTERNATIONAL AIRPORT	43.7	47.0	45.7	3.3	2.0
MT	HELENA, HELENA AIRPORT	44.0	48.6	46.8	4.6	2.8
MT	KALISPELL, GLACIER PARK INT'L AIRPORT	42.6	45.0	43.7	2.4	1.1
MT	MISSOULA, MISSOULA INT'L AIRPORT	44.8	48.1	46.0	3.3	1.2
NC	ASHEVILLE, ASHEVILLE REGIONAL AIRPORT	54.8	57.0	56.4	2.2	1.6
NC	CAPE HATTERAS, WEATHER SERVICE BUILDING	62.8	64.4	63.5	1.6	0.7
NC	CHARLOTTE, DOUGLAS INTERNATIONAL AIRPORT	61.4	62.3	60.7	0.9	(0.7)
NC	GREENSBORO-WNSTN-SAL, GREENSBORO REG. AP, NC	58.1	61.6	59.6	3.5	1.5
NC	RALEIGH, RALEIGH-DURHAM AIRPORT	59.6	62.8	60.9	3.2	1.3
NC	WILMINGTON, NEW HANOVER COUNTY AIRPORT	63.8	64.8	64.0	1.0	0.2
ND	BISMARCK, MUNICIPAL AIRPORT	42.3	43.7	44.3	1.4	2.0
ND	FARGO, HECTOR AIRPORT	41.5	43.4	43.1	1.9	1.6
ND	WILLISTON, SLOULIN FIELD INT'L AIRPORT	40.9	43.0	42.0	2.1	1.1
NE	GRAND ISLAND, HALL COUNTY REGIONAL AP	49.9	52.1	52.0	2.2	2.1
NE	LINCOLN, MUNICIPAL AIRPORT	51.1	52.9	52.6	1.8	1.5
NE	NORFOLK, KARL STEFAN MEMORIAL AIRPORT	48.7	50.3	50.7	1.6	2.0
NE	NORTH PLATTE, LEE BIRD FIELD	48.7	49.5	49.9	0.8	1.2
NE	OMAHA, EPPLEY AIRFIELD	50.7	52.0	52.3	1.3	1.6
NE	SCOTTSBLUFF, SCOTTS BLUFF COUNTY AIRPORT	47.8	49.8	49.7	2.0	1.9
NE	VALENTINE, MILLER FIELD	47.2	49.3	49.1	2.1	1.9
NH	CONCORD, CONCORD MUNICIPAL	45.9	46.5	46.8	0.6	0.9
NH	MOUNT WASHINGTON, SUMMIT OBSERVATORY	27.2	27.3	28.2	0.1	1.0
NJ	ATLANTIC CITY, AVIATION FACILITIES EXPER CNTR	53.5	55.6	54.7	2.1	1.2
NJ	ATLANTIC CITY, STATE MARINA	55.3	56.0	56.2	0.7	0.9
NJ	NEWARK, INTERNATIONAL AIRPORT	54.5	55.3	55.5	0.8	1.0
NM	ALBUQUERQUE, INTL AIRPORT-KIRTLAND AFB	56.8	58.2	58.5	1.4	1.7
NM	CLAYTON, MUNICIPAL AIRPORT	53.3	54.9	55.0	1.6	1.7
NM	ROSWELL, INDUSTRIAL AIR CENTER AP	60.8	61.3	62.1	0.5	1.3
NV	ELKO, MUNICIPAL AIRPORT	46.4	47.9	47.3	1.5	0.9
NV	ELY, YELLAND FIELD	44.8	46.0	45.9	1.2	1.1
NV	LAS VEGAS, MCCARRAN INTERNATIONAL APT	68.1	71.2	70.0	3.1	1.9
NV	RENO, CANNON INTERNATIONAL AP	51.3	55.3	54.8	4.0	3.5
NV	WINNEMUCCA, MUNICIPAL AIRPORT	49.3	49.5	49.7	0.2	0.4
NY	ALBANY, ALBANY INTERNATIONAL AIRPT	47.5	48.6	48.9	1.1	1.4
NY	BINGHAMTON, BROOME COUNTY AIRPORT	45.8	47.6	46.9	1.8	1.1
NY	BUFFALO, GREATER BUFFALO INTL AIRPORT	47.9	49.3	49.0	1.4	1.1
NY	ISLIP, LONG ISLAND MACARTHUR APT	52.4	52.8	52.6	0.4	0.2
NY	NEW YORK C.PARK, CENTRAL PARK OBSERVATORY	54.6	55.3	55.5	0.7	0.9
NY	NEW YORK, JFK INTERNATIONAL AIRPORT	53.5	54.5	54.5	1.0	1.0
NY	NEW YORK, LA GUARDIA AIRPORT	55.1	57.1	56.4	2.0	1.3

MEAN TEMPERATURE (°F)						
STATE	CITY AND LOCATION	NORMAL: 1971–2000	2007	2000–2007 AVERAGE	DEGREES ABOVE NORMAL, 2007	DEGREES ABOVE NORMAL, 2000–2007
NY	ROCHESTER, ROCHESTER-MONROE COUNTY AP	47.6	49.5	49.1	1.9	1.5
NY	SYRACUSE, HANCOCK INTERNATIONAL AIRPORT	47.4	48.4	49.0	1.0	1.6
OH	AKRON, AKRON-CANTON AIRPORT	49.5	50.7	50.4	1.2	0.9
OH	CLEVELAND, CLEVELAND HOPKINS INTL AIRPORT	49.6	51.3	51.2	1.7	1.6
OH	COLUMBUS, PORT COLUMBUS INTL AIRPORT	52.9	55.0	53.8	2.1	0.9
OH	COVINGTON/CINCINNATI, CINCINNATI/NORTHERN KY INT	54.2	56.3	54.8	2.1	0.6
OH	DAYTON, INTERNATIONAL AIRPORT	51.5	53.3	52.5	1.8	1.0
OH	MANSFIELD, LAHM MUNICIPAL AIRPORT	48.7	50.6	50.1	1.9	1.4
OH	TOLEDO, TOLEDO EXPRESS AIRPORT	49.5	51.0	51.0	1.5	1.5
OH	YOUNGSTOWN, MUNICIPAL AIRPORT	48.5	50.0	49.7	1.5	1.2
OK	OKLAHOMA CITY, WILL ROGERS WORLD AIRPORT	60.1	62.1	61.4	2.0	1.3
OK	TULSA, INTERNATIONAL AIRPORT	60.8	62.0	61.7	1.2	0.9
OR	ASTORIA, CLATSOP COUNTY AIRPORT	51.0	50.8	51.9	(0.2)	0.9
OR	BURNS, MUNICIPAL APT.	44.2	45.5	45.3	1.3	1.1
OR	EUGENE, MAHLON SWEET FIELD	52.1	51.9	52.8	(0.2)	0.7
OR	MEDFORD, ROGUE VALLEY INTNRL AIRPT	54.4	55.2	55.9	0.8	1.5
OR	PENDLETON, MUNICIPAL AIRPORT	52.3	51.8	52.6	(0.5)	0.3
OR	PORTLAND, INTERNATIONAL AIRPORT	53.5	54.0	54.8	0.5	1.3
OR	SALEM, MC NARY FIELD	52.6	53.0	53.4	0.4	0.8
PA	ALLENTOWN, LEHIGH VALLEY INTRNL AIRPT	50.6	52.2	52.0	1.6	1.4
PA	AVOCA, WILKES-BARRE SCRANTON APT	49.9	50.2	50.1	0.3	0.2
PA	ERIE, TERMINAL BLDG.	50.0	50.6	50.3	0.6	0.3
PA	MIDDLETOWN/HARRISBURG, HARRISBURG INTERNATIONAL AI	53.3	54.3	54.1	1.0	0.8
PA	PHILADELPHIA, INTERNATIONAL AIRPORT	55.3	56.5	56.4	1.2	1.1
PA	PITTSBURGH, GREATER PITTSBURGH INTL AP	50.9	52.3	51.9	1.4	1.0
PA	WILLIAMSPORT, WILLIAMSPORT-LYCOMING CO AP	49.8	51.6	51.2	1.8	1.4
RI	PROVIDENCE, THEO FRANCIS GREEN STATE AP	51.1	52.3	52.0	1.2	0.9
SC	CHARLESTON, CHARLESTON INT'L AIRPORT	65.3	67.3	66.4	2.0	1.1
SC	CHARLESTON, DOWNTOWN	67.0	68.0	67.4	1.0	0.4
SC	COLUMBIA, COLUMBIA METROPOLITAN AIRPORT	63.6	65.4	64.3	1.8	0.7
SC	GREENVILLE-SPARTANBURG, GREER AIRPORT	60.0	63.4	61.6	3.4	1.6
SD	ABERDEEN, REGIONAL AIRPORT	43.8	43.5	44.3	(0.3)	0.5
SD	HURON, HURON REGIONAL AIRPORT	45.3	46.6	47.0	1.3	1.7
SD	RAPID CITY, RAPID CITY REGIONAL AIRPORT	46.6	49.6	48.5	3.0	1.9
SD	SIOUX FALLS, FOSS FIELD	45.1	47.4	47.2	2.3	2.1
TN	BRISTOL-JHNSN CTY-KN, TRI-CITY AIRPORT	54.9	57.9	56.5	3.0	1.6
TN	CHATTANOOGA, LOVELL FIELD	60.0	63.6	61.8	3.6	1.8
TN	KNOXVILLE, MC GHEE TYSON AIRPORT	58.4	61.4	59.8	3.0	1.4
TN	MEMPHIS, INTERNATIONAL AIRPORT	62.3	65.7	63.9	3.4	1.6
TN	NASHVILLE, METROPOLITAN AIRPORT	58.9	62.6	60.6	3.7	1.7
TN	OAK RIDGE, OAK RIDGE	57.6	60.7	59.4	3.1	1.8
TX	ABILENE, MUNICIPAL AIRPORT	64.4	64.2	65.1	(0.2)	0.7
TX	AMARILLO, INTERNATIONAL AIRPORT	57.0	57.8	58.2	0.8	1.2
TX	AUSTIN/BERGSTROM, AUSTIN-BERGSTROM INTL APT	69.0	66.8	68.1	(2.2)	(0.9)
TX	BROWNSVILLE, BROWNSVILLE AIRPORT	73.3	74.6	75.4	1.3	2.1
TX	CORPUS CHRISTI, INTERNATIONAL AIRPORT	71.5	72.0	72.8	0.5	1.3
TX	DALLAS-FORT WORTH, REGIONAL AIRPORT	65.5	67.7	67.2	2.2	1.7
TX	DEL RIO, INTERNATIONAL AIRPORT	69.7	69.3	71.1	(0.4)	1.4
TX	EL PASO, INTERNATIONAL AIRPORT	64.7	65.5	65.6	0.8	0.9
TX	HOUSTON, INTERCONTINENTAL AIRPORT	68.8	70.3	70.1	1.5	1.3
TX	LUBBOCK, REGIONAL AIRPORT	59.7	60.4	61.5	0.7	1.8
TX	MIDLAND-ODESSA, MIDLAND INTERNATIONAL AIRPORT	63.4	63.2	64.5	(0.2)	1.1
TX	PORT ARTHUR, JEFFERSON COUNTY AIRPORT	68.6	69.8	69.7	1.2	1.1
TX	SAN ANGELO, MATHIS FIELD	64.5	64.7	66.0	0.2	1.5
TX	SAN ANTONIO, INTERNATIONAL AIRPORT	68.7	69.1	69.9	0.4	1.2
TX	VICTORIA, VICTORIA REGIONAL AIRPORT	70.0	70.1	70.8	0.1	0.8
TX	WACO, WACO REGIONAL AIRPORT	66.6	66.9	67.7	0.3	1.1
TX	WICHITA FALLS, SHEPPARD AIR FORCE BASE	63.1	64.9	64.7	1.8	1.6
UT	SALT LAKE CITY, INTERNATIONAL AIRPORT	52.0	54.0	53.6	2.0	1.6
VA	LYNCHBURG, MUNICIPAL AIRPORT	55.4	57.2	56.2	1.8	0.8
VA	NORFOLK, INTERNATIONAL AIRPORT	59.6	61.6	61.0	2.0	1.4
VA	RICHMOND, R.E.BYRD INTERNATIONAL AP.	57.6	60.5	59.3	2.9	1.7
VA	ROANOKE, WOODRUM AIRPORT	56.3	59.5	57.8	3.2	1.5
VT	BURLINGTON, INTERNATIONAL AIRPORT	45.2	45.8	46.3	0.6	1.1
WA	OLYMPIA, OLYMPIA AIRPORT	49.6	50.2	50.5	0.6	0.9

MEAN TEMPERATURE (°F)						
STATE	CITY AND LOCATION	NORMAL: 1971–2000	2007	2000–2007 AVERAGE	DEGREES ABOVE NORMAL, 2007	DEGREES ABOVE NORMAL, 2000–2007
WA	QUILLAYUTE, QUILLAYUTE STATE AIRPORT	49.1	49.2	49.5	0.1	0.4
WA	SEATTLE, SEATTLE-TACOMA AIRPORT	52.3	52.3	52.6	(0.0)	0.3
WA	SPOKANE, INTERNATIONAL AIRPORT	47.3	48.6	48.2	1.3	0.9
WA	YAKIMA, YAKIMA MUNICIPAL AIRPORT	48.9	50.0	50.5	1.1	1.6
WI	GREEN BAY, AUSTIN STRAUBEL FIELD	44.4	46.8	45.9	2.4	1.5
WI	LA CROSSE, MUNICIPAL AIRPORT	47.3	48.8	48.6	1.5	1.3
WI	MADISON, DANE COUNTY REGIONAL AIRPORT	46.1	47.9	47.7	1.8	1.6
WI	MILWAUKEE, GENERAL MITCHELL FIELD	47.5	49.2	48.9	1.7	1.4
WV	BECKLEY, RALEIGH COUNTY MEMORIAL AP	51.6	53.4	52.2	1.8	0.6
WV	CHARLESTON, YEAGER AIRPORT	54.5	57.5	56.1	3.0	1.6
WV	ELKINS, ELKINS-RANDOLPH COUNTY APT	49.8	51.0	50.9	1.2	1.1
WV	HUNTINGTON, TRI-STATE AIRPORT	55.0	57.4	56.5	2.4	1.5
WY	CASPER, NATRONA COUNTY INT'L AIRPORT	44.9	46.7	46.4	1.8	1.5
WY	CHEYENNE, MUNICIPAL AIRPORT	44.9	47.3	47.4	2.4	2.5
WY	LANDER, HUNT FIELD	45.0	46.8	46.1	1.8	1.1
WY	SHERIDAN, SHERIDAN COUNTY AIRPORT	44.5	46.9	46.3	2.4	1.8

# Appendix B

Average Maximum Temperatures (2000–2007) Compared with Historical Normals (1971–2000):  
By Weather Station

AVERAGE MAXIMUM TEMPERATURE (°F)						
STATE	CITY AND LOCATION	NORMAL: 1971–2000	2007	2000–2007 AVERAGE	DEGREES ABOVE NORMAL, 2007	DEGREES ABOVE NORMAL, 2000–2007
AK	ANCHORAGE, ANCHORAGE INTL AP	43.1	43.2	44.5	0.1	1.4
AK	ANNETTE, ANNETTE ISLAND AP	51.4	50.9	51.9	(0.5)	0.5
AK	BARROW, BARROW W POST-W ROGERS ARPT	15.8	18.7	17.8	2.9	2.0
AK	BETHEL, BETHEL AIRPORT	36.6	39.5	39.2	2.9	2.6
AK	BETTLES, BETTLES FIELD	32.4	32.3	33.6	(0.1)	1.2
AK	BIG DELTA, BIG DELTA ALLEN AAF	37.4	37.7	38.7	0.3	1.3
AK	COLD BAY, COLD BAY ARPT	43.1	42.6	44.2	(0.5)	1.1
AK	FAIRBANKS, FAIRBANKS INTL ARPT	37.3	37.9	38.1	0.6	0.8
AK	GULKANA, GULKANA INTERMEDIATE FIELD	37.4	39.8	39.4	2.4	2.0
AK	HOMER, HOMER ARPT	44.6	44.1	46.3	(0.5)	1.7
AK	JUNEAU, JUNEAU INT'L ARPT	47.6	46.7	48.2	(0.9)	0.6
AK	KING SALMON, KING SALMON ARPT	42.4	43.2	44.9	0.8	2.5
AK	KODIAK, KODIAK	46.0	44.5	46.7	(1.5)	0.7
AK	KOTZEBUE, KOTZEBUE RALPH WEIN MEMORIAL	27.7	27.9	29.4	0.2	1.7
AK	MCGRATH, MCGRATH ARPT	36.8	38.3	38.2	1.5	1.4
AK	NOME, NOME MUNICIPAL ARPT	33.7	34.5	34.7	0.8	1.0
AK	ST. PAUL ISLAND, ST PAUL ISLAND ARPT	39.1	38.5	40.2	(0.6)	1.1
AK	TALKEETNA, TALKEETNA STATE ARPT	43.3	44.8	46.2	1.5	2.9
AK	VALDEZ, VALDEZ	44.2	45.3	45.6	1.1	1.4
AK	YAKUTAT, YAKUTAT STATE ARPT	46.3	45.3	47.0	(1.0)	0.7
AL	BIRMINGHAM, INTERNATIONAL AIRPORT	73.4	76.2	74.0	2.8	0.6
AL	HUNTSVILLE, INTNAL/JONES FIELD	71.1	74.9	72.4	3.8	1.3
AL	MOBILE, BATES FIELD	77.4	78.5	78.0	1.1	0.6
AL	MONTGOMERY, DANNELLY FIELD	77.0	79.2	77.3	2.2	0.3
AR	FORT SMITH, MUNICIPAL AIRPORT	72.1	73.1	73.5	1.0	1.4
AR	LITTLE ROCK, ADAMS FIELD	72.7	74.3	73.3	1.6	0.6
AZ	FLAGSTAFF, PULLIAM AIRPORT	61.4	62.4	61.9	1.0	0.5
AZ	PHOENIX, SKY HARBOR INTL AIRPORT	86.4	87.9	87.2	1.5	0.8
AZ	TUCSON, INTERNATIONAL AIRPORT	82.5	84.0	83.7	1.5	1.2
AZ	WINSLOW, WINSLOW AIRPORT	70.4	73.4	72.7	3.0	2.3
CA	BAKERSFIELD, KERN COUNTY AIR TERMINAL	76.8	77.3	77.6	0.5	0.8
CA	BISHOP, BISHOP AIRPORT	74.6	76.4	75.2	1.8	0.6
CA	EUREKA, DOWNTOWN	59.3	58.9	59.9	(0.4)	0.6
CA	FRESNO, FRESNO AIR TERMINAL	75.3	77.5	77.0	2.2	1.7
CA	LONG BEACH, LONG BEACH AIRPORT	75.2	74.0	73.3	(1.2)	(1.9)
CA	LOS ANGELES, DOWNTOWN L.A./USC CAMPUS	75.6	75.0	74.3	(0.6)	(1.3)
CA	LOS ANGELES, INTERNATIONAL AIRPORT	70.6	69.2	69.6	(1.4)	(1.0)
CA	REDDING, REDDING MUNICIPAL	75.3	76.4	75.6	1.1	0.3
CA	SACRAMENTO, EXECUTIVE AIRPORT	73.7	74.4	73.9	0.7	0.2
CA	SAN DIEGO, LINDBERGH FIELD	70.8	68.6	69.2	(2.2)	(1.6)
CA	SAN FRANCISCO, DOWNTOWN SF	65.1	63.8	64.1	(1.3)	(1.0)
CA	SAN FRANCISCO, INTERNATIONAL AIRPORT	65.1	65.0	65.5	(0.1)	0.4
CA	SANTA MARIA, SANTA MARIA PUBLIC AIRPORT	69.3	70.5	69.0	1.2	(0.3)
CA	STOCKTON, METROPOLITAN AIRPORT	74.6	77.2	75.7	2.6	1.1

AVERAGE MAXIMUM TEMPERATURE (°F)						
STATE	CITY AND LOCATION	NORMAL: 1971–2000	2007	2000–2007 AVERAGE	DEGREES ABOVE NORMAL, 2007	DEGREES ABOVE NORMAL, 2000–2007
CO	ALAMOSA, SAN LUIS VALLEY RGNL APT	58.6	59.3	60.9	0.7	2.3
CO	COLORADO SPRINGS, COLORADO SPRINGS MUNICIPAL AP	61.8	63.4	63.2	1.6	1.4
CO	DENVER, DENVER INTERNATIONAL AP	64.2	64.3	64.8	0.1	0.6
CO	GRAND JUNCTION, WALKER FIELD	65.1	66.9	66.8	1.8	1.7
CO	PUEBLO, MEMORIAL AIRPORT	67.4	68.6	69.9	1.2	2.5
CT	BRIDGEPORT, SIKORSKY MEMORIAL AIRPORT	59.8	60.4	60.2	0.6	0.4
CT	HARTFORD, BRADLEY INTERNATIONAL AIRPORT	60.5	61.3	60.7	0.8	0.2
DC	WASHINGTON DC, RONALD REAGAN NATIONAL AP	N/A	67.6	66.6	N/A	N/A
DC	WASHINGTON DC/DULLES, DULLES INTERNATIONAL AIRPORT	N/A	67.4	66.0	N/A	N/A
DE	WILMINGTON, NEW CASTLE COUNTY APRT	63.5	65.0	63.9	1.5	0.4
FL	DAYTONA BEACH, INTERNATIONAL AIRPORT	80.8	81.1	80.4	0.3	(0.4)
FL	FORT MYERS, PAGE FIELD	84.6	85.5	84.1	0.9	(0.5)
FL	GAINESVILLE, REGIONAL AIRPORT	79.9	80.9	80.5	1.0	0.6
FL	JACKSONVILLE, INTERNATIONAL AIRPORT	78.4	79.7	79.2	1.3	0.8
FL	KEY WEST, INTERNATIONAL AIRPORT	82.9	84.2	82.8	1.3	(0.1)
FL	MIAMI, INTERNATIONAL AIRPORT	84.2	84.7	84.0	0.5	(0.2)
FL	ORLANDO, INTERNATIONAL AIRPORT	83.2	83.6	82.8	0.4	(0.4)
FL	PENSACOLA, PENSACOLA REGIONAL AIRPT	77.1	78.2	77.4	1.1	0.3
FL	TALLAHASSEE, MUNICIPAL AIRPORT	79.5	81.0	79.8	1.5	0.3
FL	TAMPA, INTERNATIONAL AIRPORT	81.4	83.0	81.9	1.6	0.5
FL	VERO BEACH, MUNICIPAL AIRPORT	82.3	83.0	82.3	0.7	0.0
FL	WEST PALM BEACH, PALM BEACH INTERNATIONAL AP	83.2	83.6	83.2	0.4	(0.0)
GA	ATHENS, MUNICIPAL AIRPORT	72.0	75.9	73.4	3.9	1.4
GA	ATLANTA, HARTSFIELD ATLANTA INTL AP	72.0	74.2	72.1	2.2	0.1
GA	AUGUSTA, BUSH FIELD	75.7	79.1	76.6	3.4	0.9
GA	COLUMBUS, METROPOLITAN AIRPORT	75.8	77.2	76.5	1.4	0.7
GA	MACON, MIDDLE GA REGIONAL AIRPORT	75.5	77.8	76.9	2.3	1.4
GA	SAVANNAH, MUNICIPAL AIRPORT	77.2	78.1	77.2	0.9	0.0
HI	HILO, HILO INTERNATIONAL AP	81.0	82.2	81.5	1.2	0.5
HI	HONOLULU, HONOLULU INTL ARPT	84.7	84.2	84.3	(0.5)	(0.4)
HI	KAHULUI, KAHULUI AIRPORT	84.3	84.6	84.3	0.3	0.0
HI	LIHUE, LIHUE AIRPORT	81.1	82.3	81.6	1.2	0.5
IA	DES MOINES, INTERNATIONAL AIRPORT	59.8	60.5	61.1	0.7	1.3
IA	DUBUQUE, MUNICIPAL AIRPORT	56.0	57.0	57.3	1.0	1.3
IA	SIOUX CITY, MUNICIPAL AIRPORT	59.5	60.2	61.1	0.7	1.6
IA	WATERLOO, L.B. MUNICIPAL AIRPORT	58.1	57.9	59.1	(0.2)	1.0
ID	BOISE, BOISE AIR TER. (GOWEN FLD.)	62.6	65.9	64.5	3.3	1.9
ID	LEWISTON, LEWISTON-NEZ PERCE COUNTY AP	62.4	64.5	64.1	2.1	1.7
ID	POCATELLO, MUNICIPAL AIRPORT	59.6	61.5	60.4	1.9	0.8
IL	CHICAGO, OHARE INTERNATIONAL AIRPORT	58.3	59.9	59.5	1.6	1.2
IL	MOLINE, QUAD CITY AIRPORT	60.4	62.0	61.7	1.6	1.3
IL	PEORIA, GREATER PEORIA AIRPORT	60.7	62.8	62.2	2.1	1.5
IL	ROCKFORD, GREATER ROCKFORD AIRPORT	57.8	60.1	59.4	2.3	1.6
IL	SPRINGFIELD, CAPITAL AIRPORT	62.4	64.6	63.7	2.2	1.3
IN	EVANSVILLE, DRESS REGIONAL AIRPORT	66.7	68.9	66.9	2.2	0.2
IN	FORT WAYNE, BAER FIELD	59.6	61.3	60.3	1.7	0.7
IN	INDIANAPOLIS, INTERNATIONAL AIRPORT	62.3	64.4	62.9	2.1	0.6
IN	SOUTH BEND, MICHIANA REGIONAL AIRPORT	58.8	60.3	59.5	1.5	0.7
KS	CONCORDIA, BLOSSER MUNICIPAL AIRPORT	64.5	64.9	66.2	0.4	1.7
KS	DODGE CITY, DODGE CITY REGIONAL ARPT	67.7	68.0	69.1	0.3	1.4
KS	GOODLAND, RENNER FIELD	63.9	64.3	66.5	0.4	2.6
KS	TOPEKA, MUNICIPAL(PHILIP BILLARD)AP	65.2	67.3	67.2	2.1	2.0
KS	WICHITA, MID-CONTINENT AIRPORT	67.4	68.0	68.8	0.6	1.4
KY	JACKSON, JULIAN CARROLL AP	65.2	68.1	66.3	2.9	1.1
KY	LEXINGTON, BLUE GRASS FIELD	64.7	67.4	65.4	2.7	0.7
KY	LOUISVILLE, STANDIFORD FIELD	66.0	70.0	67.6	4.0	1.6
KY	PADUCAH, BARKLEY REGIONAL ARPT	67.5	70.5	68.8	3.0	1.3
LA	BATON ROUGE, RYAN AIRPORT	77.3	79.7	79.0	2.4	1.7
LA	LAKE CHARLES, MUNICIPAL AIRPORT	77.6	77.9	78.5	0.3	0.9
LA	NEW ORLEANS, NEW ORLEANS INT'L AIRPORT	78.0	78.3	78.4	0.3	0.4
LA	SHREVEPORT, SHREVEPORT REGIONAL AIRPORT	76.3	77.9	77.1	1.6	0.8
MA	BLUE HILL, MILTON OBS	57.7	58.7	58.0	1.0	0.3
MA	BOSTON, GEN LOGAN INTERNATIONAL AP	59.3	59.3	59.0	(0.0)	(0.3)
MA	WORCESTER, WORCESTER REGIONAL AIRPORT	55.9	56.6	56.2	0.7	0.3
MD	BALTIMORE, BALTIMORE-WASHINGTON INT'L AP	65.1	66.5	65.6	1.4	0.5



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ME	CARIBOU, MUNICIPAL AIRPORT	48.9	48.8	49.3	(0.1)	0.4
ME	PORTLAND, PORTLAND INTERNATIONAL JETPORT	55.2	55.3	55.6	0.1	0.4
MI	ALPENA, PHELPS COLLINS AIRPORT	52.6	55.2	54.3	2.6	1.7
MI	DETROIT, METROPOLITAN AIRPORT	58.4	59.5	59.2	1.1	0.8
MI	FLINT, BISHOP AIRPORT	56.8	58.4	58.0	1.6	1.2
MI	GRAND RAPIDS, KENT COUNTY AIRPORT	56.9	59.3	57.7	2.4	0.8
MI	HOUGHTON LAKE, ROSCOMMON COUNTY APRT	53.7	54.8	54.6	1.1	0.9
MI	LANSING, CAPITAL CITY AIRPORT	56.9	57.9	57.8	1.0	0.9
MI	MARQUETTE, COUNTY AIRPORT	48.0	50.8	50.5	2.8	2.5
MI	MUSKEGON, MUSKEGON COUNTY AIRPORT	55.8	57.5	57.0	1.7	1.2
MI	SAULT STE. MARIE, SAULT STE MARIE MUNI APT	49.6	51.4	50.9	1.8	1.3
MN	DULUTH, INTERNATIONAL AIRPORT	48.7	49.6	49.4	0.9	0.7
MN	INTERNATIONAL FALLS, FALLS INTERNATIONAL AP	48.8	48.8	49.4	0.0	0.6
MN	MINNEAPOLIS-ST.PAUL, INTERNATIONAL AIRPORT	54.7	56.5	55.9	1.8	1.2
MN	ROCHESTER, MUNICIPAL AIRPORT	52.6	55.0	54.6	2.4	2.0
MN	SAINT CLOUD, MUNICIPAL AIRPORT	52.5	54.7	54.3	2.2	1.8
MO	COLUMBIA, COLUMBIA REGIONAL AIRPORT	64.9	66.8	65.6	1.9	0.7
MO	KANSAS CITY, INTERNATIONAL AIRPORT	64.3	65.7	65.8	1.4	1.5
MO	SPRINGFIELD, REGIONAL AIRPORT	67.4	68.3	67.6	0.9	0.2
MO	ST. LOUIS, INTERNATIONAL AIRPORT	65.7	67.7	66.8	2.0	1.1
MS	JACKSON, ALLEN C THOMPSON FIELD	75.0	77.8	76.3	2.8	1.3
MS	MERIDIAN, KEY FIELD	76.9	77.9	76.6	1.0	(0.3)
MS	TUPELO, TUPELO MUNI/LEMONS AIRPORT	72.7	76.3	73.7	3.6	1.0
MT	BILLINGS, INTERNATIONAL AIRPORT	58.4	60.3	59.9	1.9	1.5
MT	GLASGOW, INT'L AIRPORT	54.0	57.3	55.8	3.3	1.8
MT	GREAT FALLS, INTERNATIONAL AIRPORT	56.4	59.1	57.9	2.7	1.5
MT	HELENA, HELENA AIRPORT	56.7	60.7	58.6	4.0	1.9
MT	KALISPELL, GLACIER PARK INT'L AIRPORT	54.6	57.2	55.4	2.6	0.8
MT	MISSOULA, MISSOULA INT'L AIRPORT	56.7	60.0	57.6	3.3	0.9
NC	ASHEVILLE, ASHEVILLE REGIONAL AIRPORT	65.7	68.5	67.1	2.8	1.4
NC	CAPE HATTERAS, WEATHER SERVICE BUILDING	69.9	70.8	69.6	0.9	(0.3)
NC	CHARLOTTE, DOUGLAS INTERNATIONAL AIRPORT	71.7	74.0	71.5	2.3	(0.2)
NC	GREENSBORO-WNSTN-SAL, GREENSBORO REG. AP, NC	68.5	72.1	69.4	3.6	0.9
NC	RALEIGH, RALEIGH-DURHAM AIRPORT	70.6	74.3	71.8	3.7	1.2
NC	WILMINGTON, NEW HANOVER COUNTY AIRPORT	74.0	75.2	73.8	1.2	(0.2)
ND	BISMARCK, MUNICIPAL AIRPORT	54.5	55.8	56.3	1.3	1.8
ND	FARGO, HECTOR AIRPORT	51.7	53.1	53.0	1.4	1.3
ND	WILLISTON, SLOULIN FIELD INT'L AIRPORT	53.5	56.1	54.6	2.6	1.1
NE	GRAND ISLAND, HALL COUNTY REGIONAL AP	61.1	62.8	63.5	1.7	2.4
NE	LINCOLN, MUNICIPAL AIRPORT	62.8	63.9	64.4	1.1	1.6
NE	NORFOLK, KARL STEFAN MEMORIAL AIRPORT	60.3	60.9	62.1	0.6	1.8
NE	NORTH PLATTE, LEE BIRD FIELD	63.0	62.8	64.2	(0.2)	1.2
NE	OMAHA, EPPLEY AIRFIELD	61.5	62.2	62.8	0.7	1.3
NE	SCOTTSBLUFF, SCOTTS BLUFF COUNTY AIRPORT	62.8	64.6	64.5	1.8	1.7
NE	VALENTINE, MILLER FIELD	61.1	62.2	62.7	1.1	1.6
NH	CONCORD, CONCORD MUNICIPAL	57.7	57.8	58.0	0.1	0.3
NH	MOUNT WASHINGTON, SUMMIT OBSERVATORY	33.9	34.2	34.8	0.3	0.9
NJ	ATLANTIC CITY, AVIATION FACILITIES EXPER CNTR	63.6	65.3	64.4	1.7	0.8
NJ	ATLANTIC CITY, STATE MARINA	61.1	61.9	62.2	0.8	1.1
NJ	NEWARK, INTERNATIONAL AIRPORT	62.3	63.5	63.5	1.2	1.2
NM	ALBUQUERQUE, INTL AIRPORT-KIRTLAND AFB	70.4	70.1	70.2	(0.3)	(0.2)
NM	CLAYTON, MUNICIPAL AIRPORT	67.0	68.6	68.6	1.6	1.6
NM	ROSWELL, INDUSTRIAL AIR CENTER AP	76.3	75.7	76.5	(0.6)	0.2
NV	ELKO, MUNICIPAL AIRPORT	62.2	64.2	62.8	2.0	0.6
NV	ELY, YELLAND FIELD	61.6	63.2	62.3	1.6	0.7
NV	LAS VEGAS, MCCARRAN INTERNATIONAL APT	79.9	81.8	80.6	1.9	0.7
NV	RENO, CANNON INTERNATIONAL AP	67.4	69.5	68.5	2.1	1.1
NV	WINNEMUCCA, MUNICIPAL AIRPORT	65.6	67.0	66.2	1.4	0.6
NY	ALBANY, ALBANY INTERNATIONAL AIRPT	57.6	57.9	58.0	0.3	0.4
NY	BINGHAMTON, BROOME COUNTY AIRPORT	54.0	55.7	54.8	1.7	0.8
NY	BUFFALO, GREATER BUFFALO INTL AIRPORT	55.9	57.2	56.7	1.3	0.8
NY	ISLIP, LONG ISLAND MACARTHUR APT	61.2	60.7	60.6	(0.5)	(0.6)
NY	NEW YORK C.PARK, CENTRAL PARK OBSERVATORY	61.7	62.3	62.3	0.6	0.6
NY	NEW YORK, JFK INTERNATIONAL AIRPORT	61.2	61.5	61.4	0.3	0.2
NY	NEW YORK, LA GUARDIA AIRPORT	62.0	63.8	62.9	1.8	0.9

AVERAGE MAXIMUM TEMPERATURE (°F)						
STATE	CITY AND LOCATION	NORMAL: 1971–2000	2007	2000–2007 AVERAGE	DEGREES ABOVE NORMAL, 2007	DEGREES ABOVE NORMAL, 2000–2007
NY	ROCHESTER, ROCHESTER-MONROE COUNTY AP	56.8	58.3	57.6	1.5	0.8
NY	SYRACUSE, HANCOCK INTERNATIONAL AIRPORT	57.1	57.6	58.0	0.5	0.9
OH	AKRON, AKRON-CANTON AIRPORT	58.9	59.9	59.2	1.0	0.3
OH	CLEVELAND, CLEVELAND HOPKINS INTL AIRPORT	58.1	59.4	59.3	1.3	1.2
OH	COLUMBUS, PORT COLUMBUS INTL AIRPORT	62.6	64.2	62.6	1.6	(0.0)
OH	COVINGTON/CINCINNATI, CINCINNATI/NORTHERN KY INT	64.0	66.3	64.0	2.3	0.0
OH	DAYTON, INTERNATIONAL AIRPORT	60.6	62.6	61.4	2.0	0.8
OH	MANSFIELD, LAHM MUNICIPAL AIRPORT	58.5	59.7	58.9	1.2	0.4
OH	TOLEDO, TOLEDO EXPRESS AIRPORT	58.9	60.4	60.3	1.5	1.4
OH	YOUNGSTOWN, MUNICIPAL AIRPORT	58.2	59.7	59.0	1.5	0.8
OK	OKLAHOMA CITY, WILL ROGERS WORLD AIRPORT	71.1	72.0	72.2	0.9	1.1
OK	TULSA, INTERNATIONAL AIRPORT	71.4	71.7	72.1	0.3	0.7
OR	ASTORIA, CLATSOP COUNTY AIRPORT	58.1	57.5	58.8	(0.6)	0.7
OR	BURNS, MUNICIPAL APT.	59.2	61.2	60.0	2.0	0.8
OR	EUGENE, MAHLON SWEET FIELD	63.0	62.5	63.5	(0.5)	0.5
OR	MEDFORD, ROGUE VALLEY INTNRL AIRPT	67.4	67.2	68.2	(0.2)	0.8
OR	PENDLETON, MUNICIPAL AIRPORT	63.0	63.0	63.6	0.0	0.6
OR	PORTLAND, INTERNATIONAL AIRPORT	62.1	62.2	63.1	0.1	1.0
OR	SALEM, MC NARY FIELD	63.4	62.6	63.5	(0.8)	0.1
PA	ALLENTOWN, LEHIGH VALLEY INTRNL AIRPT	60.5	62.1	61.9	1.6	1.4
PA	AVOCA, WILKES-BARRE SCRANTON APT	59.3	59.5	59.2	0.2	(0.1)
PA	ERIE, TERMINAL BLDG.	57.8	57.9	57.5	0.1	(0.3)
PA	MIDDLETOWN/HARRISBURG, HARRISBURG INTERNATIONAL AI	62.4	63.1	62.9	0.7	0.5
PA	PHILADELPHIA, INTERNATIONAL AIRPORT	63.2	64.7	64.6	1.5	1.4
PA	PITTSBURGH, GREATER PITTSBURGH INTL AP	60.4	61.6	60.9	1.2	0.5
PA	WILLIAMSPORT, WILLIAMSPORT-LYCOMING CO AP	59.6	61.6	60.8	2.0	1.2
RI	PROVIDENCE, THEO FRANCIS GREEN STATE AP	60.2	61.2	60.6	1.0	0.4
SC	CHARLESTON, CHARLESTON INT'L AIRPORT	75.9	77.6	76.4	1.7	0.5
SC	CHARLESTON, DOWNTOWN	73.5	73.9	73.4	0.4	(0.1)
SC	COLUMBIA, COLUMBIA METROPOLITAN AIRPORT	74.8	77.1	75.3	2.3	0.5
SC	GREENVILLE-SPARTANBURG, GREER AIRPORT	70.4	74.5	71.8	4.1	1.4
SD	ABERDEEN, REGIONAL AIRPORT	55.1	54.9	55.8	(0.2)	0.7
SD	HURON, HURON REGIONAL AIRPORT	57.0	57.3	58.6	0.3	1.6
SD	RAPID CITY, RAPID CITY REGIONAL AIRPORT	59.1	63.1	61.8	4.0	2.7
SD	SIOUX FALLS, FOSS FIELD	57.2	57.6	57.8	0.4	0.6
TN	BRISTOL-JHNSN CTY-KN, TRI-CITY AIRPORT	66.3	70.2	67.9	3.9	1.6
TN	CHATTANOOGA, LOVELL FIELD	70.8	74.9	72.2	4.1	1.4
TN	KNOXVILLE, MC GHEE TYSON AIRPORT	68.3	72.4	69.7	4.1	1.4
TN	MEMPHIS, INTERNATIONAL AIRPORT	72.1	75.1	73.0	3.0	0.9
TN	NASHVILLE, METROPOLITAN AIRPORT	69.0	73.0	70.4	4.0	1.4
TN	OAK RIDGE, OAK RIDGE	68.9	72.2	70.2	3.3	1.3
TX	ABILENE, MUNICIPAL AIRPORT	76.1	74.9	76.3	(1.2)	0.2
TX	AMARILLO, INTERNATIONAL AIRPORT	70.3	70.3	71.3	0.0	1.0
TX	AUSTIN/BERGSTROM, AUSTIN-BERGSTROM INTL APT	79.5	77.9	79.9	(1.6)	0.4
TX	BROWNSVILLE, BROWNSVILLE AIRPORT	82.0	83.0	84.3	1.0	2.3
TX	CORPUS CHRISTI, INTERNATIONAL AIRPORT	80.9	80.7	82.1	(0.2)	1.2
TX	DALLAS-FORT WORTH, REGIONAL AIRPORT	75.8	77.0	77.1	1.2	1.3
TX	DEL RIO, INTERNATIONAL AIRPORT	80.9	79.3	81.9	(1.6)	1.0
TX	EL PASO, INTERNATIONAL AIRPORT	77.1	78.0	78.0	0.9	0.9
TX	HOUSTON, INTERCONTINENTAL AIRPORT	79.4	79.7	79.7	0.3	0.3
TX	LUBBOCK, REGIONAL AIRPORT	73.2	72.8	74.5	(0.4)	1.3
TX	MIDLAND-ODESSA, MIDLAND INTERNATIONAL AIRPORT	77.0	75.7	77.0	(1.3)	(0.0)
TX	PORT ARTHUR, JEFFERSON COUNTY AIRPORT	78.1	78.7	78.8	0.6	0.7
TX	SAN ANGELO, MATHIS FIELD	77.1	76.6	78.3	(0.5)	1.2
TX	SAN ANTONIO, INTERNATIONAL AIRPORT	79.8	78.5	80.1	(1.3)	0.3
TX	VICTORIA, VICTORIA REGIONAL AIRPORT	79.6	79.6	80.9	0.0	1.3
TX	WACO, WACO REGIONAL AIRPORT	77.9	77.3	78.3	(0.6)	0.4
TX	WICHITA FALLS, SHEPPARD AIR FORCE BASE	75.3	75.7	76.4	0.4	1.1
UT	SALT LAKE CITY, INTERNATIONAL AIRPORT	62.9	65.4	64.3	2.5	1.4
VA	LYNCHBURG, MUNICIPAL AIRPORT	66.8	68.4	67.2	1.6	0.4
VA	NORFOLK, INTERNATIONAL AIRPORT	67.8	69.9	68.8	2.1	1.0
VA	RICHMOND, R.E.BYRD INTERNATIONAL AP.	67.8	71.1	69.5	3.3	1.7
VA	ROANOKE, WOODRUM AIRPORT	67.2	69.7	67.6	2.5	0.4
VT	BURLINGTON, INTERNATIONAL AIRPORT	54.5	55.0	55.3	0.5	0.8
WA	OLYMPIA, OLYMPIA AIRPORT	59.8	59.5	60.5	(0.3)	0.7

AVERAGE MAXIMUM TEMPERATURE (°F)						
STATE	CITY AND LOCATION	NORMAL: 1971–2000	2007	2000–2007 AVERAGE	DEGREES ABOVE NORMAL, 2007	DEGREES ABOVE NORMAL, 2000–2007
WA	QUILLAYUTE, QUILLAYUTE STATE AIRPORT	57.4	56.0	57.0	(1.4)	(0.4)
WA	SEATTLE, SEATTLE-TACOMA AIRPORT	59.8	59.1	59.6	(0.7)	(0.2)
WA	SPOKANE, INTERNATIONAL AIRPORT	57.4	58.0	57.8	0.6	0.4
WA	YAKIMA, YAKIMA MUNICIPAL AIRPORT	63.0	63.4	63.7	0.4	0.7
WI	GREEN BAY, AUSTIN STRAUBEL FIELD	54.3	56.4	55.3	2.1	1.0
WI	LA CROSSE, MUNICIPAL AIRPORT	57.7	58.2	58.0	0.5	0.3
WI	MADISON, DANE COUNTY REGIONAL AIRPORT	55.8	57.1	57.1	1.3	1.3
WI	MILWAUKEE, GENERAL MITCHELL FIELD	55.9	56.7	56.4	0.8	0.5
WV	BECKLEY, RALEIGH COUNTY MEMORIAL AP	61.2	62.9	61.2	1.7	0.0
WV	CHARLESTON, YEAGER AIRPORT	65.4	68.5	66.3	3.1	0.9
WV	ELKINS, ELKINS-RANDOLPH COUNTY APT	62.2	62.5	62.5	0.3	0.3
WV	HUNTINGTON, TRI-STATE AIRPORT	64.9	68.0	66.4	3.1	1.5
WY	CASPER, NATRONA COUNTY INT'L AIRPORT	58.2	60.8	60.4	2.6	2.2
WY	CHEYENNE, MUNICIPAL AIRPORT	57.6	59.6	59.6	2.0	2.0
WY	LANDER, HUNT FIELD	58.0	60.2	59.0	2.2	1.0
WY	SHERIDAN, SHERIDAN COUNTY AIRPORT	58.4	60.9	60.5	2.5	2.1

# Appendix C

Frequency of Occurrence of Days with Temperatures Peaking at 90°F or Warmer:  
2007 vs. the Historical Average\*

STATE	CITY AND LOCATION	NORMAL AVERAGE FREQUENCY OF 90°F+ DAYS: HISTORICAL AVERAGE	FREQUENCY OF 90°F+ DAYS (2007)	NUMBER OF 90°F+ DAYS ABOVE AVERAGE
AL	BIRMINGHAM, INTERNATIONAL AIRPORT	53	85	32
AL	HUNTSVILLE, INTNAL/JONES FIELD	47	82	35
AL	MOBILE, BATES FIELD	74	81	7
AL	MONTGOMERY, DANNELLY FIELD	78	102	24
AR	FORT SMITH, MUNICIPAL AIRPORT	72	61	-11
AR	LITTLE ROCK, ADAMS FIELD	72	76	4
AZ	FLAGSTAFF, PULLIAM AIRPORT	3	6	3
AZ	PHOENIX, SKY HARBOR INTL AIRPORT	169	190	21
AZ	TUCSON, INTERNATIONAL AIRPORT	144	162	18
AZ	WINSLOW, WINSLOW AIRPORT	69	97	28
CA	BAKERSFIELD, KERN COUNTY AIR TERMINAL	108	105	-3
CA	BISHOP, BISHOP AIRPORT	96	111	15
CA	EUREKA, DOWNTOWN	0	0	0
CA	FRESNO, FRESNO AIR TERMINAL	108	116	8
CA	LONG BEACH, LONG BEACH AIRPORT	21	23	2
CA	LOS ANGELES, DOWNTOWN L.A./USC CAMPUS	22	21	-1
CA	LOS ANGELES, INTERNATIONAL AIRPORT	3	4	1
CA	REDDING, REDDING MUNICIPAL	101	100	-1
CA	SACRAMENTO, EXECUTIVE AIRPORT	74	63	-11
CA	SAN DIEGO, LINDBERGH FIELD	2	1	-1
CA	SAN FRANCISCO, DOWNTOWN SF	1	0	-1
CA	SAN FRANCISCO, INTERNATIONAL AIRPORT	3	0	-3
CA	SANTA MARIA, SANTA MARIA PUBLIC AIRPORT	3	4	1
CA	STOCKTON, METROPOLITAN AIRPORT	83	91	8
CO	ALAMOSA, SAN LUIS VALLEY RGNL APT	1	2	1
CO	COLORADO SPRINGS, COLORADO SPRINGS MUNICIPAL AP	17	21	4
CO	DENVER, DENVER INTERNATIONAL AP	34	54	20
CO	GRAND JUNCTION, WALKER FIELD	64	78	14
CO	PUEBLO, MEMORIAL AIRPORT	66	66	0
CT	BRIDGEPORT, SIKORSKY MEMORIAL AIRPORT	6	4	-2
CT	HARTFORD, BRADLEY INTERNATIONAL AIRPORT	18	20	2
DC	WASHINGTON DC, RONALD REAGAN NATIONAL AP	36	44	8
DC	WASHINGTON DC/DULLES, DULLES INTERNATIONAL AIRPORT	28	53	25
DE	WILMINGTON, NEW CASTLE COUNTY APRT	19	25	6
FL	DAYTONA BEACH, INTERNATIONAL AIRPORT	57	77	20
FL	FORT MYERS, PAGE FIELD	113	126	13
FL	GAINESVILLE, REGIONAL AIRPORT	80	89	9
FL	JACKSONVILLE, INTERNATIONAL AIRPORT	80	73	-7
FL	KEY WEST, INTERNATIONAL AIRPORT	49	91	42
FL	MIAMI, INTERNATIONAL AIRPORT	63	96	33
FL	ORLANDO, INTERNATIONAL AIRPORT	105	115	10
FL	PENSACOLA, PENSACOLA REGIONAL AIRPT	58	83	25
FL	TALLAHASSEE, MUNICIPAL AIRPORT	91	116	25
FL	TAMPA, INTERNATIONAL AIRPORT	86	108	22
FL	VERO BEACH, MUNICIPAL AIRPORT	63	81	18

\* The "normal" annual frequency of 90°F or warmer days for each location is based on a varying number of years of climatological data. This ranges from 120 years of climatological data for Blue Hill, MA to 27 years of data for Redding, CA. The median number of years of climatological data used to compute the historical average is 44 years.

STATE	CITY AND LOCATION	NORMAL AVERAGE FREQUENCY OF 90°F+ DAYS: HISTORICAL AVERAGE	FREQUENCY OF 90°F+ DAYS (2007)	NUMBER OF 90°F+ DAYS ABOVE AVERAGE
FL	WEST PALM BEACH, PALM BEACH INTERNATIONAL AP	65	66	1
GA	ATHENS, MUNICIPAL AIRPORT	50	84	34
GA	ATLANTA, HARTSFIELD ATLANTA INTL AP	35	51	16
GA	AUGUSTA, BUSH FIELD	73	102	29
GA	COLUMBUS, METROPOLITAN AIRPORT	75	80	5
GA	MACON, MIDDLE GA REGIONAL AIRPORT	80	81	1
GA	SAVANNAH, MUNICIPAL AIRPORT	69	67	-2
HI	HILO, HILO INTERNATIONAL AP	0	0	0
HI	HONOLULU, HONOLULU INTL ARPT	34	11	-23
HI	KAHULUI, KAHULUI AIRPORT	26	21	-5
HI	LIHUE, LIHUE AIRPORT	0	0	0
IA	DES MOINES, INTERNATIONAL AIRPORT	22	21	-1
IA	DUBUQUE, MUNICIPAL AIRPORT	8	3	-5
IA	SIOUX CITY, MUNICIPAL AIRPORT	25	28	3
IA	WATERLOO, L.B. MUNICIPAL AIRPORT	16	8	-8
ID	BOISE, BOISE AIR TER. (GOWEN FLD.)	45	65	20
ID	LEWISTON, LEWISTON-NEZ PERCE COUNTY AP	40	51	11
ID	POCATELLO, MUNICIPAL AIRPORT	35	51	16
IL	CHICAGO, OHARE INTERNATIONAL AIRPORT	17	19	2
IL	MOLINE, QUAD CITY AIRPORT	23	34	11
IL	PEORIA, GREATER PEORIA AIRPORT	20	34	14
IL	ROCKFORD, GREATER ROCKFORD AIRPORT	14	22	8
IL	SPRINGFIELD, CAPITAL AIRPORT	28	40	12
IN	EVANSVILLE, DRESS REGIONAL AIRPORT	40	61	21
IN	FORT WAYNE, BAER FIELD	15	29	14
IN	INDIANAPOLIS, INTERNATIONAL AIRPORT	17	37	20
IN	SOUTH BEND, MICHIANA REGIONAL AIRPORT	13	18	5
KS	CONCORDIA, BLOSSER MUNICIPAL AIRPORT	49	50	1
KS	DODGE CITY, DODGE CITY REGIONAL ARPT	66	63	-3
KS	GOODLAND, RENNEN FIELD	48	54	6
KS	TOPEKA, MUNICIPAL(PHILIP BILLARD)AP	42	54	12
KS	WICHITA, MID-CONTINENT AIRPORT	63	58	-5
KY	JACKSON, JULIAN CARROLL AP	13	35	22
KY	LEXINGTON, BLUE GRASS FIELD	19	45	26
KY	LOUISVILLE, STANDIFORD FIELD	32	67	35
KY	PADUCAH, BARKLEY REGIONAL ARPT	48	66	18
LA	BATON ROUGE, RYAN AIRPORT	85	101	16
LA	LAKE CHARLES, MUNICIPAL AIRPORT	77	84	7
LA	NEW ORLEANS, NEW ORLEANS INT'L AIRPORT	72	74	2
LA	SHREVEPORT, SHREVEPORT REGIONAL AIRPORT	90	106	16
MA	BLUE HILL, MILTON OBS	5	12	7
MA	BOSTON, GEN LOGAN INTERNATIONAL AP	12	18	6
MA	WORCESTER, WORCESTER REGIONAL AIRPORT	3	6	3
MD	BALTIMORE, BALTIMORE-WASHINGTON INT'L AP	30	45	15
ME	CARIBOU, MUNICIPAL AIRPORT	1	4	3
ME	PORTLAND, PORTLAND INTERNATIONAL JETPORT	5	7	2
MI	ALPENA, PHELPS COLLINS AIRPORT	6	9	3
MI	DETROIT, METROPOLITAN AIRPORT	12	14	2
MI	FLINT, BISHOP AIRPORT	7	14	7
MI	GRAND RAPIDS, KENT COUNTY AIRPORT	9	21	12
MI	HOUGHTON LAKE, ROSCOMMON COUNTY APRT	3	5	2
MI	LANSING, CAPITAL CITY AIRPORT	9	12	3
MI	MARQUETTE, COUNTY AIRPORT	3	4	1
MI	MUSKEGON, MUSKEGON COUNTY AIRPORT	2	3	1
MI	SAULT STE. MARIE, SAULT STE MARIE MUNI APT	1	3	2
MN	DULUTH, INTERNATIONAL AIRPORT	2	0	-2
MN	INTERNATIONAL FALLS, FALLS INTERNATIONAL AP	3	6	3
MN	MINNEAPOLIS-ST.PAUL, INTERNATIONAL AIRPORT	14	27	13
MN	ROCHESTER, MUNICIPAL AIRPORT	6	4	-2
MN	SAINT CLOUD, MUNICIPAL AIRPORT	10	20	10
MO	COLUMBIA, COLUMBIA REGIONAL AIRPORT	34	49	15
MO	KANSAS CITY, INTERNATIONAL AIRPORT	36	40	4
MO	SPRINGFIELD, REGIONAL AIRPORT	40	34	-6
MO	ST. LOUIS, INTERNATIONAL AIRPORT	41	57	16
MS	JACKSON, ALLEN C THOMPSON FIELD	81	93	12
MS	MERIDIAN, KEY FIELD	80	90	10

STATE	CITY AND LOCATION	NORMAL AVERAGE FREQUENCY OF 90°F+ DAYS: HISTORICAL AVERAGE	FREQUENCY OF 90°F+ DAYS (2007)	NUMBER OF 90°F+ DAYS ABOVE AVERAGE
MS	TUPELO, TUPELO MUNI/LEMONS AIRPORT	63	99	36
MT	BILLINGS, INTERNATIONAL AIRPORT	29	42	13
MT	GLASGOW, INT'L AIRPORT	24	31	7
MT	GREAT FALLS, INTERNATIONAL AIRPORT	19	36	17
MT	HELENA, HELENA AIRPORT	20	44	24
MT	KALISPELL, GLACIER PARK INT'L AIRPORT	13	30	17
MT	MISSOULA, MISSOULA INT'L AIRPORT	22	53	31
NC	ASHEVILLE, ASHEVILLE REGIONAL AIRPORT	8	16	8
NC	CAPE HATTERAS, WEATHER SERVICE BUILDING	5	4	-1
NC	CHARLOTTE, DOUGLAS INTERNATIONAL AIRPORT	38	76	38
NC	GREENSBORO-WNSTN-SAL, GREENSBORO REG. AP, NC	29	64	35
NC	RALEIGH, RALEIGH-DURHAM AIRPORT	38	83	45
NC	WILMINGTON, NEW HANOVER COUNTY AIRPORT	43	45	2
ND	BISMARCK, MUNICIPAL AIRPORT	21	24	3
ND	FARGO, HECTOR AIRPORT	13	20	7
ND	WILLISTON, SLOULIN FIELD INT'L AIRPORT	23	30	7
NE	GRAND ISLAND, HALL COUNTY REGIONAL AP	38	40	2
NE	LINCOLN, MUNICIPAL AIRPORT	42	45	3
NE	NORFOLK, KARL STEFAN MEMORIAL AIRPORT	32	27	-5
NE	NORTH PLATTE, LEE BIRD FIELD	36	44	8
NE	OMAHA, EPPLEY AIRFIELD	33	34	1
NE	SCOTTSBLUFF, SCOTTS BLUFF COUNTY AIRPORT	43	69	26
NE	VALENTINE, MILLER FIELD	41	54	13
NH	CONCORD, CONCORD MUNICIPAL	11	13	2
NH	MOUNT WASHINGTON, SUMMIT OBSERVATORY	0	0	0
NJ	ATLANTIC CITY, AVIATION FACILITIES EXPER CNTR	18	24	6
NJ	ATLANTIC CITY, STATE MARINA	5	1	-4
NJ	NEWARK, INTERNATIONAL AIRPORT	24	21	-3
NM	ALBUQUERQUE, INTL AIRPORT-KIRTLAND AFB	62	61	-1
NM	CLAYTON, MUNICIPAL AIRPORT	36	56	20
NM	ROSWELL, INDUSTRIAL AIR CENTER AP	95	98	3
NV	ELKO, MUNICIPAL AIRPORT	42	64	22
NV	ELY, YELLAND FIELD	20	43	23
NV	LAS VEGAS, MCCARRAN INTERNATIONAL APT	133	138	5
NV	RENO, CANNON INTERNATIONAL AP	53	81	28
NV	WINNEMUCCA, MUNICIPAL AIRPORT	58	79	21
NY	ALBANY, ALBANY INTERNATIONAL AIRPT	8	10	2
NY	BINGHAMTON, BROOME COUNTY AIRPORT	2	6	4
NY	BUFFALO, GREATER BUFFALO INTL AIRPORT	3	6	3
NY	ISLIP, LONG ISLAND MACARTHUR APT	7	3	-4
NY	NEW YORK C.PARK, CENTRAL PARK OBSERVATORY	17	10	-7
NY	NEW YORK, JFK INTERNATIONAL AIRPORT	10	7	-3
NY	NEW YORK, LA GUARDIA AIRPORT	16	23	7
NY	ROCHESTER, ROCHESTER-MONROE COUNTY AP	8	17	9
NY	SYRACUSE, HANCOCK INTERNATIONAL AIRPORT	7	15	8
OH	AKRON, AKRON-CANTON AIRPORT	7	9	2
OH	CLEVELAND, CLEVELAND HOPKINS INTL AIRPORT	9	11	2
OH	COLUMBUS, PORT COLUMBUS INTL AIRPORT	16	31	15
OH	COVINGTON/CINCINNATI, CINCINNATI/NORTHERN KY INT	19	54	35
OH	DAYTON, INTERNATIONAL AIRPORT	15	23	8
OH	MANSFIELD, LAHM MUNICIPAL AIRPORT	6	4	-2
OH	TOLEDO, TOLEDO EXPRESS AIRPORT	15	24	9
OH	YOUNGSTOWN, MUNICIPAL AIRPORT	7	10	3
OK	OKLAHOMA CITY, WILL ROGERS WORLD AIRPORT	68	64	-4
OK	TULSA, INTERNATIONAL AIRPORT	72	57	-15
OR	ASTORIA, CLATSOP COUNTY AIRPORT	0	1	1
OR	BURNS, MUNICIPAL APT.	23	38	15
OR	EUGENE, MAHLON SWEET FIELD	15	10	-5
OR	MEDFORD, ROGUE VALLEY INTNL AIRPT	55	52	-3
OR	PENDLETON, MUNICIPAL AIRPORT	34	34	0
OR	PORTLAND, INTERNATIONAL AIRPORT	11	9	-2
OR	SALEM, MC NARY FIELD	16	11	-5
PA	ALLENTOWN, LEHIGH VALLEY INTRNL AIRPT	16	17	1
PA	AVOCA, WILKES-BARRE SCRANTON APT	7	10	3
PA	ERIE, TERMINAL BLDG.	2	5	3
PA	MIDDLETOWN/HARRISBURG, HARRISBURG INTERNATIONAL AI	22	20	-2

STATE	CITY AND LOCATION	NORMAL AVERAGE FREQUENCY OF 90°F+ DAYS: HISTORICAL AVERAGE	FREQUENCY OF 90°F+ DAYS (2007)	NUMBER OF 90°F+ DAYS ABOVE AVERAGE
PA	PHILADELPHIA, INTERNATIONAL AIRPORT	23	24	1
PA	PITTSBURGH, GREATER PITTSBURGH INTL AP	8	15	7
PA	WILLIAMSPORT, WILLIAMSPORT-LYCOMING CO AP	14	26	12
RI	PROVIDENCE, THEO FRANCIS GREEN STATE AP	10	11	1
SC	CHARLESTON, CHARLESTON INT'L AIRPORT	53	70	17
SC	CHARLESTON, DOWNTOWN	32	19	-13
SC	COLUMBIA, COLUMBIA METROPOLITAN AIRPORT	72	90	18
SC	GREENVILLE-SPARTANBURG, GREER AIRPORT	36	74	38
SD	ABERDEEN, REGIONAL AIRPORT	20	18	-2
SD	HURON, HURON REGIONAL AIRPORT	28	23	-5
SD	RAPID CITY, RAPID CITY REGIONAL AIRPORT	31	56	25
SD	SIOUX FALLS, FOSS FIELD	22	20	-2
TN	BRISTOL-JHNSN CTY-KN, TRI-CITY AIRPORT	14	48	34
TN	CHATTANOOGA, LOVELL FIELD	49	82	33
TN	KNOXVILLE, MC GHEE TYSON AIRPORT	28	62	34
TN	MEMPHIS, INTERNATIONAL AIRPORT	66	104	38
TN	NASHVILLE, METROPOLITAN AIRPORT	44	74	30
TN	OAK RIDGE, OAK RIDGE	34	57	23
TX	ABILENE, MUNICIPAL AIRPORT	95	66	-29
TX	AMARILLO, INTERNATIONAL AIRPORT	64	54	-10
TX	AUSTIN/BERGSTROM, AUSTIN-BERGSTROM INTL APT	109	94	-15
TX	BROWNSVILLE, BROWNSVILLE AIRPORT	124	119	-5
TX	CORPUS CHRISTI, INTERNATIONAL AIRPORT	107	98	-9
TX	DALLAS-FORT WORTH, REGIONAL AIRPORT	97	108	11
TX	DEL RIO, INTERNATIONAL AIRPORT	129	94	-35
TX	EL PASO, INTERNATIONAL AIRPORT	108	106	-2
TX	HOUSTON, INTERCONTINENTAL AIRPORT	100	107	7
TX	LUBBOCK, REGIONAL AIRPORT	81	52	-29
TX	MIDLAND-ODESSA, MIDLAND INTERNATIONAL AIRPORT	101	78	-23
TX	PORT ARTHUR, JEFFERSON COUNTY AIRPORT	84	80	-4
TX	SAN ANGELO, MATHIS FIELD	108	70	-38
TX	SAN ANTONIO, INTERNATIONAL AIRPORT	113	82	-31
TX	VICTORIA, VICTORIA REGIONAL AIRPORT	106	99	-7
TX	WACO, WACO REGIONAL AIRPORT	109	95	-14
TX	WICHITA FALLS, SHEPPARD AIR FORCE BASE	103	100	-3
UT	SALT LAKE CITY, INTERNATIONAL AIRPORT	57	78	21
VA	LYNCHBURG, MUNICIPAL AIRPORT	23	39	16
VA	NORFOLK, INTERNATIONAL AIRPORT	32	40	8
VA	RICHMOND, R.E.BYRD INTERNATIONAL AP.	41	53	12
VA	ROANOKE, WOODRUM AIRPORT	26	56	30
VT	BURLINGTON, INTERNATIONAL AIRPORT	6	10	4
WA	OLYMPIA, OLYMPIA AIRPORT	6	2	-4
WA	QUILLAYUTE, QUILLAYUTE STATE AIRPORT	0	1	1
WA	SEATTLE, SEATTLE-TACOMA AIRPORT	2	1	-1
WA	SPOKANE, INTERNATIONAL AIRPORT	19	22	3
WA	YAKIMA, YAKIMA MUNICIPAL AIRPORT	33	37	4
WI	GREEN BAY, AUSTIN STRAUBEL FIELD	6	8	2
WI	LA CROSSE, MUNICIPAL AIRPORT	17	20	3
WI	MADISON, DANE COUNTY REGIONAL AIRPORT	11	8	-3
WI	MILWAUKEE, GENERAL MITCHELL FIELD	9	6	-3
WV	BECKLEY, RALEIGH COUNTY MEMORIAL AP	0	6	6
WV	CHARLESTON, YEAGER AIRPORT	21	54	33
WV	ELKINS, ELKINS-RANDOLPH COUNTY APT	2	1	-1
WV	HUNTINGTON, TRI-STATE AIRPORT	21	52	31
WY	CASPER, NATRONA COUNTY INT'L AIRPORT	31	52	21
WY	CHEYENNE, MUNICIPAL AIRPORT	10	21	11
WY	LANDER, HUNT FIELD	22	44	22
WY	SHERIDAN, SHERIDAN COUNTY AIRPORT	28	48	20

# Appendix D

## Average Minimum Temperatures (2000–2007) Compared with Historical Normals (1971–2000): By Weather Station

AVERAGE MINIMUM TEMPERATURE (°F)						
STATE	CITY AND LOCATION	NORMAL: 1971–2000	2007	2000–2007 AVERAGE	DEGREES ABOVE NORMAL, 2007	DEGREES ABOVE NORMAL, 2000–2007
AK	ANCHORAGE, ANCHORAGE INTL AP	29.3	30.3	31.4	1.0	2.1
AK	ANNETTE, ANNETTE ISLAND AP	40.7	40.7	41.5	0.0	0.8
AK	BARROW, BARROW W POST-W ROGERS ARPT	5.0	8.1	7.3	3.1	2.3
AK	BETHEL, BETHEL AIRPORT	23.3	25.8	25.2	2.5	1.9
AK	BETTLES, BETTLES FIELD	13.4	12.5	14.3	(0.9)	0.9
AK	BIG DELTA, BIG DELTA ALLEN AAF	19.7	21.2	22.1	1.5	2.4
AK	COLD BAY, COLD BAY ARPT	33.7	33.2	34.3	(0.5)	0.6
AK	FAIRBANKS, FAIRBANKS INTL ARPT	16.2	17.4	18.5	1.2	2.3
AK	GULKANA, GULKANA INTERMEDIATE FIELD	16.8	17.7	18.4	0.9	1.6
AK	HOMER, HOMER ARPT	31.4	30.7	32.8	(0.7)	1.4
AK	JUNEAU, JUNEAU INT'L ARPT	35.3	35.2	35.8	(0.1)	0.5
AK	KING SALMON, KING SALMON ARPT	26.6	26.2	27.7	(0.4)	1.1
AK	KODIAK, KODIAK	34.9	33.8	35.7	(1.1)	0.8
AK	KOTZEBUE, KOTZEBUE RALPH WEIN MEMORIAL	15.9	17.1	18.1	1.2	2.2
AK	MCGRATH, MCGRATH ARPT	17.0	18.7	19.2	1.7	2.2
AK	NOME, NOME MUNICIPAL ARPT	20.4	21.2	21.9	0.8	1.5
AK	ST. PAUL ISLAND, ST PAUL ISLAND ARPT	30.8	30.6	32.6	(0.2)	1.8
AK	TALKEETNA, TALKEETNA STATE ARPT	24.5	26.2	28.7	1.7	4.2
AK	VALDEZ, VALDEZ	32.3	31.3	33.4	(1.0)	1.1
AK	YAKUTAT, YAKUTAT STATE ARPT	32.5	33.1	34.1	0.6	1.6
AL	BIRMINGHAM, INTERNATIONAL AIRPORT	50.9	54.5	53.1	3.6	2.2
AL	HUNTSVILLE, INTNAL/JONES FIELD	50.1	52.4	51.1	2.3	1.0
AL	MOBILE, BATES FIELD	56.2	57.0	57.2	0.8	1.0
AL	MONTGOMERY, DANNELLY FIELD	53.1	54.6	54.0	1.5	0.9
AR	FORT SMITH, MUNICIPAL AIRPORT	50.2	52.2	51.2	2.0	1.0
AR	LITTLE ROCK, ADAMS FIELD	51.5	53.9	52.7	2.4	1.2
AZ	FLAGSTAFF, PULLIAM AIRPORT	30.9	32.1	32.0	1.2	1.1
AZ	PHOENIX, SKY HARBOR INTL AIRPORT	61.9	64.8	64.1	2.9	2.2
AZ	TUCSON, INTERNATIONAL AIRPORT	54.8	56.8	56.4	2.0	1.6
AZ	WINSLOW, WINSLOW AIRPORT	40.0	40.8	40.1	0.8	0.1
CA	BAKERSFIELD, KERN COUNTY AIR TERMINAL	53.1	53.2	53.4	0.1	0.3
CA	BISHOP, BISHOP AIRPORT	37.7	37.8	38.1	0.1	0.4
CA	EUREKA, DOWNTOWN	46.4	45.7	46.3	(0.7)	(0.1)
CA	FRESNO, FRESNO AIR TERMINAL	51.0	51.6	52.5	0.6	1.5
CA	LONG BEACH, LONG BEACH AIRPORT	55.4	55.9	55.3	0.5	(0.1)
CA	LOS ANGELES, DOWNTOWN L.A./USC CAMPUS	56.6	56.2	56.1	(0.4)	(0.5)
CA	LOS ANGELES, INTERNATIONAL AIRPORT	56.1	56.1	56.1	0.0	(0.0)
CA	REDDING, REDDING MUNICIPAL	47.9	49.0	50.0	1.1	2.1
CA	SACRAMENTO, EXECUTIVE AIRPORT	48.4	47.5	48.7	(0.9)	0.3
CA	SAN DIEGO, LINDBERGH FIELD	58.1	57.2	57.9	(0.9)	(0.2)
CA	SAN FRANCISCO, DOWNTOWN SF	51.4	50.7	50.9	(0.7)	(0.5)
CA	SAN FRANCISCO, INTERNATIONAL AIRPORT	49.6	50.0	50.9	0.4	1.3
CA	SANTA MARIA, SANTA MARIA PUBLIC AIRPORT	46.1	47.2	46.6	1.1	0.5
CA	STOCKTON, METROPOLITAN AIRPORT	48.9	48.8	48.4	(0.1)	(0.5)



AVERAGE MINIMUM TEMPERATURE (°F)						
STATE	CITY AND LOCATION	NORMAL: 1971–2000	2007	2000–2007 AVERAGE	DEGREES ABOVE NORMAL, 2007	DEGREES ABOVE NORMAL, 2000–2007
CO	ALAMOSA, SAN LUIS VALLEY RGNL APT	22.9	23.9	24.4	1.0	1.5
CO	COLORADO SPRINGS, COLORADO SPRINGS MUNICIPAL AP	33.7	36.0	36.0	2.3	2.3
CO	DENVER, DENVER INTERNATIONAL AP	35.8	37.0	37.0	1.2	1.2
CO	GRAND JUNCTION, WALKER FIELD	38.5	40.2	40.6	1.7	2.1
CO	PUEBLO, MEMORIAL AIRPORT	35.9	35.0	35.5	(0.9)	(0.4)
CT	BRIDGEPORT, SIKORSKY MEMORIAL AIRPORT	44.3	44.9	45.0	0.6	0.7
CT	HARTFORD, BRADLEY INTERNATIONAL AIRPORT	40.0	40.8	40.6	0.8	0.6
DC	WASHINGTON DC, RONALD REAGAN NATIONAL AP	48.6	50.3	49.7	1.7	1.1
DC	WASHINGTON DC/DULLES, DULLES INTERNATIONAL AIRPORT	42.6	46.2	44.9	3.6	2.3
DE	WILMINGTON, NEW CASTLE COUNTY APRT	45.1	46.3	45.7	1.2	0.6
FL	DAYTONA BEACH, INTERNATIONAL AIRPORT	61.0	63.2	62.1	2.2	1.1
FL	FORT MYERS, PAGE FIELD	65.2	66.2	65.3	1.0	0.1
FL	GAINESVILLE, REGIONAL AIRPORT	57.2	57.6	57.4	0.4	0.2
FL	JACKSONVILLE, INTERNATIONAL AIRPORT	57.6	58.0	57.7	0.4	0.1
FL	KEY WEST, INTERNATIONAL AIRPORT	73.2	74.9	73.2	1.7	(0.0)
FL	MIAMI, INTERNATIONAL AIRPORT	69.1	70.9	70.2	1.8	1.1
FL	ORLANDO, INTERNATIONAL AIRPORT	62.4	63.5	62.7	1.1	0.3
FL	PENSACOLA, PENSACOLA REGIONAL AIRPT	59.2	60.1	59.5	0.9	0.3
FL	TALLAHASSEE, MUNICIPAL AIRPORT	56.3	56.8	56.2	0.5	(0.1)
FL	TAMPA, INTERNATIONAL AIRPORT	64.8	65.9	65.0	1.1	0.2
FL	VERO BEACH, MUNICIPAL AIRPORT	64.0	65.4	64.0	1.4	0.0
FL	WEST PALM BEACH, PALM BEACH INTERNATIONAL AP	67.4	69.2	68.2	1.8	0.8
GA	ATHENS, MUNICIPAL AIRPORT	50.9	51.8	51.4	0.9	0.5
GA	ATLANTA, HARTSFIELD ATLANTA INTL AP	52.3	54.6	53.3	2.3	1.0
GA	AUGUSTA, BUSH FIELD	50.6	51.8	51.1	1.2	0.5
GA	COLUMBUS, METROPOLITAN AIRPORT	54.4	55.6	55.6	1.2	1.2
GA	MACON, MIDDLE GA REGIONAL AIRPORT	52.0	52.5	52.7	0.5	0.7
GA	SAVANNAH, MUNICIPAL AIRPORT	55.2	56.4	55.6	1.2	0.4
HI	HILO, HILO INTERNATIONAL AP	66.7	66.2	66.9	(0.5)	0.2
HI	HONOLULU, HONOLULU INTL ARPT	70.2	71.7	71.8	1.5	1.6
HI	KAHULUI, KAHULUI AIRPORT	67.3	67.5	67.4	0.2	0.1
HI	LIHUE, LIHUE AIRPORT	70.3	71.2	70.8	0.9	0.5
IA	DES MOINES, INTERNATIONAL AIRPORT	40.2	42.1	41.9	1.9	1.7
IA	DUBUQUE, MUNICIPAL AIRPORT	37.7	38.4	38.4	0.7	0.7
IA	SIOUX CITY, MUNICIPAL AIRPORT	37.0	38.1	37.8	1.1	0.8
IA	WATERLOO, L.B. MUNICIPAL AIRPORT	36.1	37.7	37.6	1.6	1.5
ID	BOISE, BOISE AIR TER. (GOWEN FLD.)	41.3	42.3	42.0	1.0	0.7
ID	LEWISTON, LEWISTON-NEZ PERCE COUNTY AP	42.4	43.0	43.0	0.6	0.6
ID	POCATELLO, MUNICIPAL AIRPORT	33.3	33.9	33.4	0.6	0.1
IL	CHICAGO, OHARE INTERNATIONAL AIRPORT	39.8	42.3	41.5	2.5	1.7
IL	MOLINE, QUAD CITY AIRPORT	39.9	42.1	41.5	2.2	1.6
IL	PEORIA, GREATER PEORIA AIRPORT	40.9	43.6	43.0	2.7	2.1
IL	ROCKFORD, GREATER ROCKFORD AIRPORT	38.1	40.5	39.5	2.4	1.4
IL	SPRINGFIELD, CAPITAL AIRPORT	42.9	44.3	43.4	1.4	0.5
IN	EVANSVILLE, DRESS REGIONAL AIRPORT	45.2	47.7	46.7	2.5	1.5
IN	FORT WAYNE, BAER FIELD	40.2	41.4	41.1	1.2	0.9
IN	INDIANAPOLIS, INTERNATIONAL AIRPORT	42.7	45.6	44.6	2.9	1.9
IN	SOUTH BEND, MICHIANA REGIONAL AIRPORT	40.1	41.9	41.2	1.8	1.1
KS	CONCORDIA, BLOSSER MUNICIPAL AIRPORT	42.4	43.6	43.5	1.2	1.1
KS	DODGE CITY, DODGE CITY REGIONAL ARPT	42.7	43.1	42.8	0.4	0.1
KS	GOODLAND, RENNER FIELD	37.4	37.7	38.1	0.3	0.7
KS	TOPEKA, MUNICIPAL(PHILIP BILLARD)AP	43.3	45.6	44.9	2.3	1.6
KS	WICHITA, MID-CONTINENT AIRPORT	45.2	46.9	46.5	1.7	1.3
KY	JACKSON, JULIAN CARROLL AP	46.6	48.5	47.9	1.9	1.3
KY	LEXINGTON, BLUE GRASS FIELD	45.7	47.2	46.4	1.5	0.7
KY	LOUISVILLE, STANDIFORD FIELD	47.9	50.5	49.2	2.6	1.3
KY	PADUCAH, BARKLEY REGIONAL ARPT	46.0	48.4	47.6	2.4	1.6
LA	BATON ROUGE, RYAN AIRPORT	56.8	58.9	57.5	2.1	0.7
LA	LAKE CHARLES, MUNICIPAL AIRPORT	58.3	59.5	59.2	1.2	0.9
LA	NEW ORLEANS, NEW ORLEANS INT'L AIRPORT	59.6	61.8	61.4	2.2	1.8
LA	SHREVEPORT, SHREVEPORT REGIONAL AIRPORT	55.1	57.0	56.2	1.9	1.1
MA	BLUE HILL, MILTON OBS	40.3	41.3	41.3	1.0	1.0
MA	BOSTON, GEN LOGAN INTERNATIONAL AP	43.9	43.9	44.2	0.0	0.3
MA	WORCESTER, WORCESTER REGIONAL AIRPORT	38.5	39.8	40.2	1.3	1.7
MD	BALTIMORE, BALTIMORE-WASHINGTON INT'L AP	44.2	46.2	45.7	2.0	1.5

AVERAGE MINIMUM TEMPERATURE (°F)						
STATE	CITY AND LOCATION	NORMAL: 1971–2000	2007	2000–2007 AVERAGE	DEGREES ABOVE NORMAL, 2007	DEGREES ABOVE NORMAL, 2000–2007
ME	CARIBOU, MUNICIPAL AIRPORT	29.5	28.7	30.4	(0.8)	0.9
ME	PORTLAND, PORTLAND INTERNATIONAL JETPORT	36.3	36.8	37.4	0.5	1.1
MI	ALPENA, PHELPS COLLINS AIRPORT	32.4	34.2	34.1	1.8	1.7
MI	DETROIT, METROPOLITAN AIRPORT	41.0	42.3	42.1	1.3	1.1
MI	FLINT, BISHOP AIRPORT	36.7	38.6	38.5	1.9	1.8
MI	GRAND RAPIDS, KENT COUNTY AIRPORT	38.4	41.0	39.9	2.6	1.5
MI	HOUGHTON LAKE, ROSCOMMON COUNTY APRT	32.6	33.9	33.9	1.3	1.3
MI	LANSING, CAPITAL CITY AIRPORT	36.7	39.5	38.4	2.8	1.7
MI	MARQUETTE, COUNTY AIRPORT	29.4	31.7	31.3	2.3	1.9
MI	MUSKEGON, MUSKEGON COUNTY AIRPORT	38.3	40.8	40.4	2.5	2.1
MI	SAULT STE. MARIE, SAULT STE MARIE MUNI APT	30.5	33.5	33.6	3.0	3.1
MN	DULUTH, INTERNATIONAL AIRPORT	29.3	31.5	31.3	2.2	2.0
MN	INTERNATIONAL FALLS, FALLS INTERNATIONAL AP	26.1	26.7	27.1	0.6	1.0
MN	MINNEAPOLIS-ST.PAUL, INTERNATIONAL AIRPORT	35.9	39.2	38.8	3.3	2.9
MN	ROCHESTER, MUNICIPAL AIRPORT	34.2	37.0	36.4	2.8	2.2
MN	SAINT CLOUD, MUNICIPAL AIRPORT	31.1	33.7	33.3	2.6	2.2
MO	COLUMBIA, COLUMBIA REGIONAL AIRPORT	43.1	46.4	45.1	3.3	2.0
MO	KANSAS CITY, INTERNATIONAL AIRPORT	44.0	45.5	45.5	1.5	1.5
MO	SPRINGFIELD, REGIONAL AIRPORT	45.0	47.9	46.3	2.9	1.3
MO	ST. LOUIS, INTERNATIONAL AIRPORT	46.9	48.9	48.3	2.0	1.4
MS	JACKSON, ALLEN C THOMPSON FIELD	53.2	54.7	53.9	1.5	0.7
MS	MERIDIAN, KEY FIELD	52.4	52.0	52.2	(0.4)	(0.2)
MS	TUPELO, TUPLO MUNI/LEMONS AIRPORT	49.9	53.4	52.1	3.5	2.2
MT	BILLINGS, INTERNATIONAL AIRPORT	36.3	38.0	37.3	1.7	1.0
MT	GLASGOW, INT'L AIRPORT	31.1	33.1	31.5	2.0	0.4
MT	GREAT FALLS, INTERNATIONAL AIRPORT	31.1	34.3	32.9	3.2	1.8
MT	HELENA, HELENA AIRPORT	31.2	36.0	34.4	4.8	3.2
MT	KALISPELL, GLACIER PARK INT'L AIRPORT	30.5	32.3	31.5	1.8	1.0
MT	MISSOULA, MISSOULA INT'L AIRPORT	32.8	35.7	34.0	2.9	1.2
NC	ASHEVILLE, ASHEVILLE REGIONAL AIRPORT	43.9	45.0	45.2	1.1	1.3
NC	CAPE HATTERAS, WEATHER SERVICE BUILDING	55.6	57.5	57.0	1.9	1.4
NC	CHARLOTTE, DOUGLAS INTERNATIONAL AIRPORT	51.0	50.1	49.3	(0.9)	(1.7)
NC	GREENSBORO-WNSTN-SAL, GREENSBORO REG. AP, NC	47.7	50.6	49.2	2.9	1.5
NC	RALEIGH, RALEIGH-DURHAM AIRPORT	48.6	50.9	49.6	2.3	1.0
NC	WILMINGTON, NEW HANOVER COUNTY AIRPORT	53.5	53.9	53.6	0.4	0.1
ND	BISMARCK, MUNICIPAL AIRPORT	30.1	31.2	31.7	1.1	1.6
ND	FARGO, HECTOR AIRPORT	31.1	33.1	32.6	2.0	1.5
ND	WILLISTON, SLOULIN FIELD INT'L AIRPORT	28.2	29.4	28.9	1.2	0.7
NE	GRAND ISLAND, HALL COUNTY REGIONAL AP	38.6	41.0	40.0	2.4	1.4
NE	LINCOLN, MUNICIPAL AIRPORT	39.3	41.3	40.3	2.0	1.0
NE	NORFOLK, KARL STEFAN MEMORIAL AIRPORT	37.0	39.2	38.9	2.2	1.9
NE	NORTH PLATTE, LEE BIRD FIELD	34.4	35.6	35.1	1.2	0.7
NE	OMAHA, EPPLEY AIRFIELD	39.8	41.3	41.4	1.5	1.6
NE	SCOTTSBLUFF, SCOTTS BLUFF COUNTY AIRPORT	32.9	34.6	34.4	1.7	1.5
NE	VALENTINE, MILLER FIELD	33.2	36.0	35.0	2.8	1.8
NH	CONCORD, CONCORD MUNICIPAL	34.1	34.7	35.1	0.6	1.0
NH	MOUNT WASHINGTON, SUMMIT OBSERVATORY	20.4	19.9	21.3	(0.5)	0.9
NJ	ATLANTIC CITY, AVIATION FACILITIES EXPER CNTR	43.3	45.3	44.6	2.0	1.3
NJ	ATLANTIC CITY, STATE MARINA	49.4	49.7	49.7	0.3	0.3
NJ	NEWARK, INTERNATIONAL AIRPORT	46.7	46.7	47.1	(0.0)	0.4
NM	ALBUQUERQUE, INTL AIRPORT-KIRTLAND AFB	43.2	45.8	46.2	2.6	3.0
NM	CLAYTON, MUNICIPAL AIRPORT	39.6	40.6	41.0	1.0	1.4
NM	ROSWELL, INDUSTRIAL AIR CENTER AP	45.3	46.4	47.1	1.1	1.8
NV	ELKO, MUNICIPAL AIRPORT	30.6	31.1	31.3	0.5	0.7
NV	ELY, YELLAND FIELD	28.0	28.3	29.1	0.3	1.1
NV	LAS VEGAS, MCCARRAN INTERNATIONAL APT	56.3	60.2	59.0	3.9	2.7
NV	RENO, CANNON INTERNATIONAL AP	35.2	40.7	40.5	5.5	5.3
NV	WINNEMUCCA, MUNICIPAL AIRPORT	33.0	31.5	32.7	(1.5)	(0.3)
NY	ALBANY, ALBANY INTERNATIONAL AIRPT	37.5	38.8	39.2	1.3	1.7
NY	BINGHAMTON, BROOME COUNTY AIRPORT	37.5	38.9	38.4	1.4	0.9
NY	BUFFALO, GREATER BUFFALO INTL AIRPORT	39.9	40.9	40.9	1.0	1.0
NY	ISLIP, LONG ISLAND MACARTHUR APT	43.5	44.3	44.2	0.8	0.7
NY	NEW YORK C.PARK, CENTRAL PARK OBSERVATORY	47.5	47.8	48.1	0.3	0.6
NY	NEW YORK, JFK INTERNATIONAL AIRPORT	45.7	47.0	47.0	1.3	1.3
NY	NEW YORK, LA GUARDIA AIRPORT	48.1	49.9	49.4	1.8	1.3

AVERAGE MINIMUM TEMPERATURE (°F)						
STATE	CITY AND LOCATION	NORMAL: 1971–2000	2007	2000–2007 AVERAGE	DEGREES ABOVE NORMAL, 2007	DEGREES ABOVE NORMAL, 2000–2007
NY	ROCHESTER, ROCHESTER-MONROE COUNTY AP	38.5	40.3	40.1	1.8	1.6
NY	SYRACUSE, HANCOCK INTERNATIONAL AIRPORT	37.7	38.7	39.4	1.0	1.7
OH	AKRON, AKRON-CANTON AIRPORT	40.0	41.0	41.1	1.0	1.1
OH	CLEVELAND, CLEVELAND HOPKINS INTL AIRPORT	41.2	42.7	42.7	1.5	1.5
OH	COLUMBUS, PORT COLUMBUS INTL AIRPORT	43.2	45.5	44.6	2.3	1.4
OH	COVINGTON/CINCINNATI, CINCINNATI/NORTHERN KY INT	44.3	45.8	45.0	1.5	0.7
OH	DAYTON, INTERNATIONAL AIRPORT	42.3	43.4	43.2	1.1	0.9
OH	MANSFIELD, LAHM MUNICIPAL AIRPORT	38.9	41.0	40.8	2.1	1.9
OH	TOLEDO, TOLEDO EXPRESS AIRPORT	40.0	41.1	41.3	1.1	1.3
OH	YOUNGSTOWN, MUNICIPAL AIRPORT	38.8	39.7	40.0	0.9	1.2
OK	OKLAHOMA CITY, WILL ROGERS WORLD AIRPORT	49.2	51.8	50.1	2.6	0.9
OK	TULSA, INTERNATIONAL AIRPORT	50.1	51.8	50.9	1.7	0.8
OR	ASTORIA, CLATSOP COUNTY AIRPORT	43.8	43.6	44.5	(0.2)	0.7
OR	BURNS, MUNICIPAL APT.	29.2	29.2	30.1	0.0	0.9
OR	EUGENE, MAHLON SWEET FIELD	41.0	40.8	41.6	(0.2)	0.6
OR	MEDFORD, ROGUE VALLEY INTNRL AIRPT	41.5	42.8	43.2	1.3	1.7
OR	PENDLETON, MUNICIPAL AIRPORT	41.5	40.1	41.1	(1.4)	(0.4)
OR	PORTLAND, INTERNATIONAL AIRPORT	44.8	45.5	45.9	0.7	1.1
OR	SALEM, MC NARY FIELD	41.7	42.8	42.8	1.1	1.1
PA	ALLENTOWN, LEHIGH VALLEY INTRNL AIRPT	40.6	41.8	41.6	1.2	1.0
PA	AVOCA, WILKES-BARRE SCRANTON APT	40.4	40.3	40.5	(0.1)	0.1
PA	ERIE, TERMINAL BLDG.	42.1	42.8	42.5	0.7	0.4
PA	MIDDLETOWN/HARRISBURG, HARRISBURG INTERNATIONAL AI	44.1	45.0	44.7	0.9	0.6
PA	PHILADELPHIA, INTERNATIONAL AIRPORT	47.4	47.7	47.6	0.3	0.2
PA	PITTSBURGH, GREATER PITTSBURGH INTL AP	41.5	42.4	42.4	0.9	0.9
PA	WILLIAMSPORT, WILLIAMSPORT-LYCOMING CO AP	40.1	41.0	41.1	0.9	1.0
RI	PROVIDENCE, THEO FRANCIS GREEN STATE AP	42.0	42.9	42.9	0.9	0.9
SC	CHARLESTON, CHARLESTON INT'L AIRPORT	54.7	56.5	55.8	1.8	1.1
SC	CHARLESTON, DOWNTOWN	60.4	61.6	60.9	1.2	0.5
SC	COLUMBIA, COLUMBIA METROPOLITAN AIRPORT	52.5	53.2	52.8	0.7	0.3
SC	GREENVILLE-SPARTANBURG, GREER AIRPORT	49.7	51.8	50.9	2.1	1.2
SD	ABERDEEN, REGIONAL AIRPORT	32.4	31.6	32.2	(0.8)	(0.2)
SD	HURON, HURON REGIONAL AIRPORT	33.6	35.3	35.0	1.7	1.4
SD	RAPID CITY, RAPID CITY REGIONAL AIRPORT	34.0	35.5	34.6	1.5	0.6
SD	SIoux FALLS, FOSS FIELD	33.0	36.8	36.0	3.8	3.0
TN	BRISTOL-JHNSN CTY-KN, TRI-CITY AIRPORT	43.4	45.0	44.7	1.6	1.3
TN	CHATTANOOGA, LOVELL FIELD	49.2	51.8	50.9	2.6	1.7
TN	KNOXVILLE, MC GHEE TYSON AIRPORT	48.4	50.0	49.4	1.6	1.0
TN	MEMPHIS, INTERNATIONAL AIRPORT	52.5	55.8	54.2	3.3	1.7
TN	NASHVILLE, METROPOLITAN AIRPORT	48.8	51.6	50.2	2.8	1.4
TN	OAK RIDGE, OAK RIDGE	46.2	48.7	48.1	2.5	1.9
TX	ABILENE, MUNICIPAL AIRPORT	52.7	53.0	53.4	0.3	0.7
TX	AMARILLO, INTERNATIONAL AIRPORT	43.6	44.8	44.6	1.2	1.0
TX	AUSTIN/BERGSTROM, AUSTIN-BERGSTROM INTL APT	58.4	55.3	55.8	(3.1)	(2.6)
TX	BROWNSVILLE, BROWNSVILLE AIRPORT	64.6	65.6	66.0	1.0	1.4
TX	CORPUS CHRISTI, INTERNATIONAL AIRPORT	62.1	62.8	63.1	0.7	1.0
TX	DALLAS-FORT WORTH, REGIONAL AIRPORT	55.1	58.0	56.8	2.9	1.7
TX	DEL RIO, INTERNATIONAL AIRPORT	58.5	58.7	59.8	0.2	1.3
TX	EL PASO, INTERNATIONAL AIRPORT	52.1	52.6	52.7	0.5	0.6
TX	HOUSTON, INTERCONTINENTAL AIRPORT	58.2	60.4	60.0	2.2	1.8
TX	LUBBOCK, REGIONAL AIRPORT	46.2	47.4	48.0	1.2	1.8
TX	MIDLAND-ODESSA, MIDLAND INTERNATIONAL AIRPORT	49.9	50.2	51.6	0.3	1.7
TX	PORT ARTHUR, JEFFERSON COUNTY AIRPORT	59.2	60.3	60.0	1.1	0.8
TX	SAN ANGELO, MATHIS FIELD	51.8	52.2	53.3	0.4	1.5
TX	SAN ANTONIO, INTERNATIONAL AIRPORT	57.5	59.1	59.3	1.6	1.8
TX	VICTORIA, VICTORIA REGIONAL AIRPORT	60.4	60.1	60.1	(0.3)	(0.3)
TX	WACO, WACO REGIONAL AIRPORT	55.3	56.1	56.5	0.8	1.2
TX	WICHITA FALLS, SHEPPARD AIR FORCE BASE	50.9	53.5	52.6	2.6	1.7
UT	SALT LAKE CITY, INTERNATIONAL AIRPORT	41.2	42.1	42.4	0.9	1.2
VA	LYNCHBURG, MUNICIPAL AIRPORT	44.0	45.6	44.7	1.6	0.7
VA	NORFOLK, INTERNATIONAL AIRPORT	51.4	52.9	52.6	1.5	1.2
VA	RICHMOND, R.E.BYRD INTERNATIONAL AP.	47.4	49.4	48.7	2.0	1.3
VA	ROANOKE, WOODRUM AIRPORT	45.4	48.8	47.5	3.4	2.1
VT	BURLINGTON, INTERNATIONAL AIRPORT	35.8	36.1	36.8	0.3	1.0
WA	OLYMPIA, OLYMPIA AIRPORT	39.5	40.3	39.9	0.8	0.4

AVERAGE MINIMUM TEMPERATURE (°F)						
STATE	CITY AND LOCATION	NORMAL: 1971–2000	2007	2000–2007 AVERAGE	DEGREES ABOVE NORMAL, 2007	DEGREES ABOVE NORMAL, 2000–2007
WA	QUILLAYUTE, QUILLAYUTE STATE AIRPORT	40.7	41.9	41.5	1.2	0.8
WA	SEATTLE, SEATTLE-TACOMA AIRPORT	44.8	44.9	45.0	0.1	0.2
WA	SPOKANE, INTERNATIONAL AIRPORT	37.2	38.6	38.0	1.4	0.8
WA	YAKIMA, YAKIMA MUNICIPAL AIRPORT	34.7	36.2	36.7	1.5	2.0
WI	GREEN BAY, AUSTIN STRAUBEL FIELD	34.4	36.7	36.1	2.3	1.7
WI	LA CROSSE, MUNICIPAL AIRPORT	37.0	38.9	38.7	1.9	1.7
WI	MADISON, DANE COUNTY REGIONAL AIRPORT	36.4	38.3	37.9	1.9	1.5
WI	MILWAUKEE, GENERAL MITCHELL FIELD	39.2	41.1	40.9	1.9	1.7
WV	BECKLEY, RALEIGH COUNTY MEMORIAL AP	42.0	43.5	42.6	1.5	0.6
WV	CHARLESTON, YEAGER AIRPORT	43.5	46.0	45.3	2.5	1.8
WV	ELKINS, ELKINS-RANDOLPH COUNTY APT	37.4	39.2	38.8	1.8	1.4
WV	HUNTINGTON, TRI-STATE AIRPORT	45.1	46.3	46.1	1.2	1.0
WY	CASPER, NATRONA COUNTY INT'L AIRPORT	31.6	32.0	32.0	0.4	0.4
WY	CHEYENNE, MUNICIPAL AIRPORT	32.3	34.5	34.8	2.2	2.5
WY	LANDER, HUNT FIELD	31.9	33.0	32.8	1.1	0.9
WY	SHERIDAN, SHERIDAN COUNTY AIRPORT	30.6	32.4	31.6	1.8	1.0

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