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## Section 6

# Geography and Environment

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This section presents a variety of information on the physical environment of the United States, starting with basic area measurement data and ending with climatic data for selected weather stations around the country. The subjects covered between those points are mostly concerned with environmental trends but include related subjects such as land use, water consumption, air pollutant emissions, toxic releases, oil spills, hazardous waste sites, municipal waste and recycling, threatened and endangered wildlife, and the environmental industry.

The information in this section is selected from a wide range of federal agencies that compile the data for various administrative or regulatory purposes, such as the Environmental Protection Agency (EPA), U.S. Geological Survey (USGS), National Oceanic and Atmospheric Administration (NOAA), Natural Resources Conservation Service (NRCS), and National Atlas® of the United States. New information on the greenhouse gases and earthquakes may be found in Tables 372 and 385.

**Area**—For the 2000 census and 2008, area measurements were calculated by computer based on the information contained in a single, consistent geographic database, the Topologically Integrated Geographic Encoding & Referencing system (TIGER®) database. The 2008 area measurements may be found in Table 355.

**Geography**—The USGS conducts investigations, surveys, and research in the fields of geography, geology, topography, geographic information systems, mineralogy, hydrology, and geothermal energy resources as well as natural hazards. The USGS provides United States cartographic data through the Earth Sciences Information Center, water resources data through the *Water Resources of the United States* at <<http://water.usgs.gov/pubs/>>. In a joint project with the U.S. Census Bureau, during the 1980s, the USGS provided the basic information on geographic features for input into a national geographic and

cartographic database prepared by the Census Bureau, called TIGER® database. Since then, using a variety of sources, the Census Bureau has updated these features and their related attributes (names, descriptions, etc.) and inserted current information on the boundaries, names, and codes of legal and statistical geographic entities. The 2008 area measures, land and water, including their classifications, reflect base feature updates made in the Master Address File (MAF)/TIGER database through May 1, 2008. The boundaries of the states and equivalent areas are as of January 1, 2008. Maps prepared by the Census Bureau using the TIGER® database show the names and boundaries of entities and are available on a current basis.

An inventory of the nation's land resources by type of use/cover was conducted by the National Resources Inventory Conservation Services (NRCS) every 5 years beginning in 1977 through 2007. The most recent survey results, which were published for the year 2007, covered all nonfederal land for the contiguous 48 states.

**Environment** —The principal federal agency responsible for pollution abatement and control activities is the Environmental Protection Agency (EPA). It is responsible for establishing and monitoring national air quality standards, water quality activities, solid and hazardous waste disposal, and control of toxic substances. Many of these series now appear in the Envirofacts portion of the EPA Web site at <<http://www.epa.gov/enviro/>>.

The Clean Air Act, which was last amended in 1990, requires the EPA to set National Ambient Air Quality Standards (NAAQS) (40 CFR part 50) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. **Primary standards** set limits to protect public health,

including the health of “sensitive” populations such as asthmatics, children, and the elderly. **Secondary standards** set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops vegetation, and buildings. See <<http://www.epa.gov/air/criteria.html>>. The EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards for six principal pollutants, which are called “criteria” pollutants. These pollutants are: Carbon Monoxide, Lead, Nitrogen Dioxide, Particulate Matter (PM2.5 and 10), Ozone, and Sulfur Dioxide. NAAQS are periodically reviewed and revised to include any additional or new health or welfare data. Table 368 gives some of the health-related standards for the six air pollutants having NAAQS. Data gathered from state networks are periodically submitted to EPA’s National Aerometric Information Retrieval System (AIRS) for summarization in annual reports on the nationwide status and trends in air quality. For details, see “Air Trends” on the EPA Web site at <<http://www.epa.gov/airtrends/index.html>>.

The Toxics Release Inventory (TRI), published by the EPA, is a valuable source of information on approximately 650 chemicals that are being used, manufactured, treated, transported, or released into the environment. Sections 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and 6607 of the Pollution Prevention Act (PPA), mandate that a publicly-accessible toxic chemical database be developed and maintained by EPA. This database, known as the TRI, contains information concerning waste management activities and the release of toxic chemicals by facilities that manufacture, process, or otherwise use said materials. Data on the release of

these chemicals are collected from about 22,000 facilities and facilities added in 1998 that have the equivalent of 10 or more full time employees and meet the established thresholds for manufacturing, processing, or “other use” of listed chemicals. Facilities must report their releases and other waste management quantities. Since 1994 federal facilities have been required to report their data regardless of industry classification. In May 1997, EPA added seven new industry sectors that reported to the TRI for the first time in July 1999 for the 1998 reporting year. More current information on this program can be found at <<http://www.epa.gov/tri/index.htm>>.

**Climate**—NOAA, through the National Weather Service and the National Environmental Satellite, Data, and Information Service, is responsible for climate data. NOAA maintains about 11,600 weather stations, of which over 3,000 produce autographic precipitation records, about 600 take hourly readings of a series of weather elements, and the remainder record data once a day. These data are reported monthly in the Climatological Data and Storm Data, published monthly and annually in the Local Climatological Data (published by location for major cities).

The normal climatological temperatures, precipitation, and degree days listed in this publication are derived for comparative purposes and are averages for the 30-year period, 1971–2000. For stations that did not have continuous records for the entire 30 years from the same instrument site, the normals have been adjusted to provide representative values for the current location. The information in all other tables is based on data from the beginning of the record at that location through 2007.

**Table 355. Land and Water Area of States and Other Entities: 2008**

[One square mile = 2.59 square kilometers. Table data have been revised. The area measurements were derived from the Census Bureau's Master Address File/Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) geographic database. The boundaries of the states and equivalent areas are as of January 1, 2008. The land and water areas, including their classifications, reflect base feature updates made in the MAF/TIGER database through May 1, 2008. These updates show increases in total water area and decrease in land area for nearly every state. For more details, see <<http://www.census.gov/geo/www/tiger/tgrshp2008/tgrshp2008.html>>]

State and other areas	Total area		Land area		Water area					
					Total		Inland (sq. mi.)	Coastal (sq. mi.)	Great Lakes (sq. mi.)	Territorial (sq. mi.)
	Sq. mi.	Sq. km.	Sq. mi.	Sq. km.	Sq. mi.	Sq. km.				
<b>Total</b> . . . . .	<b>3,805,142</b>	<b>9,855,318</b>	<b>3,535,846</b>	<b>9,157,841</b>	<b>269,296</b>	<b>697,477</b>	<b>86,478</b>	<b>43,201</b>	<b>59,959</b>	<b>76,392</b>
<b>United States</b> . . . . .	<b>3,795,951</b>	<b>9,831,513</b>	<b>3,531,822</b>	<b>9,147,420</b>	<b>264,129</b>	<b>684,094</b>	<b>86,409</b>	<b>43,185</b>	<b>59,959</b>	<b>74,575</b>
Alabama . . . . .	52,420	135,768	50,644	131,168	1,776	4,600	1,057	518	(X)	201
Alaska . . . . .	664,988	1,722,319	570,665	1,478,022	94,323	244,297	20,028	28,162	(X)	46,133
Arizona . . . . .	113,990	295,235	113,595	294,211	396	1,026	396	—	(X)	—
Arkansas . . . . .	53,178	137,732	52,030	134,758	1,149	2,976	1,149	—	(X)	—
California . . . . .	163,694	423,967	155,766	403,434	7,928	20,534	2,842	222	(X)	4,864
Colorado . . . . .	104,094	269,604	103,641	268,430	454	1,176	454	—	(X)	—
Connecticut . . . . .	5,544	14,358	4,840	12,536	703	1,821	164	539	(X)	—
Delaware . . . . .	2,489	6,445	1,949	5,048	539	1,396	74	372	(X)	93
District of Columbia . . . . .	68	177	61	158	7	18	7	—	(X)	—
Florida . . . . .	65,758	170,312	53,603	138,832	12,154	31,479	5,373	1,128	(X)	5,653
Georgia . . . . .	59,425	153,911	57,501	148,928	1,924	4,983	1,420	49	(X)	455
Hawaii . . . . .	10,926	28,300	6,428	16,649	4,499	11,652	40	—	(X)	4,459
Idaho . . . . .	83,568	216,442	82,643	214,045	926	2,398	926	—	(X)	—
Illinois . . . . .	57,916	150,002	55,518	143,792	2,398	6,211	836	—	(X)	1,562
Indiana . . . . .	36,417	94,321	35,823	92,782	594	1,538	361	—	(X)	233
Iowa . . . . .	56,273	145,746	55,858	144,672	415	1,075	415	—	(X)	—
Kansas . . . . .	82,278	213,101	81,762	211,764	516	1,336	516	—	(X)	—
Kentucky . . . . .	40,411	104,665	39,492	102,284	919	2,380	919	—	(X)	—
Louisiana . . . . .	51,988	134,649	43,199	111,885	8,789	22,764	4,433	1,951	(X)	2,405
Maine . . . . .	35,384	91,644	30,841	79,878	4,543	11,766	2,282	613	(X)	1,647
Maryland . . . . .	12,406	32,131	9,705	25,136	2,700	6,993	736	1,854	(X)	111
Massachusetts . . . . .	10,554	27,336	7,801	20,205	2,754	7,133	461	977	(X)	1,316
Michigan . . . . .	96,713	250,486	56,528	146,408	40,185	104,079	2,164	—	(X)	38,021
Minnesota . . . . .	86,935	225,163	79,607	206,182	7,328	18,980	4,782	—	(X)	2,546
Mississippi . . . . .	48,432	125,438	46,920	121,523	1,512	3,916	772	591	(X)	149
Missouri . . . . .	69,702	180,529	68,716	177,974	987	2,556	987	—	(X)	—
Montana . . . . .	147,039	380,831	145,541	376,951	1,498	3,880	1,498	—	(X)	—
Nebraska . . . . .	77,349	200,334	76,825	198,977	524	1,357	524	—	(X)	—
Nevada . . . . .	110,572	286,382	109,780	284,330	792	2,051	792	—	(X)	—
New Hampshire . . . . .	9,348	24,210	8,952	23,186	396	1,026	328	—	(X)	68
New Jersey . . . . .	8,723	22,592	7,354	19,047	1,369	3,546	458	402	(X)	509
New Mexico . . . . .	121,590	314,919	121,297	314,159	293	759	293	—	(X)	—
New York . . . . .	54,555	141,298	47,126	122,056	7,429	19,241	1,979	977	(X)	3,990
North Carolina . . . . .	53,819	139,391	48,619	125,923	5,200	13,468	4,044	—	(X)	1,157
North Dakota . . . . .	70,698	183,109	69,001	178,713	1,697	4,395	1,697	—	(X)	—
Ohio . . . . .	44,825	116,097	40,858	105,822	3,967	10,275	467	—	(X)	3,500
Oklahoma . . . . .	69,899	181,038	68,603	177,682	1,296	3,357	1,296	—	(X)	—
Oregon . . . . .	98,379	254,801	95,985	248,601	2,394	6,200	1,063	74	(X)	1,256
Pennsylvania . . . . .	46,055	119,281	44,739	115,874	1,316	3,408	567	—	(X)	749
Rhode Island . . . . .	1,545	4,001	1,034	2,678	511	1,323	187	9	(X)	315
South Carolina . . . . .	32,021	82,934	30,070	77,881	1,951	5,053	1,044	74	(X)	832
South Dakota . . . . .	77,116	199,730	75,811	196,350	1,305	3,380	1,305	—	(X)	—
Tennessee . . . . .	42,144	109,154	41,235	106,799	910	2,357	910	—	(X)	—
Texas . . . . .	268,597	695,666	261,226	676,575	7,371	19,091	5,607	406	(X)	1,358
Utah . . . . .	84,897	219,883	82,191	212,875	2,706	7,009	2,706	—	(X)	—
Vermont . . . . .	9,616	24,906	9,217	23,872	400	1,036	400	—	(X)	—
Virginia . . . . .	42,775	110,787	39,493	102,287	3,282	8,500	1,106	1,729	(X)	447
Washington . . . . .	71,298	184,661	66,449	172,103	4,849	12,559	1,646	2,537	(X)	666
West Virginia . . . . .	24,230	62,755	24,038	62,258	192	497	192	—	(X)	—
Wisconsin . . . . .	65,496	169,636	54,154	140,259	11,342	29,376	1,984	—	(X)	9,358
Wyoming . . . . .	97,812	253,334	97,088	251,458	724	1,875	724	—	(X)	—
Puerto Rico . . . . .	5,325	13,791	3,424	8,868	1,901	4,924	68	16	(X)	1,817
Island Areas:	3,866	10,013	600	1,554	3,266	8,459	(NA)	(NA)	(X)	(NA)
American Samoa . . . . .	583	1,510	77	199	506	1,311	(NA)	(NA)	(X)	(NA)
Guam . . . . .	571	1,479	210	544	361	935	(NA)	(NA)	(X)	(NA)
No. Mariana Islands . . . . .	1,975	5,115	179	464	1,796	4,652	(NA)	(NA)	(X)	(NA)
U.S. Virgin Islands . . . . .	738	1,911	134	347	604	1,564	(NA)	(NA)	(X)	(NA)

— Represents or rounds to zero. NA Not available. X Not applicable.  
Source: U.S. Census Bureau, unpublished data from the Census TIGER "R" database.

**Table 356. Great Lakes Profile**

[The Great Lakes contain the largest supply of freshwater in the world, holding about 18% of the world's total freshwater and about 90% of the United States' total freshwater. The Lakes are a series of five interconnecting large lakes, one small lake, four connecting channels, and the St. Lawrence Seaway. Combined, the lakes cover an area of over 94,000 square miles (245,000 square kilometers) and contain over 5,400 cubic miles (23,000 cubic kilometers) of water]

Characteristics	Unit	Lake Superior	Lake Michigan	Lake Huron	Lake Erie	Lake Ontario
		Length	Miles	350	307	206
Breadth	Miles	160	118	183	57	53
Depth						
Average	Feet	489	279	159	62	283
Maximum	Feet	1,333	923	750	210	802
Volume	Cubic miles	2,935	1,180	849	116	393
Water Surface Area <sup>1</sup>	Square miles	31,700	22,300	23,000	9,910	7,340
Surface area in U.S.	Square miles	20,598	22,300	9,111	4,977	3,560
Retention/Replacement Time <sup>2</sup>	Years	191	99	22	3	6

<sup>1</sup> Includes surface area in both U.S. and Canada. <sup>2</sup> The amount of time it takes for lakes to get rid of pollutants.

Source: Department of Commerce, National Oceanic and Atmospheric Administration, Great Lakes Environmental Research Laboratory, "About Our Great Lakes, Lake by Lake Profiles," June 2004, <<http://www.glerl.noaa.gov/pr/ourlakes/intro.html>>.

**Table 357. Great Lakes Length of Shoreline in Separate Basin**

[In statute miles]

	Total	Canada	U.S.	MI	MN	WI	IL	IN	OH	PA	NY
<b>Total</b>	<b>10,368</b>	<b>5,127</b>	<b>5,241</b>	<b>3,288</b>	<b>189</b>	<b>820</b>	<b>63</b>	<b>45</b>	<b>312</b>	<b>51</b>	<b>473</b>
Lake Superior	2,980	1,549	1,431	917	189	325	—	—	—	—	—
St. Marys River	297	206	91	91	—	—	—	—	—	—	—
Lake Michigan	1,661	—	1,661	1,058	—	495	63	45	—	—	—
Lake Huron	3,350	2,416	934	934	—	—	—	—	—	—	—
St. Clair River	128	47	81	81	—	—	—	—	—	—	—
Lake St. Clair	160	71	89	89	—	—	—	—	—	—	—
Detroit River	107	43	64	64	—	—	—	—	—	—	—
Lake Erie	860	366	494	54	—	—	—	—	312	51	77
Niagara River	99	34	65	—	—	—	—	—	—	—	65
Lake Ontario	726	395	331	—	—	—	—	—	—	—	331

— Represents zero.

Source: State of Michigan, Department of Environment Quality, "Great Lakes, Shorelines of the Great Lakes," <[http://www.michigan.gov/deq/0,1607,7-135-3313\\_3677---,00.html](http://www.michigan.gov/deq/0,1607,7-135-3313_3677---,00.html)>.

**Table 358. Largest Lakes in the United States**

[The list of lakes include manmade lakes and those that are only partially within the United States]

Lake	Location	Area in sq. mi.	Lake	Location	Area in sq. mi.
Lake Superior	MI-MN-WI-Ontario	31,700	Lake Pontchartrain	Louisiana	631
Lake Huron	MI-Ontario	23,000	Lake Sakakawea <sup>1</sup>	North Dakota	520
Lake Michigan	IL-IN-MI-WI	22,300	Lake Champlain	NY-VT-Quebec	490
Lake Erie	MI-NY-OH-PA-Ontario	9,910	Becharof Lake	Alaska	453
Lake Ontario	NY-Ontario	7,340	Lake St. Clair	MI-Ontario	430
Great Salt Lake	Utah	2,117	Red Lake	Minnesota	427
Lake of the Woods	MN-Manitoba-Ontario	1,485	Selawik Lake	Alaska	404
Iliamna Lake	Alaska	1,014	Fort Peck Lake <sup>1</sup>	Montana	393
Lake Oahe <sup>1</sup>	ND-SD	685	Salton Sea	California	347
Lake Okeechobee	Florida	662	Rainy Lake	MN-Ontario	345

<sup>1</sup> Manmade lakes.

Source: U.S. Geological Survey, 2003, and National Oceanic and Atmospheric Administration, "Great Lakes, 2002" and The National Atlas of the United States of America, *Lakes*, <[http://nationalatlas.gov/articles/mapping/a\\_general.html](http://nationalatlas.gov/articles/mapping/a_general.html)>.

**Table 359. U.S.–Canada and U.S.–Mexico Border Lengths**

[In statute miles. Each statute mile equals one mile. For 2008, there were over 57 million personal vehicle passengers entering the United States from Canada, and almost 158 million personal vehicle passengers entering the United States from Mexico]

State	Length of international border	State	Length of international border
<b>United States–Canada total</b>	<b>5,525</b>	Ohio	146
Alaska	1,538	Pennsylvania	42
Idaho	45	Vermont	90
Maine	611	Washington	427
Michigan	721		
Minnesota	547	<b>United States–Mexico total</b>	<b>1,933</b>
Montana	545	Arizona	373
New Hampshire	58	California	140
New York	445	New Mexico	180
North Dakota	310	Texas	1,241

Source: U.S.–Canada lengths: International Boundary Commission, 2003; U.S. Mexico lengths: U.S. Geological Survey; and The National Atlas of the United States, 1976, *Borders*, <[http://nationalatlas.gov/articles/mapping/a\\_general.html](http://nationalatlas.gov/articles/mapping/a_general.html)>.

**Table 360. Coastline and Shoreline of the United States by State**

[In statute miles. Each statute mile equals one mile. The term **coastline** is used to describe the general outline of the seacoast. For the table below, United States coastline measurements were made from small-scale maps, and the coastline was generalized. The coastlines of large sounds and bays were included. Measurements were made in 1948. **Shoreline** is the term used to describe a more detailed measure of the seacoast. The tidal shoreline figures in the table below were obtained in 1939–1940 from the largest-scale charts and maps then available. Shoreline of the outer coast, offshore islands, sounds, and bays was included, as well as the tidal portion of rivers and creeks. Only states with coastline or shoreline are included in the following table]

State	General coastline	Tidal shoreline	State	General coastline	Tidal shoreline
<b>United States</b>	<b>12,383</b>	<b>88,633</b>	Mississippi	44	359
Alabama	53	607	New Hampshire	13	131
Alaska	6,640	33,904	New Jersey	130	1,792
California	840	3,427	New York	127	1,850
Connecticut	–	618	North Carolina	301	3,375
Delaware	28	381	Oregon	296	1,410
Florida	1,350	8,426	Pennsylvania	–	89
Georgia	100	2,344	Rhode Island	40	384
Hawaii	750	1,052	South Carolina	187	2,876
Louisiana	397	7,721	Texas	367	3,359
Maine	228	3,478	Virginia	112	3,315
Maryland	31	3,190	Washington	157	3,026
Massachusetts	192	1,519			

– Represents zero.

Source: National Oceanic Atmospheric Administration, 1975 and The National Atlas of the United States, *Coastline and Shoreline*, <[http://nationalatlas.gov/articles/mapping/a\\_general.html](http://nationalatlas.gov/articles/mapping/a_general.html)>.

**Table 361. Flows of Largest U.S. Rivers—Length, Discharge, and Drainage Area**

River	Location of mouth	Source stream (name and location)	Length (miles) <sup>1</sup>	Average discharge at mouth (1,000 cubic feet per second)	Drainage area (1,000 sq. miles)
Missouri	Missouri	Red Rock Creek, MT	<sup>3</sup> 2,540	76.2	<sup>2</sup> 529
Mississippi	Louisiana	Mississippi River, MN	2,340	<sup>4</sup> 593	<sup>2, 5</sup> 1,150
Yukon	Alaska	McNeil River, Canada	1,980	225	<sup>2</sup> 328
St. Lawrence	Canada	North River, MN	1,900	348	<sup>2</sup> 396
Rio Grande	Mexico-Texas	Rio Grande, CO	1,900	(?)	336
Arkansas	Arkansas	East Fork Arkansas River, CO	1,460	41	161
Colorado	Mexico	Colorado River, CO	1,450	(?)	246
Atchafalaya <sup>6</sup>	Louisiana	Tierra Blanca Creek, NM	1,420	58	95.1
Ohio	Illinois-Kentucky	Allegheny River, PA	1,310	281	203
Red <sup>6</sup>	Louisiana	Tierra Blanca Creek, NM	1,290	56	93.2
Brazos	Texas	Blackwater Draw, NM	1,280	(?)	45.6
Columbia	Oregon-Washington	Columbia River, Canada	1,240	265	<sup>2</sup> 258
Snake	Washington	Snake River, WY	1,040	56.9	108
Platte	Nebraska	Grizzly Creek, CO	990	(?)	84.9
Pecos	Texas	Pecos River, NM	926	(?)	44.3
Canadian	Oklahoma	Canadian River, CO	906	(?)	46.9
Tennessee	Kentucky	Courthouse Creek, NC	886	68	40.9

<sup>1</sup> From source to mouth. <sup>2</sup> Drainage area includes both the United States and Canada. <sup>3</sup> The length from the source of the Missouri River to the Mississippi River and thence to the Gulf of Mexico is about 3,710 miles. <sup>4</sup> Includes about 167,000 cubic feet per second diverted from the Mississippi into the Atchafalaya River but excludes the flow of the Red River. <sup>5</sup> Excludes the drainage areas of the Red and Atchafalaya Rivers. <sup>6</sup> In east-central Louisiana, the Red River flows into the Atchafalaya River, a distributary of the Mississippi River. Data on average discharge, length, and drainage area include the Red River, but exclude all water diverted into the Atchafalaya from the Mississippi River. <sup>7</sup> Less than 15,000 cubic feet per second.

Source: U.S. Geological Survey, *Largest Rivers in the United States*, September 2005, <<http://pubs.usgs.gov/of/1987/ofr87-242/>>.

**Table 362. Extreme and Mean Elevations by State and Other Areas**

[One foot = .305 meter. There are 2,130 square miles of the United States below sea level (Death Valley is the lowest point). There are 20,230 square miles above 10,000 feet (Mount McKinley is the highest point in the United States). Minus sign (-) indicates below sea level]

State and other areas	Highest point			Lowest point			Approximate mean elevation	
	Name	Elevation		Name	Elevation		Feet	Meters
		Feet	Meters		Feet	Meters		
U.S. ....	<b>Mt. McKinley (AK) .....</b>	<b>20,320</b>	<b>6,198</b>	<b>Death Valley (CA) .....</b>	<b>-282</b>	<b>-86</b>	<b>2,500</b>	<b>763</b>
AL .....	Cheaha Mountain .....	2,407	734	Gulf of Mexico .....	( <sup>1</sup> )	( <sup>1</sup> )	500	153
AK .....	Mount McKinley .....	20,320	6,198	Pacific Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	1,900	580
AZ .....	Humphreys Peak .....	12,633	3,853	Colorado River .....	70	21	4,100	1,251
AR .....	Magazine Mountain .....	2,753	840	Ouachita River .....	55	17	650	198
CA .....	Mount Whitney .....	14,494	4,419	Death Valley .....	-282	-86	2,900	885
CO .....	Mt. Elbert .....	14,433	4,402	Arikaree River .....	3,315	1,011	6,800	2,074
CT .....	Mt. Frissell on south slope .....	2,380	726	Long Island Sound .....	( <sup>1</sup> )	( <sup>1</sup> )	500	153
DE <sup>2</sup> .....	Ebright Road <sup>2</sup> .....	448	137	Atlantic Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	60	18
DC .....	Tenleytown at Reno Reservoir .....	410	125	Potomac River .....	1	(Z)	150	46
FL .....	Britton Hill .....	345	105	Atlantic Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	100	31
GA .....	Brasstown Bald .....	4,784	1,459	Atlantic Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	600	183
HI .....	Pu'u Wekiu, Mauna Kea .....	13,796	4,208	Pacific Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	3,030	924
ID .....	Borah Peak .....	12,662	3,862	Snake River .....	710	217	5,000	1,525
IL .....	Charles Mound .....	1,235	377	Mississippi River .....	279	85	600	183
IN .....	Hoosier Hill .....	1,257	383	Ohio River .....	320	98	700	214
IA .....	Hawkeye Point .....	1,670	509	Mississippi River .....	480	146	1,100	336
KS .....	Mount Sunflower .....	4,039	1,232	Verdigris River .....	679	207	2,000	610
KY .....	Black Mountain .....	4,145	1,264	Mississippi River .....	257	78	750	229
LA .....	Driskill Mountain .....	535	163	New Orleans .....	-8	-2	100	31
ME .....	Mount Katahdin .....	5,268	1,607	Atlantic Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	600	183
MD .....	Hoye Crest .....	3,360	1,025	Atlantic Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	350	107
MA .....	Mount Greylock .....	3,491	1,065	Atlantic Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	500	153
MI .....	Mount Arvon .....	1,979	604	Lake Erie .....	571	174	900	275
MN .....	Eagle Mountain .....	2,301	702	Lake Superior .....	601	183	1,200	366
MS .....	Woodall Mountain .....	806	246	Gulf of Mexico .....	( <sup>1</sup> )	( <sup>1</sup> )	300	92
MO .....	Taum Sauk Mountain .....	1,772	540	St. Francis River .....	230	70	800	244
MT .....	Granite Peak .....	12,799	3,904	Kootenai River .....	1,800	549	3,400	1,037
NE .....	Panorama Point .....	5,424	1,654	Missouri River .....	840	256	2,600	793
NV .....	Boundary Peak .....	13,140	4,007	Colorado River .....	479	146	5,500	1,678
NH .....	Mount Washington .....	6,288	1,918	Atlantic Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	1,000	305
NJ .....	High Point .....	1,803	550	Atlantic Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	250	76
NM .....	Wheeler Peak .....	13,161	4,014	Red Bluff Reservoir .....	2,842	867	5,700	1,739
NY .....	Mount Marcy .....	5,344	1,630	Atlantic Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	1,000	305
NC .....	Mount Mitchell .....	6,684	2,039	Atlantic Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	700	214
ND .....	White Butte .....	3,506	1,069	Red River of the North .....	750	229	1,900	580
OH .....	Campbell Hill .....	1,550	473	Ohio River .....	455	139	850	259
OK .....	Black Mesa .....	4,973	1,517	Little River .....	289	88	1,300	397
OR .....	Mount Hood .....	11,239	3,428	Pacific Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	3,300	1,007
PA .....	Mount Davis .....	3,213	980	Delaware River .....	( <sup>1</sup> )	( <sup>1</sup> )	1,100	336
RI .....	Jerimoth Hill .....	812	248	Atlantic Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	200	61
SC .....	Sassafras Mountain .....	3,560	1,086	Atlantic Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	350	107
SD .....	Harney Peak .....	7,242	2,209	Big Stone Lake .....	966	295	2,200	671
TN .....	Clingmans Dome .....	6,643	2,026	Mississippi River .....	178	54	900	275
TX .....	Guadalupe Peak .....	8,749	2,668	Gulf of Mexico .....	( <sup>1</sup> )	( <sup>1</sup> )	1,700	519
UT .....	Kings Peak .....	13,528	4,126	Beaverdam Wash .....	2,000	610	6,100	1,861
VT .....	Mount Mansfield .....	4,393	1,340	Lake Champlain .....	95	29	1,000	305
VA .....	Mount Rogers .....	5,729	1,747	Atlantic Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	950	290
WA .....	Mount Rainier .....	14,411	4,395	Pacific Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	1,700	519
WV .....	Spruce Knob .....	4,863	1,483	Potomac River .....	240	73	1,500	458
WI .....	Timms Hill .....	1,951	595	Lake Michigan .....	579	177	1,050	320
WY .....	Gannett Peak .....	13,804	4,210	Belle Fourche River .....	3,099	945	6,700	2,044
Other areas:								
Puerto Rico .....	Cerro de Punta .....	4,390	1,339	Atlantic Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	1,800	549
American Samoa .....	Lata Mountain .....	3,160	964	Pacific Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	1,300	397
Guam .....	Mount Lamlam .....	1,332	406	Pacific Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	330	101
U.S. Virgin Islands .....	Crown Mountain .....	1,556	475	Atlantic Ocean .....	( <sup>1</sup> )	( <sup>1</sup> )	750	229

Z Less than .5 meter. <sup>1</sup> Sea level. <sup>2</sup> At DE-PA state line.

Source: For highest and lowest points, see U.S. Geological Survey, "Elevations and Distances in the United States," <<http://egsc.usgs.gov/isb/pubs/booklets/elvdist/elvdist.html>>, released April 2005. For mean elevations, see *Elevations and Distances in the United States*, 1983 edition.

**Table 363. Land Cover/Use by Type: 1982 to 2003**

[In millions of acres (1,937.7 represents 1,937,700,000), except percent. Excludes Alaska, Hawaii, and District of Columbia. For inventory-specific glossary of key terms, see <<http://www.nrcs.usda.gov/technical/NRI/glossaries.html>>]

Year	Total surface area	Nonfederal rural land						Other rural land	Developed land	Water areas	Federal land
		Rural land total <sup>1</sup>	Crop-land	Pasture-land	Range-land	Forest land					
Land											
1982	1,937.7	1,417.2	420.4	131.4	414.5	402.6	48.3	72.8	48.6	399.1	
1992	1,937.6	1,400.2	381.2	125.1	406.6	404.0	49.3	86.5	49.4	401.5	
2001	1,937.7	1,379.3	369.6	116.9	404.7	404.9	51.4	106.3	50.3	401.8	
2002	1,937.7	1,378.1	368.4	117.3	405.3	404.9	50.6	107.3	50.4	401.9	
2003	1,937.7	1,377.3	367.9	117.0	405.1	405.6	50.2	108.1	50.4	401.9	
Percent of total land											
1982	100.0	73.1	21.7	6.8	21.4	20.8	2.5	3.8	2.5	20.6	
1992	100.0	72.3	19.7	6.5	21.0	20.9	2.5	4.5	2.5	20.7	
2001	100.0	71.2	19.1	6.0	20.9	20.9	2.7	5.5	2.6	20.7	
2002	100.0	71.1	19.0	6.1	20.9	20.9	2.6	5.5	2.6	20.7	
2003	100.0	71.1	19.0	6.0	20.9	20.9	2.6	5.6	2.6	20.7	

<sup>1</sup> Includes Conservation Reserve Program (CRP) land not shown separately. CRP is a federal program established under the Food Security Act of 1985 to assist private landowners to convert highly erodible cropland to vegetative cover for 10 years.

Source: U.S. Department of Agriculture, Natural Resources and Conservation Service, *2003 Annual National Resources Inventory*. See also <<http://www.nrcs.usda.gov/technical/NRI/>>.

**Table 364. Wetlands on Nonfederal Land and Water Areas by Land Cover/Use and Farm Production Region: 2003**

[In thousands of acres (110,760 represents 110,760,000). Represents palustrine and estuarine wetlands; see source]

Farm production region <sup>1</sup>	Total	Cropland <sup>2</sup>	Forest land	Range-land	Other rural land	Developed land	Water area
<b>Wetlands, total</b>	<b>110,760</b>	<b>16,730</b>	<b>65,440</b>	<b>7,740</b>	<b>15,800</b>	<b>1,590</b>	<b>3,460</b>
Lake states	22,460	2,710	15,480	—	3,880	160	230
Southeast	22,360	940	16,010	970	3,460	420	560
Delta states	17,950	3,240	11,020	270	2,730	190	500
Northeast	14,150	1,250	10,890	—	1,550	240	220
Northern plains	7,640	3,020	210	2,870	1,090	80	370
Appalachian	7,460	400	6,080	—	570	110	300
Southern plains	5,590	970	2,350	970	520	230	550
Mountain	4,780	1,570	220	2,010	820	30	130
Corn belt	4,690	1,330	2,440	—	380	100	440
Pacific	3,680	1,300	740	650	800	30	160

— Represents or rounds to zero. <sup>1</sup> Ten regions established by USDA, Economic Research Service, that group states according to differences in soils, slope of land, climate, distance to market, and storage and marketing facilities. <sup>2</sup> Includes pastureland and Conservation Reserve Program (CRP) lands.

Source: U.S. Department of Agriculture, Natural Resources Conservation Service, *2003 Annual National Resources Inventory*. See also <<http://www.nrcs.usda.gov/technical/NRI/>>.

**Table 365. Land Cover/Use by State: 2003**

[In thousands of acres (1,937,664 represents 1,937,664,000), except percent. Excludes Alaska, District of Columbia, Hawaii, and Island Areas]

State	Total surface area	Selected nonfederal rural land, percent of total			State	Total surface area	Selected nonfederal rural land, percent of total		
		Crop-land	Range-land	Forest land			Crop-land	Range-land	Forest land
<b>United States</b>	<b>1,937,664</b>	<b>19.0</b>	<b>20.9</b>	<b>20.9</b>					
Alabama	33,424	7.5	0.2	64.4	Nebraska	49,510	39.5	46.6	1.6
Arizona	72,964	1.3	44.2	5.7	Nevada	70,763	0.9	11.7	0.4
Arkansas	34,037	22.1	0.1	44.1	New Hampshire	5,941	2.1	—	65.6
California	101,510	9.3	17.5	13.7	New Jersey	5,216	10.1	—	30.8
Colorado	66,625	12.5	37.2	4.9	New Mexico	77,823	2.0	51.3	7.0
Connecticut	3,195	5.4	—	53.4	New York	31,361	17.1	—	56.1
Delaware	1,534	29.8	—	22.2	North Carolina	33,709	16.4	—	45.9
Florida	37,534	7.7	7.2	33.9	North Dakota	45,251	53.6	24.5	1.0
Georgia	37,741	11.0	—	58.0	Ohio	26,445	42.5	—	27.3
Idaho	53,488	10.2	12.0	7.5	Oklahoma	44,738	20.1	31.6	16.5
Illinois	36,059	66.5	—	11.0	Oregon	62,161	6.0	15.1	20.5
Indiana	23,158	57.5	—	16.5	Pennsylvania	28,995	17.7	—	53.9
Iowa	36,017	70.8	—	6.4	Rhode Island	813	2.5	—	45.9
Kansas	52,661	50.3	30.1	2.9	South Carolina	19,939	11.9	—	56.0
Kentucky	25,863	21.2	—	40.6	South Dakota	49,358	34.6	44.7	1.0
Louisiana	31,377	17.3	0.9	42.5	Tennessee	26,974	17.6	—	44.3
Maine	20,966	1.8	—	84.0	Texas	171,052	14.9	56.2	6.2
Maryland	7,870	19.3	—	30.1	Utah	54,339	3.1	19.6	3.5
Massachusetts	5,339	4.7	—	49.9	Vermont	6,154	9.5	—	67.1
Michigan	37,349	21.7	—	44.7	Virginia	27,087	10.6	—	48.7
Minnesota	54,010	39.1	—	30.3	Washington	44,035	14.7	13.3	28.9
Mississippi	30,527	16.3	—	54.9	West Virginia	15,508	5.3	—	68.1
Missouri	44,614	30.7	0.2	28.1	Wisconsin	35,920	28.7	—	40.4
Montana	94,110	15.4	39.0	5.7	Wyoming	62,603	3.5	44.0	1.5

— Represents zero.

Source: U.S. Department of Agriculture, Natural Resources and Conservation Service, *Summary Report, 2003 Annual National Resources Inventory*. See also <<http://www.nrcs.usda.gov/technical/NRI/>>.

**Table 366. U.S. Wetland Resources and Deepwater Habitats by Type: 1998 to 2004**

[In thousands of acres (148,618.8 represents 148,618,800). Wetlands and deepwater habitats are defined separately because the term wetland does not include permanent water bodies. Deepwater habitats are permanently flooded land lying below the deepwater boundary of wetlands. Deepwater habitats include environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live, whether or not they are attached to the substrate. As in wetlands, the dominant plants are hydrophytes; however, the substrates are considered nonsoil because the water is too deep to support emergent vegetation. In general terms, wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. The single feature that most wetlands share is soil or substrate that is at least periodically saturated with or covered by water. Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For more information on wetlands, see the "Classification of Wetlands and Deepwater Habitats of the United States" at <[http://www.fws.gov/wetlands/\\_documents/gNSDI/ClassificationWetlandsDeepwaterHabitatsUS.pdf](http://www.fws.gov/wetlands/_documents/gNSDI/ClassificationWetlandsDeepwaterHabitatsUS.pdf)>]

Wetland or deepwater category	Estimated area, 1998	Estimated area, 2004	Change, 1998 to 2004
<b>All wetlands and deepwater habitats, total . . . . .</b>	<b>148,618.8</b>	<b>149,058.5</b>	<b>439.7</b>
All deepwater habitats, total . . . . .	41,046.6	41,304.5	247.9
Lacustrine <sup>1</sup> . . . . .	16,610.5	16,773.4	162.9
Riverine <sup>2</sup> . . . . .	6,765.5	6,813.3	47.7
Estuarine Subtidal <sup>3</sup> . . . . .	17,680.5	17,717.8	37.3
All wetlands, total. . . . .	107,562.3	107,754.0	191.8
Intertidal wetlands <sup>4</sup> . . . . .	5,328.7	5,300.3	-28.4
Marine intertidal. . . . .	130.4	128.6	-1.9
Estuarine intertidal nonvegetated . . . . .	594.1	600.0	5.9
Estuarine intertidal vegetated . . . . .	4,604.2	4,571.7	-32.4
Freshwater wetlands . . . . .	102,233.6	102,453.8	220.2
Freshwater nonvegetated . . . . .	5,918.7	6,633.9	715.3
Freshwater vegetated . . . . .	96,414.9	95,819.8	-495.1
Freshwater emergent <sup>5</sup> . . . . .	26,289.6	26,147.0	-142.6
Freshwater forested <sup>6</sup> . . . . .	51,483.1	52,031.4	548.2
Freshwater shrub <sup>7</sup> . . . . .	18,542.2	17,641.4	-900.8

<sup>1</sup> The lacustrine system includes deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with greater than 30 percent coverage; and (3) total area exceeds 20 acres (8 hectares). <sup>2</sup> The riverine system includes deepwater habitats contained within a channel, with the exception of habitats with water containing ocean derived salts in excess of 0.5 parts per thousand. <sup>3</sup> The estuarine system consists of deepwater tidal habitats and adjacent tidal wetlands that are usually semi-enclosed by land but have open, partly obstructed, or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. Subtidal is where the substrate is continuously submerged by marine or estuarine waters. <sup>4</sup> Intertidal is where the substrate is exposed and flooded by tides. Intertidal includes the splash zone of coastal waters. <sup>5</sup> Emergent wetlands are characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants. <sup>6</sup> Forested wetlands are characterized by woody vegetation that is 20 feet tall or taller. <sup>7</sup> Shrub wetlands include areas dominated by woody vegetation less than 20 feet tall. The species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions.

Source: U.S. Fish and Wildlife Service, *Status and Trends of Wetlands in the Conterminous United States, 1998 to 2004*, December 2005. See also <[http://www.fws.gov/wetlands/\\_documents/gSandT/NationalReports/StatusTrendsWetlandsConterminousUS1998to2004.pdf](http://www.fws.gov/wetlands/_documents/gSandT/NationalReports/StatusTrendsWetlandsConterminousUS1998to2004.pdf)>.

**Table 367. U.S. Water Withdrawals Per Day by End Use: 1950 to 2005**

[[180 represents 180,000,000,000]. Includes the District of Columbia, Puerto Rico and U.S. Virgin Islands. Withdrawal signifies water physically withdrawn from a source. Includes fresh and saline water; excludes water used for hydroelectric power. Table has been changed and data have been revised. For information on "Changes for the 2005 report," see "Trends in Estimated Water Use in the United States, Table 14"]

Year	Total with- draws Public supply		Rural domestic and livestock		Irri- gation	Thermo electric power	Other			
			Self supplied domestic	Live- stock			Self supplied domestic	Mining	Com- mercial	Aqua- culture
1950 <sup>1</sup> . . . . .	180	14	2.1	1.5	89	40	37	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
1955 <sup>2</sup> . . . . .	240	17	2.1	1.5	110	72	39	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
1960 <sup>3</sup> . . . . .	270	21	2.0	1.6	110	100	38	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
1965 <sup>4</sup> . . . . .	310	24	2.3	1.7	120	130	46	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
1970 <sup>4</sup> . . . . .	370	27	2.6	1.9	130	170	47	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
1975 <sup>3</sup> . . . . .	420	29	2.8	2.1	140	200	45	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
1980 <sup>3</sup> . . . . .	430	33	3.4	2.2	150	210	45	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
1985 <sup>3</sup> . . . . .	397	36.4	3.32	2.23	135	187	25.9	3.44	1.23	2.24
1990 <sup>3</sup> . . . . .	404	38.8	3.39	2.25	134	194	22.6	4.93	2.39	2.25
1995 <sup>3</sup> . . . . .	399	40.2	3.39	2.28	130	190	22.4	3.72	2.89	3.22
2000 <sup>3</sup> . . . . .	413	43.2	3.58	2.38	139	195	19.7	4.50	(NA)	5.77
2005 <sup>3</sup> . . . . .	410	44.2	3.83	2.14	128	201	18.2	4.02	(NA)	8.78

NA Not available. <sup>1</sup> Population covered: 48 states, District of Columbia, and Hawaii. <sup>2</sup> Population covered: 48 states, <sup>3</sup> Population covered: 50 states, District of Columbia, Puerto Rico, and the Virgin Islands. <sup>4</sup> Population covered: 50 states, District of Columbia, and Puerto Rico. <sup>5</sup> Included in "Self-Supplied Industrial."

Source: 1940–1960, U.S. Bureau of Domestic Business Development, based principally on committee prints, *Water Resources Activities in the United States*, for the Senate Committee on National Water Resources, U.S. Senate, thereafter, U.S. Geological Survey, *Estimated Use of Water in the United States in 2005*, circular I344. See also <<http://pubs.usgs.gov/circ/1344/>> (October 2009).



**Table 368. National Ambient Air Pollutant Concentrations by Type of Pollutant: 2001 to 2007**

[Data represent annual composite averages of pollutant based on daily 24-hour averages of monitoring stations, except carbon monoxide which is based on the second-highest, nonoverlapping, 8-hour average; ozone, the fourth-highest maximum 8-hour value; and lead, the maximum quarterly average of ambient lead levels. Based on data from the Air Quality System. @mg/m<sup>3</sup> = micrograms of pollutant per cubic meter of air; ppm = parts per million]

Pollutant	Unit	Monitoring stations, number	Air quality standard <sup>1</sup>	2001	2002	2003	2004	2005	2006	2007
				Carbon monoxide	ppm	322	<sup>2</sup> 9	3.3	2.9	2.7
Ozone	ppm	1,013	<sup>3</sup> 0.075	0.081	0.085	0.080	0.074	0.079	0.077	0.077
Sulfur dioxide	ppm	406	<sup>4</sup> 0.03	0.005	0.004	0.004	0.004	0.004	0.004	0.004
Particulates (PM-10)	µg/m <sup>3</sup>	734	<sup>5</sup> 150	86.5	86.8	84.4	69.6	65.2	75.6	68.5
Fine particulates (PM2.5) annual average	µg/m <sup>3</sup>	725	<sup>6</sup> 15	13.2	12.7	12.3	11.9	12.9	11.6	11.9
Fine particulates (PM2.5) daily average	µg/m <sup>3</sup>	725	<sup>7</sup> 35	34.1	32.9	30.8	30.5	33.5	28.7	30.9
Nitrogen dioxide	ppm	313	<sup>8</sup> 0.053	0.015	0.015	0.014	0.013	0.013	0.013	0.012
Lead	µg/m <sup>3</sup>	103	<sup>9</sup> 0.15	0.35	0.17	0.17	0.21	0.16	0.14	0.155

<sup>1</sup> Refers to the primary National Ambient Air Quality Standard. <sup>2</sup> Based on 8-hour standard of 9 ppm. <sup>3</sup> Based on annual standard of 0.03 ppm. <sup>4</sup> Based on 8-hour standard of 0.075 ppm. On March 12, 2008, EPA revised the level of the primary and secondary 8-hour ozone standards to 0.075 ppm. <sup>5</sup> Based on 24-hour (daily) standard of 150 µg/m<sup>3</sup>. The particulates (PM-10) standard replaced the previous standard for total suspended particulates in 1987. In 2006, EPA revoked the annual PM-10 standard. <sup>6</sup> Based on annual standard of 15 µg/m<sup>3</sup>. The PM-2.5 national monitoring network was deployed in 1999. National trend data prior to that time is not available. <sup>7</sup> Based on daily standard of 35 µg/m<sup>3</sup>. The PM-2.5 national monitoring network was deployed in 1999. National trend data prior to that time is not available. <sup>8</sup> Based on annual standard of 0.053 ppm. <sup>9</sup> Based on 3-month standard of 1.5 µg/m<sup>3</sup>. On October 15, 2008, EPA revised the form of the primary and secondary lead standards and revised the level to 0.15 µg/m<sup>3</sup>.

Source: U.S. Environmental Protection Agency, *Latest Findings on National Air Quality—Status and Trends through 2007*, released November 2008, <<http://www.epa.gov/air/airtrends/2008/index.html>>.

**Table 369. Selected National Air Pollutant Emissions: 1970 to 2008**

[In thousands of tons (4,320 represents 4,320,000), except as indicated. The methodology used to estimate emission data for 1970 thru 1984 and for 1985 thru the current year is different. Beginning with 1985, the methodology for more recent years is described in the document available at <<http://www.epa.gov/ttn/chieff/net/2005inventory.html>>]

Year	Ammonia	Carbon monoxide	Nitrogen oxide	PM-10 <sup>1</sup>	PM-10 <sup>2</sup>	PM-2.5 <sup>1</sup>	PM-2.5 <sup>2</sup>	Sulfur dioxide	V.O.C. <sup>3</sup>
1980	(NA)	185,408	27,080	7,013	7,013	(NA)	(NA)	25,926	31,107
1990	4,320	154,188	25,527	27,753	27,753	7,560	7,560	23,077	24,108
1995	4,659	126,778	24,955	25,820	25,820	6,929	6,929	18,619	22,042
2000	4,907	114,465	22,599	23,748	22,962	7,287	6,503	16,348	17,511
2004	4,101	99,041	19,793	21,211	18,321	5,497	3,044	14,820	19,789
2005	4,085	93,034	19,122	21,153	18,266	5,457	3,015	14,844	18,422
2006	4,071	87,917	18,111	19,037	16,150	5,269	2,861	13,656	17,590
2007	4,057	82,800	17,318	16,921	14,034	5,080	2,707	13,006	16,759
2008	4,043	77,683	16,366	14,805	11,918	4,892	2,553	11,502	15,927

NA Not available. <sup>1</sup> PM=Particulate Matter; PM-10 is equal to or less than ten microns in diameter; PM-2.5 to or less than 2.5 microns effective diameter. <sup>2</sup> Without condensibles. <sup>3</sup> Volatile organic compound.

Source: U.S. Environmental Protection Agency, *National Emissions Inventory (NEI) Air Pollution Emissions Trends Data, 1970–2002*. See <<http://www.epa.gov/ttn/chieff/trends/index.html#tables>>, *Air and Radiation, Air Trends*, <<http://www.epa.gov/airtrends/index.html>>.

**Table 370. Selected Air Pollutant Emissions by Pollutant and Source: 2008**

[In thousands of tons, except as indicated (4,043 represents 4,043,000). See headnote, Table 369]

Source	Ammonia	Carbon monoxide	Nitrogen oxide	PM-10 <sup>1</sup>	PM-2.5 <sup>1</sup>	Sulfur dioxide	V.O.C. <sup>2</sup>
Fuel combustion, stationary sources	68	5,283	5,597	1,330	1,006	9,872	1,450
Electric utilities	34	699	3,033	534	410	7,624	50
Industrial	16	1,216	1,838	330	175	1,670	130
Other fuel combustion	18	3,369	727	466	421	578	1,269
Industrial processes	206	3,767	1,047	1,461	751	1,025	7,142
Chemical and allied product manufacturing	22	265	67	39	29	255	228
Metals processing	3	947	68	78	52	203	46
Petroleum and related industries	3	355	350	24	17	206	561
Other	151	500	418	967	355	329	404
Solvent utilization	—	2	6	8	7	—	4,226
Storage and transport	1	115	18	57	22	4	1,303
Waste disposal and recycling	26	1,584	120	288	267	27	374
Highway vehicles	308	38,866	5,206	171	110	64	3,418
Off highway <sup>3</sup>	3	18,036	4,255	304	283	456	2,586
Miscellaneous <sup>4</sup>	3,457	11,731	260	11,540	2,742	85	1,332

— Rounds to zero. <sup>1</sup> PM=Particulate Matter. <sup>2</sup> Volatile organic compound. <sup>3</sup> Includes emissions from farm tractors and other farm machinery, construction equipment, industrial machinery, recreational marine vessels, and small general utility engines such as lawn mowers. <sup>4</sup> Includes emissions such as from forest fires and other kinds of burning, various agricultural activities, fugitive dust from paved and unpaved roads, and other construction and mining activities, and natural sources.

Source: U.S. Environmental Protection Agency, *National Emissions Inventory (NEI) Air Pollution Emissions Trends Data, 1970–2002*, <<http://www.epa.gov/ttn/chieff/trends/index.html#tables>>, *Air and Radiation, Air Trends*, <<http://www.epa.gov/airtrends/index.html>>.

**Table 371. Emissions of Greenhouse Gases by Type and Source: 1990 to 2008**

[In millions of metric tons (6,187.4 represents 6,187,400,000). Metric ton = 2,204.6 lbs. Emission estimates were mandated by Congress through Section 1605(a) of the Energy Policy Act of 1992 (Title XVI). Data shown below, by type and source, are measured in terms of their carbon dioxide equivalent. Data have been revised for years shown]

Type and source	1990	1995	2000	2004	2005	2006	2007	2008 <sup>1</sup>
<b>CARBON DIOXIDE EQUIVALENT</b>								
<b>Total emissions</b> .....	<b>6,187.4</b>	<b>6,522.3</b>	<b>7,009.8</b>	<b>7,152.1</b>	<b>7,182.6</b>	<b>7,100.8</b>	<b>7,209.8</b>	<b>7,052.6</b>
Carbon dioxide, total .....	5,022.3	5,341.5	5,886.4	6,009.9	6,029.0	5,928.7	6,017.0	5,839.3
From energy use by sector								
Residential .....	958.6	1,035.5	1,179.8	1,221.9	1,254.5	1,186.7	1,235.1	1,220.1
Commercial .....	785.1	845.1	1,013.1	1,043.3	1,059.6	1,034.9	1,070.3	1,075.1
Industrial .....	1,689.5	1,739.5	1,784.7	1,728.5	1,671.4	1,657.8	1,655.2	1,589.1
Transportation .....	1,586.9	1,682.2	1,872.7	1,958.9	1,988.7	2,014.3	2,025.7	1,930.1
Adjustments to energy <sup>2</sup> .....	-82.9	-63.1	-61.7	-44.6	-48.8	-70.9	-74.9	-79.0
Adjusted energy subtotal .....	4,937.2	5,239.1	5,788.7	5,907.9	5,925.5	5,822.8	5,911.5	5,735.5
Other sources .....	85.1	102.3	97.8	102.0	103.5	106.0	105.6	103.8
Methane .....	783.5	756.2	683.0	686.6	691.8	706.3	722.7	737.4
Energy sources .....	294.4	284.8	277.6	278.9	274.2	276.7	282.8	295.7
Agricultural sources .....	201.5	219.1	211.1	212.5	218.8	221.8	222.6	225.0
Waste management .....	283.0	246.8	188.6	189.6	193.7	202.6	212.1	212.1
Industrial processes .....	4.6	5.6	5.7	5.6	5.1	5.2	5.2	4.7
Nitrous oxide .....	279.3	305.6	289.8	302.2	304.0	305.2	299.8	300.3
Agricultural sources .....	196.4	199.2	199.1	213.9	217.9	220.8	213.9	217.9
Energy use .....	51.6	70.4	71.0	71.4	68.8	67.1	66.8	63.9
Industrial processes .....	22.8	33.1	16.7	13.7	14.0	14.0	15.9	15.1
Waste management .....	2.6	2.8	3.1	3.2	3.3	3.3	3.4	3.4
High-GWP gases <sup>3</sup> .....	102.3	119.0	150.5	153.5	157.8	160.5	170.3	175.6

<sup>1</sup> 2008 preliminary data. <sup>2</sup> Carbon dioxide (CO<sub>2</sub>) emissions from U.S. Territories are added to the U.S. total, and CO<sub>2</sub> emissions from fuels used for international transport (both ocean-going vessels and airplanes) are subtracted to derive total U.S. greenhouse gas emissions. <sup>3</sup> High global warming potential gases: hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>).

Source: U.S. Energy Information Administration, *Greenhouse Gas Emissions in the United States, 2008*, Series DOE/EIA-0573 (2008), annual. See also <<http://www.eia.doe.gov/oiat/1605/ggrpt/index.html>>.

**Table 372. Carbon Dioxide Emissions by Sector and Source: 1990 to 2008**

[In million metric tons (5,022.3 represents 5,022,300,000), except as noted. Data below measured in terms of carbon dioxide equivalent. Data have been revised for years shown]

Sector	1990	2000	2003	2004	2005	2006	2007	2008 <sup>1</sup>
<b>Total</b> <sup>2</sup> .....	<b>5,022.3</b>	<b>5,886.4</b>	<b>5,908.8</b>	<b>6,009.9</b>	<b>6,029.0</b>	<b>5,928.7</b>	<b>6,017.0</b>	<b>5,839.3</b>
Petroleum <sup>3</sup> .....	5,020.1	5,850.4	5,838.6	5,952.5	5,974.3	5,893.7	5,986.4	5,814.4
Natural gas .....	2,185.9	2,461.3	2,516.7	2,605.4	2,625.7	2,594.9	2,588.6	2,436.0
Coal .....	1,024.7	1,240.6	1,194.6	1,195.4	1,176.1	1,157.1	1,231.7	1,241.8
<b>Residential</b> .....	<b>958.6</b>	<b>1,179.8</b>	<b>1,224.9</b>	<b>1,221.9</b>	<b>1,254.5</b>	<b>1,186.7</b>	<b>1,235.1</b>	<b>1,220.1</b>
Petroleum .....	99.2	108.6	106.8	107.2	101.1	85.5	86.7	80.1
Natural gas .....	238.3	270.8	277.5	264.5	262.7	237.5	256.8	265.0
Coal .....	3.0	1.1	1.2	1.1	0.8	0.6	0.7	0.7
Electricity <sup>4</sup> .....	618.2	799.3	839.5	849.1	889.9	863.0	890.9	874.4
<b>Commercial</b> .....	<b>785.1</b>	<b>1,013.1</b>	<b>1,026.1</b>	<b>1,043.3</b>	<b>1,059.6</b>	<b>1,034.9</b>	<b>1,070.3</b>	<b>1,075.1</b>
Petroleum <sup>5</sup> .....	70.1	54.7	55.8	54.9	52.4	44.8	44.3	41.4
Natural gas .....	142.3	172.5	173.7	170.0	163.2	154.0	164.2	169.9
Coal .....	11.8	8.8	7.8	9.8	9.2	6.2	6.7	6.4
Electricity <sup>4</sup> .....	560.8	777.2	788.7	808.6	834.8	830.0	855.2	857.3
<b>Industrial</b> .....	<b>1,689.5</b>	<b>1,784.7</b>	<b>1,690.3</b>	<b>1,728.5</b>	<b>1,671.4</b>	<b>1,657.8</b>	<b>1,655.2</b>	<b>1,589.1</b>
Petroleum .....	367.2	373.1	396.5	421.1	419.2	432.5	417.2	385.3
Natural gas .....	432.5	480.7	431.7	432.0	397.9	394.3	403.6	409.0
Coal .....	256.8	210.0	190.2	190.7	182.0	178.3	173.7	167.5
Electricity <sup>4</sup> .....	632.5	713.4	666.1	668.9	667.2	645.8	657.7	622.6
<b>Transportation</b> .....	<b>1,586.9</b>	<b>1,872.7</b>	<b>1,897.4</b>	<b>1,958.9</b>	<b>1,988.7</b>	<b>2,014.3</b>	<b>2,025.7</b>	<b>1,930.1</b>
Petroleum <sup>6</sup> .....	1,547.7	1,833.4	1,859.5	1,922.2	1,950.7	1,976.4	1,985.1	1,889.4
Natural gas .....	36.1	35.7	33.4	32.0	33.1	33.2	35.4	35.9
Electricity <sup>4</sup> .....	3.2	3.6	4.5	4.7	4.9	4.7	5.2	4.9
<b>Electric power sector</b> <sup>7</sup> .....	<b>1,814.6</b>	<b>2,293.5</b>	<b>2,298.8</b>	<b>2,331.3</b>	<b>2,396.8</b>	<b>2,343.5</b>	<b>2,409.1</b>	<b>2,359.1</b>
Petroleum .....	101.8	91.5	98.1	100.1	102.3	55.6	55.3	39.7
Natural gas .....	175.5	280.9	278.3	296.8	319.1	338.2	371.7	362.0
Coal .....	1,531.2	1,910.8	1,910.7	1,922.9	1,963.9	1,937.8	1,970.6	1,945.9

<sup>1</sup> Preliminary. <sup>2</sup> Includes other items, not shown separately. <sup>3</sup> This includes carbon dioxide from international bunker fuels, both civilian and military, which are excluded from the accounting of carbon dioxide emissions under the United Nations convention.

<sup>4</sup> Share of total electric power sector carbon dioxide emissions weighted by sales to this sector. <sup>5</sup> Includes small amounts of petroleum coke. <sup>6</sup> Includes lease and plant fuel. <sup>7</sup> Includes electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public. Beginning 2005, also includes emissions from municipal solid waste and geothermal electricity generation. Emissions from the electric power sector are apportioned to each end-use sector according to their share of electricity sales.

Source: "State Energy Data Report"; 1990 to 2000, "Emissions of Greenhouse Gases in the U.S., 2006"; and after, *Annual Energy Outlook*. See also <<http://www.eia.doe.gov>>.

**Table 373. Municipal Solid Waste Generation, Materials Recovery, Combustion With Energy Recovery, and Discards: 1980 to 2008**

[In millions of tons (151.6 represents 151,600,000), except as indicated. Covers post-consumer residential and commercial solid wastes which comprise the major portion of typical municipal collections. Excludes mining, agricultural and industrial processing, demolition and construction wastes, sewage sludge and junked autos and obsolete equipment wastes. Based on material-flows estimating procedure and wet weight as generated]

Item and material	1980	1990	2000	2005	2006	2007	2008
Waste generated . . . . .	151.6	205.2	239.1	249.7	254.2	254.6	249.6
Per person per day (lb.) . . . . .	3.7	4.5	4.7	4.6	4.7	4.6	4.5
Total materials recovery . . . . .	14.5	33.2	69.4	79.2	82.2	84.2	82.9
Per person per day (lb.) . . . . .	0.4	0.7	1.4	1.5	1.5	1.5	1.5
Recovery for recycling . . . . .	14.5	29.0	52.9	58.6	61.4	62.5	60.8
Per person per day (pounds) . . . . .	0.35	0.64	1.03	1.08	1.08	1.14	1.10
Recovery for composting <sup>1</sup> . . . . .	(Z)	4.2	16.5	20.6	20.8	21.7	22.1
Per person per day (pounds) . . . . .	(Z)	0.09	0.32	0.38	0.38	0.39	0.40
Combustion with energy recovery . . . . .	2.7	29.7	33.7	31.6	31.9	32.0	31.6
Per person per day (lb.) . . . . .	0.07	0.70	0.66	0.58	0.60	0.58	0.57
Discards to landfill, other disposal . . . . .	134.4	142.3	136.0	138.9	140.1	138.4	135.1
Per person per day (lb.) . . . . .	3.2	3.1	2.6	2.6	2.6	2.5	2.4
PERCENT DISTRIBUTION OF GENERATION							
Percent of total generation . . . . .	71.8	71.4	74.5	73.5	73.6	73.3	72.6
Paper and paperboard . . . . .	36.4	35.4	36.7	34.0	33.6	32.4	31.0
Glass . . . . .	10.0	6.4	5.3	5.0	5.3	4.9	4.9
Metals . . . . .	10.2	8.1	7.9	8.0	8.1	8.2	8.4
Plastics . . . . .	4.5	8.3	10.7	11.7	11.7	12.1	12.0
Rubber and leather . . . . .	2.8	2.8	2.8	2.9	2.9	3.0	3.0
Textiles . . . . .	1.7	2.8	3.9	4.6	4.7	4.7	5.0
Wood . . . . .	4.6	6.0	5.5	5.6	5.5	6.3	6.6
Other . . . . .	1.7	1.6	1.7	1.7	1.7	1.7	1.8
Total other waste . . . . .	28.2	28.6	25.5	26.3	26.4	26.7	27.4
Food scraps . . . . .	8.6	10.1	11.2	12.1	12.2	12.4	12.7
Yard trimmings . . . . .	18.1	17.1	12.8	12.8	12.7	12.8	13.2
Miscellaneous organic wastes . . . . .	1.5	1.4	1.5	1.5	1.5	1.5	1.5

Z Less than 5,000 tons or 0.05 percent. <sup>1</sup> Composting of yard trimmings, food scraps, and other municipal solid waste.

Source: Franklin Associates, a Division of ERG, Prairie Village, KS, *Municipal Solid Waste in the United States: 2008 Facts and Figures*. Prepared for the U.S. Environmental Protection Agency. See also <[www.epa.gov/osw/nonhaz/municipal/msw99.htm](http://www.epa.gov/osw/nonhaz/municipal/msw99.htm)>.

**Table 374. Generation and Recovery of Selected Materials in Municipal Solid Waste: 1980 to 2008**

[In millions of tons (151.6 represents 151,600,000), except as indicated. Covers post-consumer residential and commercial solid wastes which comprise the major portion of typical municipal collections. Excludes mining, agricultural and industrial processing, demolition and construction wastes, sewage sludge, and junked autos and obsolete equipment wastes. Based on material-flows estimating procedure and wet weight as generated]

Item and material	1980	1990	2000	2005	2006	2007	2008
<b>Waste generated, total<sup>1</sup></b> . . . . .	<b>151.6</b>	<b>205.2</b>	<b>239.0</b>	<b>249.7</b>	<b>254.2</b>	<b>254.6</b>	<b>249.6</b>
Paper and paperboard . . . . .	55.2	72.7	87.7	84.8	83.4	82.5	77.4
Glass . . . . .	15.1	13.1	12.8	12.5	13.5	12.5	12.2
Metals: Ferrous . . . . .	12.6	12.6	14.1	15.0	15.5	15.6	15.7
Aluminum . . . . .	1.7	2.8	3.2	3.3	3.4	3.4	3.4
Other nonferrous . . . . .	1.2	1.1	1.6	1.7	1.8	1.8	1.8
Plastics . . . . .	6.8	17.1	25.5	29.2	29.8	30.7	30.1
Food scraps . . . . .	13.0	20.8	26.8	30.2	31.0	31.7	31.8
Yard trimmings . . . . .	27.5	35.0	30.5	32.1	32.4	32.6	32.9
<b>Materials recovered, total<sup>1</sup></b> . . . . .	<b>14.5</b>	<b>33.2</b>	<b>69.3</b>	<b>79.2</b>	<b>82.2</b>	<b>84.2</b>	<b>82.9</b>
Paper and paperboard . . . . .	11.7	20.2	37.6	42.0	43.9	44.5	42.9
Glass . . . . .	0.8	2.6	2.9	2.6	2.9	2.9	2.8
Metals: Ferrous . . . . .	0.4	2.2	4.7	5.0	5.3	5.3	5.3
Aluminum . . . . .	0.3	1.0	0.9	0.7	0.7	0.7	0.7
Other nonferrous . . . . .	0.5	0.7	1.1	1.2	1.2	1.2	1.2
Plastics . . . . .	0.2	0.4	1.5	1.8	2.1	2.1	2.1
Food scraps . . . . .	(Z)	(Z)	0.7	0.7	0.7	0.8	0.8
Yard trimmings . . . . .	(Z)	4.2	15.8	19.9	20.1	20.9	21.3
<b>Percent of generation recovered, total<sup>1</sup></b> . . . . .	<b>9.6</b>	<b>16.2</b>	<b>29.0</b>	<b>31.7</b>	<b>32.3</b>	<b>33.1</b>	<b>33.2</b>
Paper and paperboard . . . . .	21.3	27.8	42.8	49.5	51.4	53.9	55.5
Glass . . . . .	5.0	20.1	22.6	20.7	21.3	23.0	23.1
Metals: Ferrous . . . . .	2.9	17.6	33.2	33.6	33.9	33.8	33.7
Aluminum . . . . .	17.9	35.9	26.9	20.7	20.3	21.7	21.1
Other nonferrous . . . . .	46.6	66.4	66.3	69.0	69.3	69.7	68.8
Plastics . . . . .	0.3	2.2	5.8	6.0	6.9	6.8	7.1
Food scraps . . . . .	(Z)	(Z)	2.5	2.3	2.2	2.6	2.5
Yard trimmings . . . . .	(Z)	12.0	51.7	61.9	62.0	64.1	64.7

Z Less than 5,000 tons or 0.05 percent. <sup>1</sup> Includes products not shown separately.

Source: Franklin Associates, a Division of ERG, Prairie Village, KS, *Municipal Solid Waste in the United States: 2008 Facts and Figures*. Prepared for the U.S. Environmental Protection Agency. See also <[www.epa.gov/osw/nonhaz/municipal/msw99.htm](http://www.epa.gov/osw/nonhaz/municipal/msw99.htm)>.

**Table 375. Municipal Solid Waste—Generation, Recovery, and Discards by Selected Type of Product: 2008**

[See headnote, Table 374]

Type of product	Generation (1,000 tons)	Recovery		Discards (1,000 tons)
		Products recovered (1,000 tons)	Percent of generation	
Paper and paperboard products <sup>1</sup> . . . . .	77,410	42,940	55.5	34,470
Nondurable goods . . . . .	39,120	17,860	45.7	21,260
Newsprint . . . . .	6,290	5,510	87.6	780
Groundwood inserts . . . . .	2,510	2,220	88.4	290
Magazines . . . . .	2,050	820	40.0	1,230
Office-type papers . . . . .	6,050	4,290	70.9	1,760
Standard mail . . . . .	5,510	2,240	40.7	3,270
Other commercial printing . . . . .	5,130	2,200	42.9	2,930
Containers and packaging . . . . .	38,290	25,080	65.5	13,210
Corrugated boxes . . . . .	29,710	22,760	76.6	6,950
Folding cartons . . . . .	5,340	1,880	35.2	3,460
Glass products <sup>1</sup> . . . . .	12,150	2,810	23.1	9,340
Containers and packaging . . . . .	10,050	2,810	28.0	7,240
Beer and soft drink bottles . . . . .	6,350	2,260	35.6	4,090
Wine and liquor bottles . . . . .	1,610	240	14.9	1,370
Food and other bottles and jars . . . . .	2,090	310	14.8	1,780
Metal products <sup>1</sup> . . . . .	20,850	7,220	34.6	13,630
Ferrous . . . . .	15,680	5,290	33.7	10,390
Aluminum . . . . .	3,410	720	21.1	2,690
Other nonferrous . . . . .	1,760	1,210	68.8	550
Plastics <sup>1</sup> . . . . .	30,050	2,120	7.1	27,930
Plastics in durable goods . . . . .	10,520	390	3.7	10,130
Plastics in nondurable goods . . . . .	6,520	(Z)	(Z)	6,520
Plastics in containers and packaging . . . . .	13,010	1,730	13.3	11,280
Rubber and leather <sup>1</sup> . . . . .	7,410	1,060	14.3	6,350
Rubber in tires . . . . .	3,000	1,060	35.3	1,940

Z Less than 5,000 tons or 0.05 percent. <sup>1</sup> Includes products not shown separately.

Source: Franklin Associates, a Division of ERG, Prairie Village, KS, *Municipal Solid Waste in the United States: 2008 Facts and Figures*. Prepared for the U.S. Environmental Protection Agency. See also <[www.epa.gov/osw/nonhaz/municipal/msw99.htm](http://www.epa.gov/osw/nonhaz/municipal/msw99.htm)>.

**Table 376. Environmental Industry—Revenues and Employment by Industry Segment: 2000 to 2009**

[211.2 represents \$211,200,000,000. Covers approximately 30,000 private and public companies engaged in revenue-generating environmental activities]

Industry segment	Revenue (bil. dol.)				Employment			
	2000	2005	2008	2009	2000	2005	2008	2009
<b>Industry total</b> . . . . .	<b>211.2</b>	<b>255.1</b>	<b>308.9</b>	<b>309.2</b>	<b>1,371,600</b>	<b>1,548,200</b>	<b>1,775,000</b>	<b>1,745,100</b>
Analytical services <sup>1</sup> . . . . .	1.8	1.8	1.9	1.9	20,200	20,000	21,100	19,700
Wastewater treatment works <sup>2</sup> . . . . .	28.7	35.6	40.7	41.7	118,800	141,100	164,200	160,000
Solid waste management <sup>3</sup> . . . . .	39.4	47.8	53.1	54.0	221,400	256,500	300,200	280,700
Hazardous waste management <sup>4</sup> . . . . .	8.2	8.7	9.2	9.1	44,800	45,000	45,900	44,400
Remediation/industrial services . . . . .	10.1	11.0	12.5	12.0	100,200	96,600	111,100	100,600
Consulting and engineering . . . . .	17.4	22.4	26.7	26.6	184,000	220,800	270,400	251,300
Water equipment and chemicals . . . . .	19.8	24.8	28.5	28.7	130,500	153,000	179,800	169,400
Instrument manufacturing . . . . .	3.8	4.8	5.9	5.7	30,200	35,500	43,300	39,600
Air pollution control equipment <sup>5</sup> . . . . .	19.0	18.8	18.0	16.7	129,600	123,400	113,900	107,600
Waste management equipment <sup>6</sup> . . . . .	10.0	10.1	11.4	11.0	75,500	72,900	78,500	73,800
Process and prevention technology . . . . .	1.2	1.5	1.9	1.8	29,000	28,100	34,300	28,600
Water utilities <sup>7</sup> . . . . .	29.9	35.1	39.2	39.5	130,000	145,200	163,300	157,500
Resource recovery <sup>8</sup> . . . . .	16.0	21.0	28.5	24.7	127,000	156,600	204,900	170,200
Clean energy systems and power <sup>9</sup> . . . . .	5.9	11.9	31.4	35.8	30,400	53,500	126,800	141,700

<sup>1</sup> Covers environmental laboratory testing and services. <sup>2</sup> Mostly revenues collected by municipal entities for sewage or wastewater plants. <sup>3</sup> Covers such activities as collection, transportation, transfer stations, disposal, landfill ownership and management for solid waste and recyclables. <sup>4</sup> Transportation and disposal of hazardous, medical, and nuclear waste. <sup>5</sup> Includes stationary and mobile sources. <sup>6</sup> Includes vehicles, containers, liners, processing, and remediation equipment. <sup>7</sup> Revenues generated from the sale of water, majority in public sector. <sup>8</sup> Revenues generated from the sale of recovered metals, paper, plastic, etc. <sup>9</sup> Revenues generated from the sale of equipment and systems and electricity.

Source: Environmental Business International, Inc., San Diego, CA, *Environmental Business Journal*, monthly (copyright). See also <<http://www.ebiusa.com/>>.

**Table 377. Toxic Chemical Releases and Transfers by Media: 2003 to 2008**

[In millions of pounds (4,447.7 represents 4,447,700,000), except as indicated. Based on reports filed as required by Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA), or Title III of the Superfund Amendments and Reauthorization Act of 1986), Public Law 99-499. The Pollution Prevention Act (PPA) of 1990 mandates collection of data on toxic chemicals that are treated on-site, recycled, and combusted for energy recovery. Owners and operators of facilities that are classified within North American Industrial Classification Code groups 31 through 33, 2121, 2122, 2211, 4246, 4247 and 562; have 10 or more full-time employees, and that manufacture, process, or otherwise use any listed toxic chemical in quantities greater than the established threshold in the course of a calendar year are covered and required to report. Includes all Persistent, Toxic (PBT) chemicals and vanadium and vanadium compounds. Does not include off-site disposal or other releases transferred to other TRI facilities that reported the amounts as on-site disposal or other releases. Data for all the years have been revised]

Media	2003	2004	2005	2006	2007	2008
<b>Total facilities reporting</b>	<b>24,593</b>	<b>24,428</b>	<b>24,140</b>	<b>23,543</b>	<b>22,775</b>	<b>21,695</b>
<b>Total on- and off-site disposal or other releases</b>	<b>4,447.7</b>	<b>4,253.6</b>	<b>4,364.7</b>	<b>4,322.7</b>	<b>4,118.7</b>	<b>3,861.3</b>
On-site releases	3,961.5	3,738.1	3,829.5	3,784.6	3,559.8	3,372.4
Air emissions <sup>1</sup>	1,586.3	1,544.1	1,516.4	1,413.5	1,319.8	1,140.9
Surface water discharges	230.8	253.3	256.7	250.0	238.7	246.8
Underground injection class I	207.2	210.3	211.5	199.8	184.1	168.7
Underground injection class II-V	22.0	27.7	20.2	20.1	21.5	18.2
RCRA subtitle C landfills <sup>2</sup>	196.3	151.9	155.2	151.8	150.6	123.0
Other landfills	268.0	267.8	266.9	263.1	267.2	291.4
Land treatment/application farming	18.1	21.5	23.7	26.8	22.0	24.7
Surface impoundments	822.6	719.3	782.0	822.2	764.9	736.4
Other land disposal	610.2	542.1	596.9	637.3	590.9	622.4
Off-site releases	486.2	515.5	535.2	538.1	558.8	488.9
<b>Total transfers offsite for further waste management</b>	<b>3,711.0</b>	<b>4,006.4</b>	<b>3,944.6</b>	<b>3,989.0</b>	<b>3,885.1</b>	<b>3,458.4</b>
Transfers to recycling	1,916.1	2,085.0	2,095.8	2,181.6	2,142.3	1,935.9
Transfers to energy recovery	649.8	650.4	609.0	555.3	525.4	441.9
Transfers to treatment	279.6	326.6	335.4	328.1	286.5	254.9
Transfers to POTWs (non metals) <sup>3</sup>	270.1	259.9	264.6	260.1	252.5	251.5
Transfers to POTWs metal and metal compounds <sup>3</sup>	1.9	1.7	1.8	1.8	2.0	1.3
Other off-site transfers	0.9	71.5	0.4	0.5	0.2	0.1
Transfers off-site for disposal or other releases	592.5	611.3	637.6	661.5	676.3	572.7
<b>Total production-related waste managed</b>	<b>25,080.0</b>	<b>25,863.8</b>	<b>24,863.3</b>	<b>24,305.5</b>	<b>24,377.3</b>	<b>22,574.6</b>
Recycled on-site	7,143.2	7,135.9	6,719.6	6,822.9	6,878.2	6,649.5
Recycled off-site	1,918.2	2,085.3	2,100.7	2,185.2	2,121.5	1,935.6
Energy recovery on-site	2,649.1	2,617.1	2,462.9	2,392.7	2,286.9	2,164.6
Energy recovery off-site	649.6	649.5	608.9	554.6	523.3	440.7
Treated on-site	7,616.6	8,447.8	7,918.0	7,314.6	7,755.4	6,962.0
Treated off-site	520.0	566.2	574.9	555.7	515.1	477.7
Quantity disposed or otherwise release of on- and off-site	4,583.4	4,362.1	4,478.3	4,479.9	4,296.9	3,944.6
Non-production-related waste managed	24.8	19.3	24.1	18.1	14.3	37.8

<sup>1</sup> Air emissions include both fugitive and point source. <sup>2</sup> RCRA=Resource Conservation and Recovery Act. <sup>3</sup> POTW (Publicly Owned Treatment Work) is a wastewater treatment facility that is owned by a state or municipality.  
 Source: U.S. Environmental Protection Agency, Toxic Release Inventory (TRI) Program, 2008 TRI National Analysis. See also <[http://www.epa.gov/tri/tridata/tri08/national\\_analysis/index.htm](http://www.epa.gov/tri/tridata/tri08/national_analysis/index.htm)>.

**Table 378. Toxic Chemical Releases by Industry: 2008**

[In millions of pounds (3,861.3 represents 3,861,300,000), except as indicated. See headnote, Table 377]

Industry	2002 NAICS <sup>1</sup> code	Total on- and off-site releases	On-site releases			Off-site releases/transfers to disposal <sup>2</sup>
			Total	Air emissions	Other surface impoundments	
<b>Total<sup>3</sup></b>	<b>(X)</b>	<b>3,861.3</b>	<b>3,372.4</b>	<b>1,140.9</b>	<b>732.2</b>	<b>488.9</b>
Coal mining	2121	13.5	13.5	0.7	0.3	(Z)
Metal mining	2122	1,157.7	1,154.7	3.7	574.9	3.0
Electric utilities	2211	904.8	819.8	524.6	107.4	85.0
Food/beverages/tobacco	311/312	166.8	158.0	46.8	0.1	8.8
Textiles	313/314	2.4	1.8	1.4	0.1	0.6
Apparel	315	-	(Z)	(Z)	-	(Z)
Leather	316	1.3	0.4	0.3	-	0.9
Wood products	321	14.4	13.4	13.1	(Z)	1.0
Paper	322	186.1	178.8	139.4	3.6	7.4
Printing and publishing	323/51	10.3	10.0	10.0	-	0.3
Petroleum	324	72.8	68.6	41.1	(Z)	4.2
Chemicals	325	468.0	419.6	166.3	13.5	48.4
Plastics and rubber	326	49.2	38.8	38.4	(Z)	10.4
Stone/clay/glass	327	25.4	22.3	18.2	0.1	3.1
Cement	32731	9.1	9.0	7.4	(Z)	0.1
Primary metals	331	440.6	193.4	41.0	30.2	247.2
Fabricated metals	332	54.5	31.3	27.1	(Z)	23.3
Machinery	333	9.9	7.4	7.3	-	2.5
Computers/electronic products	334	7.7	5.0	2.1	-	2.7
Electrical equipment	335	7.0	2.8	2.8	(Z)	4.2
Transportation equipment	336	38.4	31.2	30.5	(Z)	7.2
Furniture	337	6.9	6.7	6.7	-	0.2
Miscellaneous Manufacturing	339	5.3	3.2	3.2	-	2.0
Chemical wholesalers	4246	1.6	1.2	1.2	-	0.4
Petroleum bulk terminals	4247	5.2	5.1	5.0	(Z)	0.1
Hazardous waste	562	167.1	143.0	0.6	0.5	24.1
No codes <sup>3</sup>	(X)	35.5	33.7	2.0	1.4	29.1

- Represents zero. X Not applicable. Z less than 50,000 lbs. <sup>1</sup> North American Industry Classification System, see text, Section 12. <sup>2</sup> Includes off-site disposal to underground injection for Class I wells, Class II to V wells, other surface impoundments, land releases, and other releases, not shown separately. <sup>3</sup> Includes industries with no specific industry identification.

Source: U.S. Environmental Protection Agency, 2008 TRI National Analysis. See also <[http://www.epa.gov/tri/tridata/tri08/national\\_analysis/index.htm](http://www.epa.gov/tri/tridata/tri08/national_analysis/index.htm)>.

**Table 379. Toxic Chemical Releases by State and Outlying Area: 2008**

[In millions of pounds (3,861.3 represents 3,861,300,000). Based on reports filed as required by Section 313 of the EPCRA. See headnote, Table 377]

State and outlying areas	Total on-and off-site releases	On-site Releases or other Disposal			Off-site releases/transfers to disposal	State and outlying areas	Total on-and off-site releases	On-site Releases or other Disposal			Off-site releases/transfers to disposal
		Total <sup>1</sup>	Air emissions	Other surface im-pound-ments				Total <sup>1</sup>	Air emissions	Other surface im-pound-ments	
<b>Total</b> . . . . .	<b>3,861.3</b>	<b>3,372.4</b>	<b>1,140.9</b>	<b>732.2</b>	<b>488.9</b>	MT	47.1	45.7	3.4	14.0	1.3
<b>U.S. total</b> . . . . .	<b>3,855.0</b>	<b>3,366.7</b>	<b>1,135.5</b>	<b>732.2</b>	<b>488.4</b>	NE	33.7	30.3	8.4	(Z)	3.5
AL	113.3	86.8	40.0	17.8	26.6	NV	202.3	200.5	1.3	105.9	1.8
AK	567.8	567.6	0.6	221.7	0.2	NH	3.1	2.8	2.8	(Z)	0.3
AZ	95.1	93.8	3.6	17.8	1.3	NJ	18.0	15.6	6.1	—	2.4
AR	40.5	36.4	16.2	2.1	4.1	NM	19.1	19.0	1.1	1.3	0.1
CA	42.3	38.5	12.5	(Z)	3.8	NY	32.5	24.3	11.2	3.1	8.2
CO	21.6	17.2	2.8	3.6	4.4	NC	92.9	84.6	56.8	5.1	8.3
CT	4.0	2.5	2.2	(Z)	1.5	ND	22.5	14.6	4.3	5.9	7.9
DE	12.6	9.4	5.8	(Z)	3.1	OH	224.0	180.8	90.1	11.5	43.2
DC	0.1	0.1	(Z)	0.1	(Z)	OK	33.4	29.5	13.7	0.4	3.9
FL	77.6	73.5	46.1	0.6	4.2	OR	18.9	17.5	9.4	(Z)	1.4
GA	104.6	102.3	71.5	16.7	2.3	PA	150.7	96.3	73.7	0.5	54.4
HI	3.2	2.9	2.3	—	0.2	RI	0.4	0.2	0.2	—	0.2
ID	69.2	68.3	3.7	15.0	1.0	SC	65.0	55.9	42.1	3.6	9.1
IL	115.1	79.2	37.3	5.6	35.9	SD	7.6	7.0	1.6	(Z)	0.6
IN	209.3	112.2	55.0	6.7	97.1	TN	112.3	95.4	43.2	26.9	16.9
IA	43.0	34.9	22.4	1.5	8.1	TX	207.1	184.0	69.1	4.2	23.1
KS	24.6	20.4	10.0	0.4	4.1	UT	215.0	212.3	9.2	141.8	2.6
KY	92.7	81.9	56.4	8.2	10.9	VT	0.3	0.2	(Z)	—	0.1
LA	139.3	129.9	51.8	4.5	9.4	VA	64.8	59.1	34.5	1.4	5.7
ME	10.4	9.1	4.6	—	1.3	WA	30.7	24.9	7.5	12.1	5.7
MD	49.9	46.0	40.6	(Z)	4.0	WV	71.8	64.7	46.5	2.6	7.2
MA	5.8	3.9	3.8	(Z)	1.9	WI	42.8	26.4	17.5	(Z)	16.4
MI	95.7	67.7	45.3	6.4	28.0	WY	20.0	18.8	2.2	1.1	1.2
MN	26.1	23.2	10.8	2.4	3.0						
MS	67.7	64.7	19.3	10.7	3.0	Puerto Rico	5.2	4.7	4.6	—	0.5
MO	87.5	84.2	15.1	49.1	3.3						

— Represents zero. Z Less than 50,000 lbs. <sup>1</sup> Includes other types of release not shown separately.

Source: U.S. Environmental Protection Agency, Toxic Release Inventory (TRI) Program, 2008 TRI National Analysis. See also <[http://www.epa.gov/tri/tridata/tri08/national\\_analysis/index.htm](http://www.epa.gov/tri/tridata/tri08/national_analysis/index.htm)>.

**Table 380. Hazardous Waste Sites on the National Priority List by State and Outlying Area: 2008**

[As of December 31. Includes both proposed and final sites listed on the National Priorities List for the Superfund program as authorized by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 and the Superfund Amendments and Reauthorization Act (SARA) of 1986. For information on CERCLA and SARA, see also <<http://www.epa.gov/superfund/policy/cercla.htm>>]

State and outlying areas	Total sites		Per-cent distri-bution	Non-fed-earal	State and outlying areas	Total sites		Per-cent distri-bution	Fed-eral	Non-fed-eral	
	Rank	Rank				Rank	Rank				
<b>Total</b> . . . . .	<b>1,318</b>	(X)	(X)	163	1,155	Missouri	29	16	2.3	3	26
<b>United States</b> . . . . .	<b>1,301</b>	(X)	(X)	161	1,140	Nebraska	13	32	1.0	1	12
Alabama	15	26	1.2	3	12	Nevada	1	49	0.1	—	1
Alaska	5	45	0.4	5	—	New Hampshire	21	19	1.7	1	20
Arizona	9	39	0.7	2	7	New Jersey	116	1	9.3	8	108
Arkansas	9	40	0.7	—	9	New Mexico	14	29	1.1	1	13
California	97	2	7.8	24	73	New York	86	4	6.9	4	82
Colorado	20	20	1.6	3	17	North Carolina	32	13	2.6	2	30
Connecticut	15	24	1.2	1	14	North Dakota	—	50	—	—	—
Delaware	14	27	1.1	1	13	Ohio	40	10	3.2	5	35
District of Columbia	1	(X)	0.1	1	—	Oklahoma	9	42	0.7	1	8
Florida	52	6	4.2	6	46	Oregon	12	36	1.0	2	10
Georgia	16	23	1.3	2	14	Pennsylvania	96	3	7.7	6	90
Hawaii	3	46	0.2	2	1	Rhode Island	12	37	1.0	2	10
Idaho	9	41	0.7	2	7	South Carolina	26	17	2.1	2	24
Illinois	49	7	3.9	5	44	South Dakota	2	47	0.2	1	1
Indiana	31	14	2.5	—	31	Tennessee	14	30	1.1	4	10
Iowa	12	33	1.0	1	11	Texas	49	8	3.9	4	45
Kansas	12	34	1.0	1	11	Utah	19	22	1.5	4	15
Kentucky	14	28	1.1	1	13	Vermont	11	38	0.9	0	11
Louisiana	13	31	1.0	1	12	Virginia	30	15	2.4	11	19
Maine	12	35	1.0	3	9	Washington	48	9	3.8	13	35
Maryland	19	21	1.5	10	9	West Virginia	9	43	0.7	2	7
Massachusetts	32	12	2.6	6	26	Wisconsin	38	11	3.0	—	38
Michigan	67	5	5.4	1	66	Wyoming	2	48	0.2	1	1
Minnesota	25	18	2.0	2	23						
Mississippi	6	44	0.5	—	6	Puerto Rico	13	(X)	(X)	1	12

— Represents zero. X Not applicable.

Source: U.S. Environmental Protection Agency, Supplementary Materials: CERCLIS3/WasteLan Database, published July 2009. See also <<http://www.epa.gov/osw/inforesources/data/biennialreport/>>.

**Table 381. Hazardous Waste Generated, Shipped, and Received by State and Other Areas: 2007**

[In thousands of tons (32,269.7 represents 32,269,700). Covers hazardous waste regulated under the Resource Conservation and Recovery Act (RCRA) of 1976 as amended. The data have been revised. See source for exclusions of data from the 2007 National Biennial RCRA Hazardous Waste Report]

State and other areas	Hazardous waste quantity (1,000) tons			State and other areas	Hazardous waste quantity (1,000) tons		
	Generated	Shipped	Received		Generated	Shipped	Received
<b>Total</b> . . . . .	<b>32,269.7</b>	<b>7,010.7</b>	<b>7,176.1</b>	Nebraska . . . . .	38.7	39.9	32.4
<b>United States</b> . . . . .	<b>32,206.3</b>	<b>655.0</b>	<b>713.3</b>	Nevada . . . . .	10.0	14.5	112.7
Alabama . . . . .	898.1	206.1	136.9	New Hampshire . . . . .	5.4	5.4	—
Alaska . . . . .	2.5	2.1	—	New Jersey . . . . .	596.1	596.8	220.8
Arizona . . . . .	56.7	54.1	46.5	New Mexico . . . . .	5.6	6.2	4.8
Arkansas . . . . .	495.8	324.4	358.5	New York . . . . .	1,267.6	274.6	201.0
California . . . . .	540.9	631.6	491.0	North Carolina . . . . .	96.9	103.1	18.6
Colorado . . . . .	54.9	40.0	34.4	North Dakota . . . . .	538.6	1.2	0.3
Connecticut . . . . .	30.4	38.3	42.2	Ohio . . . . .	1,612.0	717.7	804.0
Delaware . . . . .	19.7	19.4	0.1	Oklahoma . . . . .	134.4	42.3	69.2
District of Columbia . . . . .	0.8	0.8	—	Oregon . . . . .	75.0	64.2	65.1
Florida . . . . .	152.7	55.8	23.7	Pennsylvania . . . . .	388.8	295.7	437.8
Georgia . . . . .	102.6	53.2	5.7	Rhode Island . . . . .	4.6	9.4	6.4
Hawaii . . . . .	1.1	1.1	0.2	South Carolina . . . . .	151.4	189.2	187.8
Idaho . . . . .	5.6	8.1	456.6	South Dakota . . . . .	0.8	0.9	0.1
Illinois . . . . .	1,122.9	235.9	420.4	Tennessee . . . . .	220.0	56.9	31.0
Indiana . . . . .	958.0	404.8	510.0	Texas . . . . .	13,406.4	706.2	493.9
Iowa . . . . .	49.0	48.8	0.4	Utah . . . . .	82.8	88.6	134.8
Kansas . . . . .	125.6	121.0	221.2	Vermont . . . . .	3.0	2.5	0.3
Kentucky . . . . .	139.9	167.6	75.1	Virginia . . . . .	94.9	83.8	18.0
Louisiana . . . . .	5,010.8	474.1	352.3	Washington . . . . .	147.2	65.7	40.8
Maine . . . . .	5.3	5.1	0.6	West Virginia . . . . .	76.6	49.5	13.5
Maryland . . . . .	43.6	46.8	43.2	Wisconsin . . . . .	310.3	155.6	55.4
Massachusetts . . . . .	185.6	60.9	94.3	Wyoming . . . . .	4.0	4.0	—
Michigan . . . . .	340.5	237.4	430.3	Guam . . . . .	0.1	0.1	0.1
Minnesota . . . . .	94.4	56.2	249.7	Navajo Nation . . . . .	—	—	—
Mississippi . . . . .	2,239.7	21.5	55.7	Puerto Rico . . . . .	60.0	42.8	2.7
Missouri . . . . .	228.1	66.4	175.7	Virgin Islands . . . . .	3.2	3.1	—
Montana . . . . .	29.5	9.4	—				

— Represents or rounds to zero.

Source: U.S. Environmental Protection Agency, *The National Biennial RCRA Hazardous Waste Report (Based on 2007 Data)*, Series EPA530-R-03-007. See also <<http://www.epa.gov/epawaste/infosources/data/biennialreport/index.htm>>.

**Table 382. Oil Spills in U.S. Water—Number and Volume: 2000 to 2009**

[These summary statistics are based on reported discharges of oil and petroleum based products into U.S. navigable waters, including territorial waters (extending 3 to 12 miles from the coastline), tributaries, the contiguous zone, onto shoreline, or into other waters that threaten the marine environment. Spills associated with Hurricanes Katrina and Rita have been excluded]

Spill characteristic	Number of spills				Spill volume (millions)			
	2000	2005	2008	2009	2000	2005	2008	2009
<b>Total</b> . . . . .	<b>8,354</b>	<b>4,073</b>	<b>3,633</b>	<b>3,492</b>	<b>1,431,370</b>	<b>2,364,169</b>	<b>777,039</b>	<b>195,189</b>
Size of spill (gallons):								
1 to 100 . . . . .	8,058	3,857	3,474	3,351	39,355	33,041	25,335	24,428
101 to 1,000 . . . . .	219	166	130	123	78,779	62,357	50,486	46,062
1,001 to 3,000 . . . . .	37	26	12	9	67,529	46,019	22,130	20,907
3,001 to 5,000 . . . . .	12	9	8	2	45,512	36,803	30,396	6,872
5,001 to 10,000 . . . . .	16	7	3	3	112,415	58,453	21,800	21,400
10,001 to 50,000 . . . . .	6	5	3	4	108,400	106,870	73,600	75,520
50,001 to 100,000 . . . . .	4	1	1	—	266,380	84,000	82,274	—
100,001 to 1,000,000 . . . . .	2	1	2	—	713,000	110,000	471,018	—
1,000,000 and over . . . . .	—	1	—	—	—	1,826,626	—	—
Source:								
Tankship . . . . .	111	40	36	34	608,176	2,975	1,338	14,415
Tankbarge . . . . .	229	130	184	166	133,540	2,006,774	288,029	5,678
All other vessels . . . . .	5,220	1,789	1,577	1,585	291,927	115,906	263,632	92,388
Facilities . . . . .	1,054	996	1,048	963	311,604	92,399	170,299	38,299
Pipelines . . . . .	25	20	18	17	17,021	111,253	14,494	1,739
All other nonvessels . . . . .	566	264	297	312	45,136	13,422	29,056	27,557
Unknown . . . . .	1,149	834	473	415	23,966	21,440	10,191	15,113

— Represents zero.

Source: U.S. Coast Guard, *Pollution Incidents In and Around U.S. Waters, A Spill/Release Compendium: 1969–2004, and 2004–2009: U.S. Coast Guard Marine Information for Safety and Law Enforcement (MISLE)*. Data are unpublished. See <<http://homeport.uscg.mil/mycg/portal/ep/home.do>>.

**Table 383. Threatened and Endangered Wildlife and Plant Species: 2010**

[As of April. Endangered species: One in danger of becoming extinct throughout all or a significant part of its natural range. Threatened species: One likely to become endangered in the foreseeable future]

Item	Mam- mals		Rep- tiles	Amphib- ians	Fishes	Snails	Clams	Crusta- ceans		Arach- nids	Plants
	Birds							Insects			
<b>Total listings</b> . . . . .	<b>360</b>	<b>281</b>	<b>119</b>	<b>34</b>	<b>152</b>	<b>36</b>	<b>72</b>	<b>22</b>	<b>64</b>	<b>12</b>	<b>762</b>
<b>Endangered species, total</b> . . .	<b>325</b>	<b>258</b>	<b>79</b>	<b>22</b>	<b>85</b>	<b>25</b>	<b>64</b>	<b>19</b>	<b>54</b>	<b>12</b>	<b>616</b>
United States . . . . .	70	76	13	14	74	24	62	19	50	12	615
Foreign . . . . .	255	182	66	8	11	1	2	—	4	—	1
<b>Threatened species, total</b> . . . .	<b>35</b>	<b>23</b>	<b>40</b>	<b>12</b>	<b>67</b>	<b>11</b>	<b>8</b>	<b>3</b>	<b>10</b>	—	<b>146</b>
United States . . . . .	15	16	24	11	66	11	8	3	10	—	146
Foreign . . . . .	20	7	16	1	1	—	—	—	—	—	—

— Represents zero.

Source: U.S. Fish and Wildlife Service, *Endangered Species Bulletin*, bimonthly. See also <[http://ecos.fws.gov/tess\\_public/pub/listedanimals.jsp](http://ecos.fws.gov/tess_public/pub/listedanimals.jsp)>, accessed May 2010.

**Table 384. Tornadoes, Floods, Tropical Storms, and Lightning: 1995 to 2008**

Weather type	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>Tornadoes:</b> <sup>1</sup>										
Number . . . . .	1,235	1,071	1,216	941	1,376	1,819	1,264	1,106	1,098	1,691
Lives lost . . . . .	30	41	40	55	54	35	38	67	81	126
Injuries . . . . .	650	882	743	968	1,087	396	537	990	659	1,714
Property loss (mil. dol.) . . . .	411	424	630	801	1,263	537	422	752	1,408	1,844
<b>Floods and flash floods:</b>										
Lives lost . . . . .	80	38	48	49	85	82	43	76	70	82
Injuries . . . . .	57	47	277	88	65	128	38	23	51	46
Property loss (mil. dol.) . . . .	1,251	1,255	1,220	655	2,541	1,696	1,538	3,768	1,278	3,406
<b>North Atlantic tropical cyclones and hurricanes:</b> <sup>2</sup>										
Hurricanes . . . . .	19	15	15	12	21	16	27	9	17	17
Hurricanes . . . . .	11	8	9	4	7	9	15	5	6	8
Lives lost . . . . .	17	—	24	51	14	34	1,016	—	1	12
Property loss (bil.dol.) . . . .	5.9	8.1	5.2	1.1	1.9	18.9	93.0	2.4	38.8	7.6
<b>Lightning:</b>										
Deaths . . . . .	85	51	44	51	44	32	38	48	45	27
Injuries . . . . .	433	364	371	256	237	280	309	246	138	216

— Represents zero. <sup>1</sup> Source: U.S. National Weather Service, <<http://www.spc.noaa.gov/climo/torn/monthlytornstats.html>>.

A violent, rotating column of air descending from a cumulonimbus cloud in the form of a tubular- or funnel-shaped cloud, usually characterized by movements along a narrow path and wind speeds from 100 to over 300 miles per hour. Also known as a "twister" or "waterspout."<sup>2</sup> Source: National Hurricane Center (NHC), Coral Gables, FL, unpublished data. For data on individual hurricanes, see <<http://www.nhc.noaa.gov/>>.

Source: Except as noted, U.S. National Oceanic and Atmospheric Administration (NOAA), National Weather Service (NWS), *Office of Climate, Water, and Weather Services, Natural Hazard Statistics*, monthly. See also <<http://www.nws.noaa.gov/om/hazstats.shtml>>.

**Table 385. Number of Earthquakes in the United States: 2000 to 2009**

[The United States Geological Survey (USGS) detects but does not generally locate mine blasts (explosions) throughout the United States on any given business day. For more information, see "Routine United States Mining Seismicity." For information on "Top Earthquake States," see <[http://earthquake.usgs.gov/earthquakes/states/top\\_states.php](http://earthquake.usgs.gov/earthquakes/states/top_states.php)>]

Magnitude											Top earth- quake states	1974- 2003 <sup>2</sup>
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 <sup>1</sup>		
<b>Total</b> . . . . .	<b>2,342</b>	<b>2,261</b>	<b>3,876</b>	<b>2,946</b>	<b>3,550</b>	<b>3,685</b>	<b>2,783</b>	<b>2,791</b>	<b>3,618</b>	<b>4,256</b>	<b>Total</b>	<b>21,080</b>
8.0 to 9.9 . . . . .	—	—	—	—	—	—	—	—	—	—	AK	<sup>3</sup> 12,053
7.0 to 7.9 . . . . .	—	1	1	2	—	1	—	1	—	—	CA	4,895
6.0 to 6.9 . . . . .	6	5	4	7	2	4	7	9	9	4	HI	1,533
5.0 to 5.9 . . . . .	63	41	63	54	25	47	51	72	85	52	NE	778
4.0 to 4.9 . . . . .	281	290	536	541	284	345	346	366	432	296	WA	424
3.0 to 3.9 . . . . .	917	842	1,535	1,303	1,362	1,475	1,213	1,137	1,486	1,491	ID	404
2.0 to 2.9 . . . . .	660	646	1,228	704	1,336	1,738	1,145	1,173	1,573	2,370	WY	217
1.0 to 1.9 . . . . .	—	2	2	2	1	2	7	11	13	26	MT	186
0.1 to 0.9 . . . . .	—	—	—	—	—	—	1	—	—	1	UT	139
No magnitude . . . . .	415	434	507	333	540	73	13	22	20	16	OR	73

— Represents zero. <sup>1</sup> Data are as of July 20, 2010. <sup>2</sup> The total number represents earthquakes of a magnitude range of 3.5 and greater. <sup>3</sup> The number of earthquakes is underreported. Events in the magnitude range of 3.5 to 4.0 in the Aleutian Islands are not recorded on enough seismograph stations to be located.

Source: U.S. Geological Survey, *Earthquake Facts and Statistics*. See <<http://earthquake.usgs.gov/earthquakes/eqarchives/year/eqstats.php>>



**Table 386. Wildland Fires, Number, and Acres: 1970 to 2009**

[In thousands (3,279 represents 3,279,000), except as indicated. As of December 31. There are three distinct types of wildland fires: wildfire, wildland fire use, and prescribed fire. Wildland fire is any nonstructure fire that occurs in the wildland]

Year	Total <sup>1</sup>		Year	Total <sup>1</sup>		State	Top states ranked by wildland acres burned for 2009 (number)				
	Fires (number)	Acres (1,000)		Fires (number)	Acres (1,000)		Wildland <sup>1</sup>		Prescribed <sup>2</sup>		Acres
							Fires	Acres	Fires	Acres	
1970.....	121,736	3,279	2000.....	92,250	7,393	Total.....	78,792	5,921,786	12,429	2,531,133	
1975.....	134,872	1,791	2001.....	84,079	3,571	AK.....	527	2,951,597	1	290	
1980.....	234,892	5,261	2002.....	73,457	7,185	TX.....	16,614	753,261	151	172,826	
1985.....	82,591	2,896	2003.....	63,629	3,961	NM.....	1,278	421,481	76	99,132	
1990.....	66,481	4,622	2004 <sup>3</sup> .....	65,461	8,098	CA.....	9,159	405,585	841	93,940	
1994.....	79,107	4,074	2005.....	66,753	8,689	AZ.....	2,371	263,358	2,097	147,531	
1995.....	82,234	1,841	2006.....	96,385	9,874	OK.....	1,773	153,948	14	5,383	
1996.....	96,363	6,066	2007.....	85,705	9,328	FL.....	2,797	124,401	1,090	512,350	
1997.....	66,196	2,857	2008.....	78,979	5,292	UT.....	1,136	112,753	147	28,173	
1998.....	81,043	1,330	2009.....	78,792	5,922	OR.....	1,488	100,668	750	130,654	
1999.....	92,487	5,626				WA.....	1,976	77,250	135	26,419	

<sup>1</sup> Data are for wildland fires only. The data do not include wildland fire use and prescribed fires. <sup>2</sup> Prescribed fire is any fire which are ignited by management action under certain predetermined conditions to meet specific objectives related to hazardous fuels or habitat improvement. <sup>3</sup> 2004 fires and acres do not include state lands for North Carolina.

Source: National Interagency Coordination Center, "Wildland Fires and Acres (1960–2009)," <[http://www.nifc.gov/fire\\_info/fires\\_acres.htm](http://www.nifc.gov/fire_info/fires_acres.htm)>, accessed February 2010.

**Table 387. Highest and Lowest Temperatures by State Through 2003**

State	Highest temperatures			Lowest temperatures		
	Station	Temperature (F)	Date	Station	Temperature (F)	Date
AL.....	Centerville.....	112	Sep. 5, 1925	New Market.....	-27	Jan. 30, 1966
AK.....	Fort Yukon.....	100	<sup>1</sup> Jun. 27, 1915	Prospect Creek Camp... ..	-80	Jan. 23, 1971
AZ.....	Lake Havasu City.....	128	Jun. 29, 1994	Hawley Lake.....	-40	Jan. 7, 1971
AR.....	Ozark.....	120	Aug. 10, 1936	Pond.....	-29	Feb. 13, 1905
CA.....	Greenland Ranch.....	134	Jul. 10, 1913	Boca.....	-45	Jan. 20, 1937
CO.....	Bennett.....	118	Jul. 11, 1888	Maybell.....	-61	Feb. 1, 1985
CT.....	Danbury.....	106	Jul. 15, 1995	Coventry.....	-32	<sup>2</sup> Jan. 22, 1961
DE.....	Millsboro.....	110	Jul. 21, 1930	Millsboro.....	-17	Jan. 17, 1893
FL.....	Monticello.....	109	Jun. 29, 1931	Tallahassee.....	-2	Feb. 13, 1899
GA.....	Greenville.....	112	Aug. 20, 1983	CCC Camp F-16.....	-17	<sup>1</sup> Jan. 27, 1940
HI.....	Pahala.....	100	Apr. 27, 1931	Mauna Kea Obs. 111.2... ..	12	May 17, 1979
ID.....	Orofino.....	118	Jul. 28, 1934	Island Park Dam.....	-60	Jan. 18, 1943
IL.....	East St. Louis.....	117	Jul. 14, 1954	Congerville.....	-36	Jan. 5, 1999
IN.....	Collegeville.....	116	Jul. 14, 1936	New Whiteland.....	-36	Jan. 19, 1994
IA.....	Keokuk.....	118	Jul. 20, 1934	Elkader.....	-47	<sup>2</sup> Feb. 3, 1996
KS.....	Alton (near).....	121	<sup>2</sup> Jul. 24, 1936	Lebanon.....	-40	Feb. 13, 1905
KY.....	Greensburg.....	114	Jul. 28, 1930	Shelbyville.....	-37	Jan. 19, 1994
LA.....	Plain Dealing.....	114	Aug. 10, 1936	Minden.....	-16	Feb. 13, 1899
ME.....	North Bridgton.....	105	<sup>2</sup> Jul. 10, 1911	Van Buren.....	-48	Jan. 19, 1925
MD.....	Cumberland & Frederick... ..	109	<sup>2</sup> Jul. 10, 1936	Oakland.....	-40	Jan. 13, 1912
MA.....	New Bedford & Chester... ..	107	Aug. 2, 1975	Chester.....	-35	Jan. 12, 1981
MI.....	Mio.....	112	Jul. 13, 1936	Vanderbilt.....	-51	Feb. 9, 1934
MN.....	Moorhead.....	114	<sup>2</sup> Jul. 6, 1936	Tower.....	-60	Feb. 2, 1996
MS.....	Holly Springs.....	115	Jul. 29, 1930	Corinth.....	-19	Jan. 30, 1966
MO.....	Warsaw & Union.....	118	<sup>2</sup> Jul. 14, 1954	Warsaw.....	-40	Feb. 13, 1905
MT.....	Medicine Lake.....	117	Jul. 5, 1937	Rogers Pass.....	-70	Jan. 20, 1954
NE.....	Minden.....	118	<sup>2</sup> Jul. 24, 1936	Oshkosh.....	-47	<sup>2</sup> Dec. 22, 1989
NV.....	Laughlin.....	125	<sup>2</sup> Jun. 29, 1994	San Jacinto.....	-50	Jan. 8, 1937
NH.....	Nashua.....	106	Jul. 4, 1911	Mt. Washington.....	-47	Jan. 29, 1934
NJ.....	Runyon.....	110	Jul. 10, 1936	River Vale.....	-34	Jan. 5, 1904
NM.....	Waste Isolat Pilot Plt.....	122	Jun. 27, 1994	Gavilan.....	-50	Feb. 1, 1951
NY.....	Troy.....	108	Jul. 22, 1926	Old Forge.....	-52	<sup>2</sup> Feb. 18, 1979
NC.....	Fayetteville.....	110	Aug. 21, 1983	Mt. Mitchell.....	-34	Jan. 21, 1985
ND.....	Steele.....	121	Jul. 6, 1936	Parshall.....	-60	Feb. 15, 1936
OH.....	Gallipolis (near).....	113	<sup>2</sup> Jul. 21, 1934	Milligan.....	-39	Feb. 10, 1899
OK.....	Tipton.....	120	Jun. 27, 1994	Watts.....	-27	Jan. 18, 1930
OR.....	Pendleton.....	119	<sup>2</sup> Aug. 10, 1898	Seneca.....	-54	<sup>2</sup> Feb. 10, 1933
PA.....	Phoenixville.....	111	<sup>2</sup> Jul. 10, 1936	Smethport.....	-42	<sup>1</sup> Jan. 5, 1904
RI.....	Providence.....	104	Aug. 2, 1975	Greene.....	-25	Feb. 5, 1996
SC.....	Camden.....	111	<sup>2</sup> Jun. 28, 1954	Caesars Head.....	-19	Jan. 21, 1985
SD.....	Gannvalley.....	120	Jul. 5, 1936	McIntosh.....	-58	Feb. 17, 1936
TN.....	Perryville.....	113	<sup>2</sup> Aug. 9, 1930	Mountain City.....	-32	Dec. 30, 1917
TX.....	Monahans.....	120	<sup>2</sup> Jun. 28, 1994	Seminole.....	-23	<sup>2</sup> Feb. 8, 1933
UT.....	Saint George.....	117	Jul. 5, 1985	Peter's Sink.....	-69	Feb. 1, 1985
VT.....	Vernon.....	105	Jul. 4, 1911	Bloomfield.....	-50	Dec. 30, 1933
VA.....	Balcony Falls.....	110	Jul. 15, 1954	Mtn. Lake Bio. Stn.....	-30	Jan. 22, 1985
WA.....	Ice Harbor Dam.....	118	<sup>2</sup> Aug. 5, 1961	Mazama & Winthrop... ..	-48	Dec. 30, 1968
WV.....	Martinsburg.....	112	<sup>2</sup> Jul. 10, 1936	Lewisburg.....	-37	Dec. 30, 1917
WI.....	Wisconsin Dells.....	114	Jul. 13, 1936	Couderay.....	-55	Feb. 4, 1996
WY.....	Basin.....	115	Aug. 8, 1983	Riverside R.S.....	-66	Feb. 9, 1933

<sup>1</sup> Also on earlier dates at the same or other places. <sup>2</sup> Estimated.

Source: U.S. National Oceanic and Atmospheric Administration, National Environmental Satellite, Data, and Information Services (NESDIS), National Climatic Data Center (NCDC), *Temperature Extremes and Drought*, <<http://www.ncdc.noaa.gov/oa/climate/severeweather/temperatures.html>>.

**Table 388. Major U.S. Weather Disasters: 2006 to 2009**

[5.0 represents \$5,000,000,000. Covers only weather-related disasters costing \$1 billion or more]

Event	Description	Time period	Estimated cost <sup>1</sup> (bil. dol.)	Deaths (number)
2009 Southwest/Great Plains drought . . . . .	Drought conditions occurred during much of the year causing agricultural losses in TX, OK, KS, CA, NM, and AZ. The largest losses occurred in TX and CA.	Entire year 2009	Over 5.0	—
Western wildfires . . . . .	Residual and sustained drought conditions across western and south-central states resulted in thousands of fires. Most affected states include CA, AZ, NM, TX, OK, and UT.	Summer–Fall 2009	Over 1.0	10
Midwest, South, and Eastern severe weather . . . . .	Sustained outbreak of thunderstorms and high winds in TX, OK, MO, NE, KS, AR, AL, MS, TN, NC, SC, KY, and PA.	June 2009	Over 1.1	—
South/Southeast tornadoes and severe weather . . . . .	Outbreak of tornadoes, hail and severe thunderstorms in AL, AR, GA, KY, MO, SC, TN—with 85 tornadoes confirmed.	April 2009	Over 1.2	6
Midwest/Southeast tornadoes . . . . .	Outbreak of tornadoes in NE, KS, OK, IA, TX, LA, MS, AL, GA, TN, KY—with 56 tornadoes confirmed.	March 2009	Over 1.0	—
Southeast/Ohio Valley severe weather . . . . .	Complex of severe thunderstorms and high winds in TN, KY, OK, OH, VA, WV, and PA. The majority of the damage occurred in OK and OH.	February 2009	Over 1.4	10
2008 widespread drought . . . . .	Severe drought and heat caused agricultural losses in areas of the South and West. Record low lake levels. Also occurred in areas of the Southeast. Includes states of CA, GA, NC, SC, TN, and TX.	Entire year 2008	Over 2.0	—
Hurricane Ike . . . . .	Category 2 hurricane made landfall in Texas as the largest (in size) Atlantic hurricane on record, causing wind and considerable surge in coastal and significant flooding damage in AR, IL, IN, KY, LA, MO, OH, PA, and TX.	September 2008	Over 27.0	82
Hurricane Gustav . . . . .	Category 2 hurricane made landfall in Louisiana causing significant wind, storm surge and flood damage in AL, AR, LA, and MS.	September 2008	5.0	43
Hurricane Dolly . . . . .	Category 2 hurricane made landfall in southern Texas causing considerable wind and flooding damage in TX and NM.	July 2008	Over 1.2	3
U.S. wildfires . . . . .	Drought conditions across numerous Western, Central and Southeastern states (15) resulted in thousands of wildfires, national acreage burned exceeding 5.2 million acres (mainly in the West).	Summer–Fall 2008	Over 2.0	16
Midwest flood . . . . .	Heavy rainfall and flooding caused significant agricultural loss and property damage in seven states with Iowa being hardest hit with widespread rainfall totals ranging from 4 to 16 inches.	June 2008	Over 15.0	24
Midwest/Mid-Atlantic storms . . . . .	An outbreak of tornadoes and thunderstorms over the states of IA, IL, IN, KS, NE, MD, MI, MN, MO, OK, VA, WI, WV.	June 2008	Over 1.1	18
Midwest/Ohio Valley storms . . . . .	Outbreak of tornadoes over the Midwest/Ohio Valley over the region (IL, IN, IA, KS, MN, NE, OK, WY, and CO)—with 235 tornadoes confirmed.	May 2008	Over 2.4	13
Southeast/Midwest tornadoes . . . . .	Series of tornadoes and severe thunderstorms across the Southeast and Midwest states (AL, AR, IN, KY, MS, OH, TN, TX)—with 87 tornadoes confirmed.	February 2008	Over 1.0	57
Great Plains and Eastern drought . . . . .	Severe drought with periods of extreme heat resulting in major reductions in crop yields, along with very low stream flows, and lake levels.	Entire year 2007	5.0	( <sup>2</sup> )
Western wildfires . . . . .	Continued drought conditions and high winds over much of the Western United States, resulting in numerous wildfires.	Summer–Fall 2007	Over 1.0	12
Spring freeze . . . . .	Widespread severe freeze over much of the East and Midwest causing losses in fruit crops, field crops, and in the ornamental industry.	April 2007	2.0	—
Severe storms and tornadoes . . . . .	Flooding, hail, tornadoes and severe thunderstorms across numerous Eastern and Southern states.	April 2007	1.5	9
Freeze . . . . .	Widespread agricultural freeze over a good portion of California, destroying numerous agricultural crops.	January 2007	1.4	1

— Represents zero. <sup>1</sup> Represents actual dollar costs at the time of event and is not adjusted for inflation. <sup>2</sup> Some deaths reported due to heat but not beyond typical annual averages. Source: U.S. National Oceanic and Atmospheric Administration, National Climatic Data Center, "Billion Dollar U.S. Weather Disasters, 1980–2009" (released January 2010). See also <<http://www.ncdc.noaa.gov/oa/reports/billionz.html>>.

**Table 389. Normal Daily Mean, Maximum, and Minimum Temperatures—Selected Cities**

[In Fahrenheit degrees. Airport data, except as noted. Based on standard 30-year period, 1971–2000]

State	Station	Daily mean temperature			Daily maximum temperature			Daily minimum temperature		
		January	July	Annual average	January	July	Annual average	January	July	Annual average
AL	Mobile	50.1	81.5	66.8	60.7	91.2	77.4	39.5	71.8	56.2
AK	Juneau	25.7	56.8	41.5	30.6	64.3	47.6	20.7	49.2	35.3
AZ	Phoenix	56.1	94.8	74.2	67.3	106.6	86.4	44.8	82.9	61.9
AR	Little Rock	40.1	82.4	62.1	49.5	92.8	72.7	30.8	72.0	51.5
CA	Los Angeles	57.1	69.3	63.3	65.6	75.3	70.6	48.6	63.3	56.1
	Sacramento	46.3	75.4	61.1	53.8	92.4	73.7	38.8	58.3	48.4
	San Diego	57.8	70.9	64.4	65.8	75.8	70.8	49.7	65.9	58.1
	San Francisco	49.4	62.8	57.3	55.9	71.1	65.1	42.9	54.5	49.6
CO	Denver	29.2	73.4	50.1	43.2	88.0	64.2	15.2	58.7	35.8
CT	Hartford	25.7	73.7	50.2	34.1	84.9	60.5	17.2	62.4	40.0
DC	Washington	31.5	76.6	54.4	39.3	86.0	63.5	23.7	67.3	45.1
DE	Washington	34.9	79.2	57.5	42.5	88.3	66.4	27.3	70.1	48.6
FL	Jacksonville	53.1	81.6	68.0	64.2	90.8	78.4	41.9	72.4	57.6
	Miami	68.1	83.7	76.7	76.5	90.9	84.2	59.6	76.5	69.1
GA	Atlanta	42.7	80.0	62.1	51.9	89.4	72.0	33.5	70.6	52.3
HI	Honolulu	73.0	80.8	77.5	80.4	87.8	84.7	65.7	73.8	70.2
ID	Boise	30.2	74.7	51.9	36.7	89.2	62.6	23.6	60.3	41.3
IL	Chicago	22.0	73.3	49.1	29.6	83.5	58.3	14.3	63.2	39.8
	Peoria	22.5	75.1	50.8	30.7	85.7	60.7	14.3	64.6	40.9
IN	Indianapolis	26.5	75.4	52.5	34.5	85.6	62.3	18.5	65.2	42.7
IA	Des Moines	20.4	76.1	50.0	29.1	86.0	59.8	11.7	66.1	40.2
KS	Wichita	30.2	81.0	56.4	40.1	92.9	67.4	20.3	69.1	45.2
KY	Louisville	33.0	78.4	56.9	41.0	87.0	66.0	24.9	69.8	47.9
LA	New Orleans	52.6	82.7	68.8	61.8	91.1	78.0	43.4	74.2	59.6
ME	Portland	21.7	68.7	45.7	30.9	78.8	55.2	12.5	58.6	36.3
MD	Baltimore	32.3	76.5	54.6	41.2	87.2	65.1	23.5	65.8	44.2
MA	Boston	29.3	73.9	51.6	36.5	82.2	59.3	22.1	65.5	43.9
MI	Detroit	24.5	73.5	49.7	31.1	83.4	58.4	17.8	63.6	41.0
	Sault Ste. Marie	13.2	63.9	40.1	21.5	75.7	49.6	4.9	52.0	30.5
MN	Duluth	8.4	65.5	39.1	17.9	76.3	48.7	-1.2	54.6	29.3
	Minneapolis-St. Paul	13.1	73.2	45.4	21.9	83.3	54.7	4.3	63.0	35.9
MS	Jackson	45.0	81.4	64.1	55.1	91.4	75.0	35.0	71.4	53.2
MO	Kansas City	26.9	78.5	54.2	36.0	88.8	64.3	17.8	68.2	44.0
	St. Louis	29.6	80.2	56.3	37.9	89.8	65.7	21.2	70.6	46.9
MT	Great Falls	21.7	66.2	43.7	32.1	82.0	56.4	11.3	50.4	31.1
NE	Omaha	21.7	76.7	50.7	31.7	87.4	61.5	11.6	65.9	39.8
NV	Reno	33.6	71.3	51.3	45.5	91.2	67.4	21.8	51.4	35.2
NH	Concord	20.1	70.0	45.9	30.6	82.9	57.7	9.7	57.1	34.1
NJ	Atlantic City	32.1	75.3	53.5	41.4	85.1	63.6	22.8	65.4	43.3
NM	Albuquerque	35.7	78.5	56.8	47.6	92.3	70.4	23.8	64.7	43.2
NY	Albany	22.2	71.1	47.5	31.1	82.2	57.6	13.3	60.0	37.5
	Buffalo	24.5	70.8	47.9	31.1	79.6	55.9	17.8	62.1	39.9
	New York	32.1	76.5	54.6	38.0	84.2	61.7	26.2	68.8	47.5
NC	Charlotte	41.7	80.3	61.4	51.3	90.1	71.7	32.1	70.6	51.0
	Raleigh	39.7	78.8	59.6	49.8	89.1	70.6	29.6	68.5	48.6
ND	Bismarck	10.2	70.4	42.3	21.1	84.5	54.5	-0.6	56.4	30.1
OH	Cincinnati	29.7	76.3	54.2	38.0	86.4	64.0	21.3	66.1	44.3
	Cleveland	25.7	71.9	49.6	32.6	81.4	58.1	18.8	62.3	41.2
	Columbus	28.3	75.1	52.9	36.2	85.3	62.6	20.3	64.9	43.2
OK	Oklahoma City	36.7	82.0	60.1	47.1	93.1	71.1	26.2	70.8	49.2
OR	Portland	39.9	68.1	53.5	45.6	79.3	62.1	34.2	56.9	44.8
PA	Philadelphia	32.3	77.6	55.3	39.0	85.5	63.2	25.5	69.7	47.4
	Pittsburgh	27.5	72.6	50.9	35.1	82.7	60.4	19.9	62.4	41.5
RI	Providence	28.7	73.3	51.1	58.9	90.9	75.9	20.3	64.1	42.0
SC	Columbia	44.6	82.0	63.6	55.1	92.1	74.8	34.0	71.8	52.5
SD	Sioux Falls	14.0	73.0	45.1	25.2	85.6	57.2	2.9	60.3	33.0
TN	Memphis	39.9	82.5	62.3	48.6	92.1	72.1	31.3	72.9	52.5
	Nashville	36.8	79.1	58.9	45.6	88.7	69.0	27.9	69.5	48.8
TX	Dallas-Fort Worth	44.1	85.0	65.5	54.1	95.4	75.8	34.0	74.6	55.1
	El Paso	45.1	83.3	64.7	57.2	94.5	77.1	32.9	72.0	52.1
	Houston	51.8	83.6	68.8	62.3	93.6	79.4	41.2	73.5	58.2
UT	Salt Lake City	29.2	77.0	52.0	37.0	90.6	62.9	21.3	63.4	41.2
VT	Burlington	18.0	70.6	45.2	26.7	81.4	54.5	9.3	59.8	35.8
VA	Norfolk	40.1	79.1	59.6	47.8	86.8	67.8	32.3	71.4	51.4
	Richmond	36.4	77.9	57.6	45.3	87.5	67.8	27.6	68.3	47.4
WA	Seattle-Tacoma	40.9	65.3	52.3	45.8	75.3	59.8	35.9	55.3	44.8
	Spokane	27.3	68.6	47.3	32.8	82.5	57.4	21.7	54.6	37.2
WV	Charleston	33.4	73.9	54.5	42.6	84.9	65.4	24.2	62.9	43.5
WI	Milwaukee	20.7	72.0	47.5	28.0	81.1	55.9	13.4	62.9	39.2
WY	Cheyenne	25.9	67.7	44.9	37.1	81.9	57.6	14.8	53.4	32.3
PR	San Juan	76.6	82.2	79.9	82.4	87.4	85.5	70.8	76.9	74.2

<sup>1</sup> City office data.

Source: U.S. National Oceanic and Atmospheric Administration, Comparative Climatic Data. See also <<http://www.ncdc.noaa.gov/oa/climate/online/ccd/nrmmax.txt>>; <<http://www.ncdc.noaa.gov/oa/climate/online/ccd/nrmmn.txt>>; and <<http://www.ncdc.noaa.gov/oa/climate/online/ccd/nrmavg.txt>>.

**Table 390. Highest Temperature of Record—Selected Cities**

[In Fahrenheit degrees. Airport data, except as noted. For period of record through 2008]

State	Station	Length of record (years)	Length of record (years)												Annual <sup>1</sup>
			Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
AL	Mobile . . . . .	67	84	82	90	94	100	102	104	105	99	93	87	81	105
AK	Juneau . . . . .	64	57	57	61	74	82	86	90	84	73	61	56	54	90
AZ	Phoenix . . . . .	71	88	92	100	105	113	122	121	116	118	107	95	88	122
AK	Little Rock . . . . .	67	83	85	91	95	98	105	112	109	106	97	86	80	112
CA	Los Angeles . . . . .	73	91	92	95	102	97	104	97	98	110	106	101	94	110
	Sacramento . . . . .	58	70	76	88	95	105	115	114	110	108	104	87	72	115
	San Diego . . . . .	68	88	90	93	98	96	101	99	98	111	107	97	88	111
	San Francisco . . . . .	81	72	78	85	92	97	106	105	100	103	99	85	75	106
CO	Denver . . . . .	66	73	77	84	90	96	104	105	104	97	89	80	75	105
CT	Hartford . . . . .	54	72	73	89	96	99	100	102	102	99	91	81	76	102
DE	Wilmington . . . . .	61	75	78	86	94	96	100	102	101	100	91	85	75	102
DC	Washington . . . . .	67	79	82	89	95	99	101	104	105	101	94	86	79	105
FL	Jacksonville . . . . .	67	85	88	91	95	100	103	105	102	100	96	88	84	105
	Miami . . . . .	66	88	89	93	96	96	98	98	98	97	95	91	87	98
GA	Atlanta . . . . .	60	79	80	89	93	95	101	105	104	98	95	84	79	105
HI	Honolulu . . . . .	39	88	88	88	91	93	92	94	93	95	94	93	89	95
ID	Boise . . . . .	69	63	71	81	92	99	109	111	110	102	94	78	65	111
IL	Chicago . . . . .	50	65	72	88	91	93	104	104	101	99	91	78	71	104
	Peoria . . . . .	69	70	72	86	92	94	105	104	103	100	93	81	71	105
IN	Indianapolis . . . . .	69	71	76	85	89	93	102	104	102	100	91	81	74	104
IA	Des Moines . . . . .	69	67	73	91	93	98	103	105	108	101	95	81	69	108
KS	Wichita . . . . .	56	75	87	89	96	100	110	113	110	108	97	86	83	113
KY	Louisville . . . . .	61	77	77	86	91	95	102	106	105	104	93	84	76	106
LA	New Orleans . . . . .	62	83	85	89	92	96	100	101	102	101	94	87	84	102
ME	Portland . . . . .	68	67	64	88	85	94	98	99	103	95	88	74	71	103
MD	Baltimore . . . . .	58	75	79	89	94	98	101	104	105	100	94	83	77	105
MA	Boston . . . . .	57	69	70	89	94	95	100	102	102	100	90	79	76	102
MI	Detroit . . . . .	50	64	70	81	89	93	104	102	100	98	91	77	69	104
	Sault Ste. Marie . . . . .	68	45	49	75	85	89	93	97	98	95	81	68	62	98
MN	Duluth . . . . .	67	52	55	78	88	90	94	97	97	95	86	71	55	97
	Minneapolis-St. Paul . . . . .	70	58	61	83	95	97	102	105	102	98	90	77	68	105
MS	Jackson . . . . .	45	83	85	89	94	99	105	106	107	104	95	88	84	107
MO	Kansas City . . . . .	36	71	78	86	93	95	105	107	109	106	95	82	74	109
	St. Louis . . . . .	51	76	85	89	93	94	102	107	107	104	94	85	76	107
MT	Great Falls . . . . .	71	67	70	78	89	93	101	105	106	98	91	76	69	106
NE	Omaha . . . . .	72	69	78	89	97	99	105	114	110	104	96	83	72	114
NV	Reno . . . . .	67	71	75	83	89	97	103	108	105	101	91	77	70	108
NH	Concord . . . . .	67	69	67	89	95	97	98	102	101	98	90	80	73	102
NJ	Atlantic City . . . . .	65	78	75	87	94	99	106	104	103	99	90	84	77	106
NM	Albuquerque . . . . .	69	69	76	85	89	98	107	105	101	100	91	77	72	107
NY	Albany . . . . .	62	71	68	89	92	94	99	100	99	100	89	82	71	100
	Buffalo . . . . .	65	72	71	81	94	91	96	97	99	98	87	80	74	99
	New York <sup>2</sup> . . . . .	140	72	75	86	96	99	101	106	104	102	94	84	75	106
NC	Charlotte . . . . .	69	79	81	90	93	100	103	103	104	104	98	85	80	104
	Raleigh . . . . .	64	80	84	92	95	97	104	105	105	104	98	88	81	105
ND	Bismarck . . . . .	69	63	69	81	93	98	111	112	109	105	95	79	65	112
OH	Cincinnati . . . . .	47	69	75	84	89	93	102	103	102	98	91	81	75	103
	Cleveland . . . . .	67	73	74	83	88	92	104	103	102	101	90	82	77	104
	Columbus . . . . .	69	74	75	85	89	94	102	100	101	100	91	80	76	102
OK	Oklahoma City . . . . .	55	80	92	93	100	104	105	110	110	108	96	87	86	110
OR	Portland . . . . .	68	66	71	80	90	100	102	107	107	105	92	73	65	107
PA	Philadelphia . . . . .	67	74	74	87	95	97	100	104	101	100	96	81	73	104
	Pittsburgh . . . . .	56	72	76	82	89	91	98	103	100	97	87	82	74	103
RI	Providence . . . . .	55	69	72	85	98	95	97	102	104	100	86	78	77	104
SC	Columbia . . . . .	61	84	84	91	94	101	107	107	107	101	101	90	83	107
SD	Sioux Falls . . . . .	63	66	70	87	94	100	110	108	108	104	94	81	63	110
TN	Memphis . . . . .	67	79	81	86	94	99	104	108	107	103	95	86	81	108
	Nashville . . . . .	69	78	84	86	91	97	106	107	106	105	94	84	79	107
TX	Dallas-Fort Worth . . . . .	55	88	95	96	101	103	113	110	109	111	102	89	89	113
	El Paso . . . . .	69	80	83	89	98	105	114	112	108	104	96	87	80	114
	Houston . . . . .	39	84	91	91	95	99	103	104	107	109	96	89	85	109
UT	Salt Lake City . . . . .	80	63	69	78	89	99	104	107	106	100	89	75	69	107
VT	Burlington . . . . .	65	66	62	84	91	93	100	100	101	98	85	75	67	101
VA	Norfolk . . . . .	60	80	82	88	97	100	101	103	104	99	95	86	80	104
	Richmond . . . . .	79	81	83	93	96	100	104	105	104	103	99	86	81	105
WA	Seattle-Tacoma . . . . .	64	64	70	78	85	93	96	100	99	98	89	74	64	100
	Spokane . . . . .	61	59	63	71	90	96	101	103	108	98	86	67	56	108
WV	Charleston . . . . .	61	79	79	89	94	93	98	104	104	102	93	85	80	104
WI	Milwaukee . . . . .	68	63	68	82	91	93	101	103	103	98	89	77	68	103
WY	Cheyenne . . . . .	73	66	71	74	83	91	100	100	98	95	83	75	69	100
PR	San Juan . . . . .	54	92	96	96	97	96	97	95	97	97	98	96	94	98

<sup>1</sup> Represents the highest observed temperature in any month. <sup>2</sup> City office data.

Source: U.S. National Oceanic and Atmospheric Administration, *Comparative Climatic Data*. See also <<http://www.ncdc.noaa.gov/oa/climate/online/ccd/lowtmp.txt>>.

**Table 391. Lowest Temperature of Record—Selected Cities**

[In Fahrenheit degrees. Airport data, except as noted. For period of record through 2008]

State	Station	Length of record (years)	Length of record (years)												Annual <sup>1</sup>
			Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
AL	Mobile	67	3	11	21	32	43	49	60	59	42	30	22	8	3
AK	Juneau	64	-22	-22	-15	6	25	31	36	27	23	11	-5	-21	-22
AZ	Phoenix	71	17	22	25	32	40	50	61	60	47	34	25	22	17
AR	Little Rock	67	-4	-5	11	28	40	46	54	52	37	29	17	-1	-5
CA	Los Angeles	73	23	32	34	39	43	48	49	51	47	41	34	32	23
	Sacramento	58	21	23	26	31	36	41	48	49	42	36	26	18	18
	San Diego	68	29	36	39	41	48	51	55	57	51	43	38	34	29
	San Francisco	81	24	25	30	31	36	41	43	42	38	34	25	20	20
CO	Denver	66	-25	-30	-11	-2	21	30	43	41	17	3	-8	-25	-30
CT	Hartford	54	-26	-21	-6	9	28	35	44	36	30	17	1	-14	-26
DE	Wilmington	61	-14	-6	2	18	30	41	48	43	36	24	14	-7	-14
DC	Washington	67	-5	4	11	24	34	47	54	49	39	29	16	1	-5
FL	Jacksonville	67	7	19	23	31	45	47	61	59	48	33	21	11	7
	Miami	66	30	32	32	46	53	60	69	68	68	51	39	30	30
GA	Atlanta	60	-8	5	10	26	37	46	53	55	36	28	3	0	-8
HI	Honolulu	39	53	53	55	57	60	65	66	67	66	61	57	54	53
ID	Boise	69	-17	-15	6	19	22	31	35	34	23	11	-3	-25	-25
IL	Chicago	50	-27	-19	-8	7	24	36	40	41	28	17	1	-25	-27
	Peoria	69	-25	-19	-10	14	25	39	47	41	26	19	-2	-23	-25
IN	Indianapolis	69	-27	-21	-7	16	28	37	44	41	28	17	-2	-23	-27
IA	Des Moines	69	-24	-26	-22	9	30	38	47	40	26	14	-4	-22	-26
KS	Wichita	56	-12	-21	-2	15	31	43	51	48	31	18	1	-16	-21
KY	Louisville	61	-22	-19	-1	22	31	42	50	46	33	23	-1	-15	-22
LA	New Orleans	62	14	16	25	32	41	50	60	60	42	35	24	11	11
ME	Portland	68	-26	-39	-21	8	23	33	40	33	23	15	3	-21	-39
MD	Baltimore	58	-7	-3	6	20	32	40	50	45	35	25	13	0	-7
MA	Boston	57	-12	-4	5	16	34	45	50	47	38	28	15	-7	-12
MI	Detroit	50	-21	-15	-4	10	25	36	41	38	29	17	9	-10	-21
	Sault Ste. Marie	68	-36	-35	-24	-2	18	26	36	29	25	16	-10	-31	-36
MN	Duluth	67	-39	-39	-29	-5	17	27	35	32	22	8	-23	-34	-39
	Minneapolis-St. Paul	70	-34	-32	-32	2	18	34	43	39	26	13	-17	-29	-34
MS	Jackson	45	2	10	15	27	38	47	51	54	35	26	17	4	2
MO	Kansas City	36	-17	-19	-10	12	30	42	51	43	31	17	1	-23	-23
	St. Louis	51	-18	-12	-5	22	31	43	51	47	36	23	1	-16	-18
MT	Great Falls	71	-37	-35	-29	-8	15	31	36	30	16	-11	-25	-43	-43
NE	Omaha	72	-23	-21	-16	5	27	38	44	43	25	13	-9	-23	-23
NV	Reno	67	-16	-16	-2	13	18	21	33	24	20	8	1	-16	-16
NH	Concord	67	-33	-37	-16	8	21	30	35	29	21	10	-5	-22	-37
NJ	Atlantic City	65	-10	-11	4	12	25	37	42	40	32	20	10	-7	-11
NM	Albuquerque	69	-17	-5	8	19	16	40	52	50	37	21	-7	-7	-17
NY	Albany	62	-28	-21	-21	10	26	36	40	34	24	16	5	-22	-28
	Buffalo	65	-16	-20	-7	12	26	35	43	38	32	20	9	-10	-20
	New York <sup>2</sup>	140	-6	-15	3	12	32	44	52	50	39	28	5	-13	-15
NC	Charlotte	69	-5	5	4	21	32	45	53	50	39	24	11	2	-5
	Raleigh	64	-9	0	11	23	31	38	48	46	37	19	11	4	-9
ND	Bismarck	69	-44	-43	-31	-12	15	30	35	33	11	-10	-30	-43	-44
OH	Cincinnati	47	-25	-11	-11	15	27	39	47	43	31	16	1	-20	-25
	Cleveland	67	-20	-15	-5	10	25	31	41	38	32	19	3	-15	-20
	Columbus	69	-22	-13	-6	14	25	35	43	39	31	20	5	-17	-22
OK	Oklahoma City	55	-4	-3	3	20	37	47	53	51	36	16	11	-8	-8
OR	Portland	68	-2	-3	19	29	39	43	44	34	26	13	6	-3	-3
PA	Philadelphia	67	-7	-4	7	19	28	44	51	44	35	25	15	1	-7
	Pittsburgh	56	-22	-12	-1	14	26	34	42	39	31	16	-1	-12	-22
RI	Providence	55	-13	-7	1	14	29	41	48	40	33	20	6	-10	-13
SC	Columbia	61	-1	5	4	26	34	44	54	53	40	23	12	4	-1
SD	Sioux Falls	63	-36	-31	-23	5	17	33	38	34	22	9	-17	-28	-36
TN	Memphis	67	-4	-11	12	28	38	48	52	48	36	25	9	-13	-13
	Nashville	69	-17	-13	2	23	34	42	51	47	36	26	-1	-10	-17
TX	Dallas-Fort Worth	55	4	7	15	29	41	51	59	56	43	29	20	-1	-1
	El Paso	69	-8	8	14	23	31	46	57	56	41	25	1	5	-8
	Houston	39	12	3	22	31	44	52	62	60	48	29	19	7	3
UT	Salt Lake City	80	-22	-30	2	14	25	35	40	37	27	16	-14	-21	-30
VT	Burlington	65	-30	-30	-20	2	24	33	39	35	25	15	-2	-26	-30
VA	Norfolk	60	-3	8	18	28	36	45	54	49	45	27	20	7	-3
	Richmond	79	-12	-10	11	23	31	40	51	46	35	21	10	-1	-12
WA	Seattle-Tacoma	64	0	1	11	29	28	38	43	44	35	28	6	6	0
	Spokane	61	-22	-24	-7	17	24	33	37	35	22	7	-21	-25	-25
WV	Charleston	61	-16	-12	0	19	26	33	46	41	34	17	6	-12	-16
WI	Milwaukee	68	-26	-26	-10	12	21	33	40	44	28	18	-5	-20	-26
WY	Cheyenne	73	-29	-34	-21	-8	16	25	38	36	8	-1	-16	-28	-34
PR	San Juan	54	61	62	60	64	66	69	69	70	69	46	66	59	46

<sup>1</sup> Represents the lowest observed temperature in any month. <sup>2</sup> City office data.

Source: U.S. National Oceanic and Atmospheric Administration, Comparative Climatic Data. See also <<http://www.ncdc.noaa.gov/oa/climate/online/ccd/lowtmp.txt>>.

**Table 392. Normal Monthly and Annual Precipitation—Selected Cities**

[In inches. Airport data, except as noted. The table data are the 30-year average values computed from the data recorded during the period 1971–2000]

State	Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
AL	Mobile	5.75	5.10	7.20	5.06	6.10	5.01	6.54	6.20	6.01	3.25	5.41	4.66	66.29
AK	Juneau	4.81	4.02	3.51	2.96	3.48	3.36	4.14	5.37	7.54	8.30	5.43	5.41	58.33
AZ	Phoenix	0.83	0.77	1.07	0.25	0.16	0.09	0.99	0.94	0.75	0.79	0.73	0.92	8.29
AR	Little Rock	3.61	3.33	4.88	5.47	5.05	3.95	3.31	2.93	3.71	4.25	5.73	4.71	50.93
CA	Los Angeles	2.98	3.11	2.40	0.63	0.24	0.08	0.03	0.14	0.26	0.36	1.13	1.79	13.15
	Sacramento	3.84	3.54	2.80	1.02	0.53	0.20	0.05	0.06	0.36	0.89	2.19	2.45	17.93
	San Diego	2.28	2.04	2.26	0.75	0.20	0.09	0.03	0.09	0.21	0.44	1.07	1.31	10.77
	San Francisco	4.45	4.01	3.26	1.18	0.38	0.11	0.03	0.07	0.20	1.04	2.49	2.89	20.11
CO	Denver	0.51	0.49	1.28	1.93	2.32	1.56	2.16	1.82	1.14	0.99	0.98	0.63	15.81
CT	Hartford	3.84	2.96	3.88	3.86	4.39	3.85	3.67	3.98	4.13	3.94	4.06	3.60	46.16
DE	Wilmington	3.43	2.81	3.97	3.39	4.15	3.59	4.28	3.51	4.01	3.08	3.19	3.40	42.81
DC	Washington	3.21	2.63	3.60	2.77	3.82	3.13	3.66	3.44	3.79	3.22	3.03	3.05	39.35
FL	Jacksonville	3.69	3.15	3.93	3.14	3.48	5.37	5.97	6.87	7.90	3.86	2.34	2.64	52.34
	Miami	1.88	2.07	2.56	3.36	5.52	8.54	5.79	8.63	8.38	6.19	3.43	2.18	58.53
GA	Atlanta	5.03	4.68	5.38	3.62	3.95	3.63	5.12	3.67	4.09	3.11	4.10	3.82	50.20
HI	Honolulu	2.73	2.35	1.89	1.11	0.78	0.43	0.50	0.46	0.74	2.18	2.27	2.85	18.29
ID	Boise	1.39	1.14	1.41	1.27	1.27	0.74	0.39	0.30	0.76	0.76	1.38	1.38	12.19
IL	Chicago	1.75	1.63	2.65	3.68	3.38	3.63	3.51	4.62	3.27	2.71	3.01	2.43	36.27
	Peoria	1.50	1.67	2.83	3.56	4.17	3.84	4.02	3.16	3.12	2.77	2.99	2.40	36.03
IN	Indianapolis	2.48	2.41	3.44	3.61	4.36	4.13	4.42	3.82	2.88	2.76	3.61	3.03	40.95
IA	Des Moines	1.03	1.19	2.21	3.58	4.25	4.57	4.18	4.51	3.15	2.62	2.10	1.33	34.72
KS	Wichita	0.84	1.02	2.71	2.57	4.16	4.25	3.31	2.94	2.96	2.45	1.82	1.35	30.38
KY	Louisville	3.28	3.25	4.41	3.91	4.88	3.76	4.30	3.41	3.05	2.79	3.81	3.69	44.54
LA	New Orleans	5.87	5.47	5.24	5.02	4.62	6.83	6.20	6.15	5.55	3.05	5.09	5.07	64.16
ME	Portland	4.09	3.14	4.14	4.26	3.82	3.28	3.32	3.05	3.37	4.40	4.72	4.24	45.83
MD	Baltimore	3.47	3.02	3.93	3.00	3.89	3.43	3.85	3.74	3.98	3.16	3.12	3.35	41.94
MA	Boston	3.92	3.30	3.85	3.60	3.24	3.22	3.06	3.37	3.47	3.79	3.98	3.73	42.53
MI	Detroit	1.91	1.88	2.52	3.05	3.05	3.55	3.16	3.10	3.27	2.23	2.66	2.51	32.89
	Sault Ste. Marie	2.64	1.60	2.41	2.57	2.50	3.00	3.14	3.47	3.71	3.32	3.40	2.91	34.67
MN	Duluth	1.12	0.83	1.69	2.09	2.95	4.25	4.20	4.22	4.13	2.46	2.12	0.94	31.00
	Minneapolis-St. Paul	1.04	0.79	1.86	2.31	3.24	4.34	4.04	4.05	2.69	2.11	1.94	1.00	29.41
MS	Jackson	5.67	4.50	5.74	5.98	4.86	3.82	4.69	3.66	3.23	3.42	5.04	5.34	55.95
MO	Kansas City	1.15	1.31	2.44	3.38	5.39	4.44	4.42	3.54	4.64	3.33	2.30	1.64	37.98
	St. Louis	2.14	2.28	3.60	3.69	4.11	3.76	3.90	2.98	2.96	2.76	3.71	2.86	38.75
MT	Great Falls	0.68	0.51	1.01	1.40	2.53	2.24	1.45	1.65	1.23	0.93	0.59	0.67	14.89
NE	Omaha	0.77	0.80	2.13	2.94	4.44	3.95	3.86	3.21	3.17	2.21	1.82	0.92	30.22
NV	Reno	1.06	1.06	0.86	0.35	0.62	0.47	0.24	0.27	0.45	0.42	0.80	0.88	7.48
NH	Concord	2.97	2.36	3.04	3.07	3.33	3.10	3.37	3.21	3.16	3.46	3.57	2.96	37.60
NJ	Atlantic City	3.60	2.85	4.06	3.45	3.38	2.66	3.86	4.32	3.14	2.86	3.26	3.15	40.59
NM	Albuquerque	0.49	0.44	0.61	0.50	0.60	0.65	1.27	1.73	1.07	1.00	0.62	0.49	9.47
NY	Albany	2.71	2.27	3.17	3.25	3.67	3.74	3.50	3.68	3.31	3.23	3.31	2.76	38.60
	Buffalo	3.16	2.42	2.99	3.04	3.35	3.82	3.14	3.87	3.84	3.19	3.92	3.80	40.54
	New York	4.13	3.15	4.37	4.28	4.69	3.84	4.62	4.22	4.23	3.85	4.36	3.95	49.69
NC	Charlotte	4.00	3.55	4.39	2.95	3.66	3.42	3.79	3.72	3.83	3.66	3.36	3.18	43.51
	Raleigh	4.02	3.47	4.03	2.80	3.79	3.42	4.29	3.78	4.26	3.18	2.97	3.04	43.05
ND	Bismarck	0.45	0.51	0.85	1.46	2.22	2.59	2.58	2.15	1.61	1.28	0.70	0.44	16.84
OH	Cincinnati	2.92	2.75	3.90	3.96	4.59	4.42	3.75	3.79	2.82	2.96	3.46	3.28	42.60
	Cleveland	2.48	2.29	2.94	3.37	3.50	3.89	3.52	3.69	3.77	2.74	3.38	3.14	38.71
	Columbus	2.53	2.20	2.89	3.25	3.88	4.08	4.62	3.72	2.92	2.31	3.19	2.93	38.52
OK	Oklahoma City	1.28	1.56	2.90	3.00	5.44	4.63	2.94	2.48	3.98	3.64	2.11	1.89	35.85
OR	Portland	5.07	4.18	3.71	2.64	2.38	1.59	0.72	0.93	1.65	2.88	5.61	5.71	37.07
PA	Philadelphia	3.52	2.74	3.81	3.49	3.89	3.29	4.39	3.82	3.88	2.75	3.16	3.31	42.05
	Pittsburgh	2.70	2.37	3.17	3.01	3.80	4.12	3.96	3.38	3.21	2.25	3.02	2.86	37.85
RI	Providence	4.37	3.45	4.43	4.16	3.66	3.38	3.17	3.90	3.70	3.69	4.40	4.14	46.45
SC	Columbia	4.66	3.84	4.59	2.98	3.17	4.99	5.54	5.41	3.94	2.89	2.88	3.38	48.27
SD	Sioux Falls	0.51	0.51	1.81	2.65	3.39	3.49	2.93	3.01	2.58	1.93	1.36	0.52	24.69
TN	Memphis	4.24	4.31	5.58	5.79	5.15	4.30	4.22	3.00	3.31	3.31	5.76	5.68	54.65
	Nashville	3.97	3.69	4.87	3.93	5.07	4.08	3.77	3.28	3.59	2.87	4.45	4.54	48.11
TX	Dallas-Fort Worth	1.90	2.37	3.06	3.20	5.15	3.23	2.12	2.03	2.42	4.11	2.57	2.57	34.73
	El Paso	0.45	0.39	0.26	0.23	0.38	0.87	1.49	1.75	1.61	0.81	0.42	0.77	9.43
	Houston	3.68	2.98	3.36	3.60	5.15	5.35	3.18	3.83	4.33	4.50	4.19	3.69	47.84
UT	Salt Lake City	1.37	1.33	1.91	2.02	2.09	0.77	0.72	0.76	1.33	1.57	1.40	1.23	16.50
VT	Burlington	2.22	1.67	2.32	2.88	3.32	3.43	3.97	4.01	3.83	3.12	3.06	2.22	36.05
VA	Norfolk	3.93	3.34	4.08	3.38	3.74	3.77	5.17	4.79	4.06	3.47	2.98	3.03	45.74
	Richmond	3.55	2.98	4.09	3.18	3.96	3.54	4.67	4.18	3.98	3.60	3.06	3.12	43.91
WA	Seattle-Tacoma	5.13	4.18	3.75	2.59	1.78	1.49	0.79	1.02	1.63	3.19	5.90	5.62	37.07
	Spokane	1.82	1.51	1.53	1.28	1.60	1.18	0.76	0.68	0.76	1.06	2.24	2.25	16.67
WI	Charleston	3.25	3.19	3.90	3.25	4.30	4.09	4.86	4.11	3.45	2.67	3.66	3.32	44.05
WV	Milwaukee	1.85	1.65	2.59	3.78	3.06	3.56	3.58	4.03	3.30	2.49	2.70	2.22	34.81
WY	Cheyenne	0.45	0.44	1.05	1.55	2.48	2.12	2.26	1.82	1.43	0.75	0.64	0.46	15.45
PR	San Juan	3.02	2.30	2.14	3.71	5.29	3.52	4.16	5.22	5.60	5.06	6.17	4.57	50.76

1 City office data.

Source: U.S. National Oceanic and Atmospheric Administration, Climatology of the United States, No. 81. See also <<http://www.ncdc.noaa.gov/oa/climate/online/ccd/nrmpcp.txt>>.

**Table 393. Snow, Hail, Ice Pellets, and Sleet—Selected Cities**

[In inches. Airport data, except as noted. For period of record through 2008. T denotes trace. Stations may show snowfall (hail) during the warm months]

State	Station	Length of record (years)												Annual			
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.				
AL	Mobile	66	0.1	0.1	0.1	T	T	-	T	-	-	-	T	0.1	0.4		
AK	Juneau	64	25.9	18.7	15.3	3.5	T	T	-	-	-	T	1.1	12.3	21.4	97.4	
AZ	Phoenix	62	T	-	T	T	T	-	-	-	-	T	-	-	-	-	
AR	Little Rock	57	2.4	1.5	0.5	T	T	T	-	-	-	-	T	0.2	0.6	5.2	
CA	Los Angeles	62	T	T	T	-	-	-	-	-	-	-	-	-	T	-	
	Sacramento	50	T	T	T	-	-	T	-	-	-	-	-	-	T	-	
	San Diego	60	T	-	T	T	-	-	-	-	-	-	-	-	T	T	
	San Francisco	69	-	T	T	-	-	-	-	-	-	-	-	-	-	-	
CO	Denver	64	8.0	7.4	12.2	8.6	1.6	-	T	T	1.6	3.8	8.8	7.9	60.3		
CT	Hartford	51	13.2	12.5	10.0	1.5	-	T	-	-	-	-	0.1	2.1	10.9	50.3	
DE	Wilmington	58	6.7	6.6	3.2	0.2	T	T	T	-	-	0.1	0.9	3.4	21.3		
DC	Washington	65	5.3	5.5	2.3	2.3	T	T	T	T	-	-	0.8	3.0	19.4		
FL	Jacksonville	60	T	-	-	T	-	T	T	-	-	-	-	-	-	-	
	Miami	59	-	-	-	-	-	T	-	-	-	-	-	-	-	-	
GA	Atlanta	69	1.0	0.5	0.4	T	-	-	T	-	-	-	T	T	0.2	2.1	
HI	Honolulu	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ID	Boise	69	6.4	3.7	1.7	0.6	0.1	T	T	T	T	0.1	2.3	5.8	20.3		
IL	Chicago	49	11.2	8.2	6.6	1.6	0.1	T	T	T	T	0.4	2.1	8.6	38.2		
	Peoria	65	6.5	5.3	4.2	0.8	T	T	T	-	T	0.1	2.1	6.3	25.1		
IN	Indianapolis	77	6.9	5.7	3.5	0.5	T	T	-	T	-	0.2	1.9	5.5	24.2		
IA	Des Moines	65	8.3	7.5	6.1	1.9	T	T	T	-	T	0.3	3.1	6.7	33.6		
KS	Wichita	55	4.0	4.1	2.7	0.2	T	T	T	T	-	-	1.4	3.6	16.0		
KY	Louisville	61	5.1	4.2	3.2	0.1	T	T	T	T	-	0.1	1.0	2.5	16.1		
LA	New Orleans	51	T	0.1	T	T	T	-	-	-	-	-	-	T	0.1	0.2	
ME	Portland	68	19	16.6	13.3	3.1	0.2	-	T	-	-	T	0.2	3.3	15.1	70.4	
MD	Baltimore	58	6.1	7.1	3.6	0.1	T	T	T	-	-	T	1.0	3.3	21.4		
MA	Boston	71	12.7	12.0	8.1	0.9	-	-	T	T	T	-	T	1.3	8.2	43.2	
MI	Detroit	50	11.0	9.4	7.1	1.9	T	-	-	-	-	T	0.2	2.5	10.2	41.4	
	Sault Ste. Marie	61	29.3	18.8	14.5	6.0	0.5	T	T	T	T	0.1	2.4	15.8	31.0	117.4	
MN	Duluth	65	17.7	12.3	14.0	6.9	0.7	T	T	T	T	0.1	1.6	12.5	15.9	81.7	
	Minneapolis-St. Paul	66	10.4	8.1	10.7	2.8	0.1	T	T	T	T	0.5	7.6	9.6	49.7		
MS	Jackson	38	0.5	0.2	0.2	T	-	-	-	T	-	-	-	T	0.1	1.0	
MO	Kansas City	74	5.4	4.5	3.4	0.8	T	T	T	T	T	0.1	1.3	4.5	19.9		
	St. Louis	72	5.3	4.6	3.8	0.5	T	T	T	-	-	-	-	T	1.4	4.1	19.5
MT	Great Falls	71	9.3	8.6	10.6	7.2	1.9	0.4	T	0.1	1.5	3.5	7.5	8.3	58.4		
NE	Omaha	73	7.6	6.9	6.2	1.1	0.1	T	T	T	T	0.3	2.6	5.7	30.6		
NV	Reno	59	6.1	5.2	4.2	1.2	0.8	-	-	-	-	0.3	2.5	4.6	24.9		
NH	Concord	67	17.9	14.4	11.5	2.8	0.1	T	-	-	-	T	0.1	3.8	14.5	64.5	
NJ	Atlantic City	59	5.0	5.6	2.5	0.3	T	T	T	-	-	-	T	0.4	2.4	16.2	
NM	Albuquerque	69	2.5	2.1	1.8	0.6	T	T	T	T	T	0.1	1.2	3.0	11.3		
NY	Albany	62	16.9	13.6	11.6	2.8	0.1	T	T	-	T	0.2	3.9	14.9	64.1		
	Buffalo	65	24.2	18.0	12.7	3.2	0.2	T	T	T	T	0.7	10.9	24.4	93.7		
	New York <sup>1</sup>	140	7.7	8.7	5.1	0.9	T	-	T	-	-	-	T	0.9	5.6	28.9	
NC	Charlotte	69	2.2	1.8	1.2	T	T	T	-	-	-	-	T	0.1	0.5	5.8	
	Raleigh	64	2.8	2.6	1.3	T	T	T	-	-	-	-	-	0.1	0.8	7.6	
ND	Bismarck	69	7.6	6.9	8.3	4.0	0.9	T	T	T	T	0.2	1.9	6.8	7.4	43.7	
OH	Cincinnati	61	7.1	5.6	4.2	0.5	-	T	T	T	-	0.3	2.0	3.8	23.5		
	Cleveland	67	14.3	12.6	11.1	2.9	0.1	T	T	-	T	0.6	5.1	12.6	58.9		
	Columbus	61	8.7	6.3	4.8	1.0	T	T	T	-	T	0.1	2.2	5.3	28.2		
OK	Oklahoma City	69	3.2	2.4	1.5	T	T	T	T	T	T	T	0.6	1.9	9.6		
OR	Portland	55	3.2	1.1	0.4	T	-	T	-	-	T	T	-	0.4	1.4	6.5	
PA	Philadelphia	66	6.0	7.0	3.4	0.3	T	T	-	-	-	-	T	0.7	3.4	21	
	Pittsburgh	56	11.8	9.5	8.2	1.8	0.1	T	T	T	T	0.4	3.4	8.3	43.6		
RI	Providence	55	9.6	9.8	7.3	0.7	0.2	-	-	-	-	-	0.1	1.3	7.3	36.4	
SC	Columbia	60	0.6	0.8	0.2	T	T	-	T	T	-	-	-	T	0.3	1.9	
SD	Sioux Falls	63	6.9	8.0	9.4	3.2	T	T	T	T	T	0.9	6.0	7.1	41.2		
TN	Memphis	51	2.2	1.4	0.9	T	T	T	-	-	-	-	T	0.1	0.6	5.1	
	Nashville	62	3.7	3.0	1.5	-	-	-	T	-	-	-	-	0.4	1.4	10.0	
TX	Dallas-Fort Worth	50	1.1	1.0	0.2	T	T	-	-	-	-	-	T	0.1	0.2	2.6	
	El Paso	59	1.3	0.8	0.4	0.3	T	T	T	-	-	T	-	1.0	1.6	5.4	
	Houston	74	0.2	0.2	T	T	T	T	-	-	-	-	-	T	-	0.4	
UT	Salt Lake City	80	13.4	10.0	9.0	4.9	0.6	T	T	T	T	0.1	1.3	6.8	12.2	58.1	
VT	Burlington	65	19.3	17.0	13.9	4.1	0.2	-	T	T	T	0.2	6.6	19.0	79.8		
VA	Norfolk	58	3.0	2.9	1.0	-	T	T	-	T	-	-	-	1.0	7.9		
	Richmond	69	4.9	3.8	2.4	0.1	T	-	T	-	-	-	T	0.4	2.0	13.7	
WA	Seattle-Tacoma	52	4.9	1.6	1.3	0.1	T	-	-	T	-	-	-	1.1	2.4	11.4	
	Spokane	61	15.5	7.4	4.0	0.7	0.1	T	-	-	T	0.4	6.2	14.9	47.8		
WV	Charleston	54	10.6	8.6	5.3	0.9	-	T	T	T	T	0.2	2.4	5.2	33.3		
WI	Milwaukee	68	14.0	9.7	8.4	2.0	0.1	T	T	T	T	0.2	3.0	11.1	47.5		
WY	Cheyenne	73	6.0	6.4	11.8	9.2	3.4	0.2	T	T	1.1	3.8	7.2	6.7	56.1		
PR	San Juan	53	-	-	-	-	-	-	-	-	T	-	-	-	-	-	

- Represents zero. <sup>1</sup> City office data.

Source: U.S. National Oceanic and Atmospheric Administration, Comparative Climatic Data, annual. See also <<http://www.ncdc.noaa.gov/oa/climate/online/ccd/avgnsf.txt>>.

**Table 394. Cloudiness, Average Wind Speed, Heating and Cooling Degree Days, and Average Relative Humidity—Selected Cities**

[Airport data, except as noted. For period of record through 2008, except as noted. M=morning. A=afternoon]

State	Station	Cloudiness-average percentage of days <sup>1</sup>		Average wind speed (miles per hour, m.p.h.)				Heating degree days		Cooling degree days		Average relative humidity (percent)					
		Length of record (yr.)	Annual	Length of record (yr.)	Annual	Jan.	July					Length of record (yr.)	Annual	Jan.		July	
								M	A	M	A			M	A		
AL	Mobile	47	72.1	60	8.8	10.1	6.9	1,681	2,539	46	86	65	81	67	89	68	
AK	Juneau	47	87.9	63	8.2	8.0	7.5	8,574	-	42	80	70	78	75	79	68	
AZ	Phoenix	57	42.5	63	6.2	5.3	7.1	1,027	4,364	48	49	23	63	31	42	20	
AR	Little Rock	35	67.7	66	7.7	8.4	6.7	3,084	2,086	44	82	63	78	66	85	62	
CA	Los Angeles	60	60.0	60	7.5	6.7	7.9	1,274	679	49	79	66	71	61	86	68	
	Sacramento	49	48.5	58	7.8	6.9	8.9	2,666	1,248	22	83	60	90	69	77	29	
	San Diego	55	60.0	68	7.0	6.0	7.5	1,063	866	48	77	63	72	58	82	66	
	San Francisco	68	56.2	81	10.6	7.2	13.6	2,862	142	49	84	63	86	68	86	60	
CO	Denver	61	68.5	52	8.7	8.7	8.3	6,128	696	40	67	40	63	49	67	33	
CT	Hartford	41	77.5	54	8.4	8.9	7.3	6,104	759	49	77	53	72	56	78	51	
DC	Washington	47	73.4	60	9.0	9.8	7.8	4,888	1,125	61	78	55	75	59	79	54	
DE	Washington	48	74.0	60	9.4	10.0	8.3	4,055	1,531	48	75	53	70	55	76	53	
FL	Jacksonville	47	74.2	59	7.8	8.1	7.0	1,354	2,627	72	89	56	87	57	88	58	
	Miami	46	79.5	59	9.2	9.5	7.9	149	4,361	44	83	61	83	59	82	63	
GA	Atlanta	61	70.1	70	9.1	10.4	7.7	2,827	1,810	48	82	56	78	58	87	58	
HI	Honolulu	47	75.3	59	11.2	9.4	13.1	-	4,561	39	72	56	80	61	67	51	
ID	Boise	56	67.1	69	8.7	7.9	8.4	5,727	807	69	69	43	80	70	53	21	
IL	Chicago	37	77.0	50	10.3	11.6	8.4	6,498	830	50	80	65	77	70	81	61	
	Peoria	52	73.7	65	9.8	10.9	7.8	6,097	998	49	82	67	79	72	85	65	
IN	Indianapolis	64	76.2	60	9.6	10.9	7.5	5,521	1,042	49	83	61	81	70	86	59	
IA	Des Moines	46	71.5	59	10.7	11.4	8.9	6,436	1,052	47	79	66	76	70	82	64	
KS	Wichita	39	64.9	55	12.2	11.9	11.2	4,765	1,658	55	79	61	78	66	78	56	
KY	Louisville	47	74.8	61	8.3	9.5	6.8	4,352	1,443	48	81	58	77	64	83	57	
LA	New Orleans	47	72.3	60	8.2	9.3	6.1	1,417	2,773	60	87	67	83	69	90	70	
ME	Portland	54	72.3	68	8.7	9.0	7.6	7,318	347	68	79	59	75	60	79	59	
MD	Baltimore	45	71.2	58	8.7	9.2	7.5	4,720	1,147	55	77	53	72	56	79	52	
MA	Boston	60	73.2	51	12.3	13.7	11.0	5,630	777	44	72	58	68	58	73	57	
MI	Detroit	37	79.5	50	10.2	11.8	8.5	6,422	736	50	81	59	80	69	81	53	
	Sault Ste. Marie	54	81.9	67	9.2	9.6	7.8	9,224	145	67	85	66	81	73	87	61	
MN	Duluth	47	79.2	59	11.0	11.6	9.4	9,724	189	47	81	68	77	73	84	65	
	Minneapolis-St. Paul	57	74.0	70	10.5	10.5	9.4	7,876	699	49	78	64	75	70	79	60	
MS	Jackson	30	69.6	45	6.9	8.2	5.2	2,401	2,264	45	89	65	84	69	92	67	
MO	Kansas City	23	67.1	36	10.6	11.1	9.2	5,249	1,325	36	80	67	76	69	83	67	
	St. Louis	47	72.6	59	9.6	10.6	8.0	4,758	1,561	48	80	64	79	69	82	62	
MT	Great Falls	57	78.4	67	12.5	14.8	10.0	7,828	288	47	68	46	66	60	67	30	
NE	Omaha	49	69.6	72	10.5	10.9	8.8	6,311	1,095	44	80	66	78	69	83	65	
NV	Reno	53	56.7	66	6.6	5.6	7.2	5,600	493	45	68	31	79	50	57	18	
NH	Concord	54	75.3	66	6.7	7.2	5.7	7,478	442	43	81	53	76	58	82	51	
NJ	Atlantic City	37	74.2	50	9.8	10.7	8.3	5,113	935	44	81	56	78	58	82	56	
NM	Albuquerque	56	54.2	69	8.9	8.0	8.9	4,281	1,290	48	58	29	67	39	58	27	
NY	Albany	57	81.1	70	8.9	9.8	7.5	6,860	544	43	80	58	77	63	80	55	
	Buffalo	52	85.2	69	11.8	13.9	10.2	6,692	548	48	80	63	79	72	78	55	
	New York	42	71.0	71	9.1	10.4	7.5	4,754	1,151	74	72	56	67	59	74	55	
NC	Charlotte	49	70.4	59	7.4	7.8	6.6	3,162	1,681	48	82	53	77	54	85	56	
	Raleigh	47	69.9	59	7.5	8.2	6.7	3,465	1,521	44	84	53	78	54	88	57	
ND	Bismarck	56	74.5	69	10.2	10.0	9.2	8,802	471	49	80	63	76	71	82	56	
OH	Cincinnati	44	77.8	61	9.0	10.4	7.2	5,148	1,064	46	82	60	79	68	85	57	
	Cleveland	54	81.9	67	10.5	12.2	8.6	6,121	702	48	79	62	78	70	80	56	
	Columbus	46	80.3	59	8.3	9.8	6.5	5,492	951	49	80	59	77	67	83	55	
OK	Oklahoma City	44	61.9	60	12.2	12.5	10.8	3,663	1,907	43	79	62	76	64	78	58	
OR	Portland	47	81.1	60	7.9	9.9	7.6	4,400	390	68	85	59	85	75	81	44	
PA	Philadelphia	55	74.5	68	9.5	10.3	8.2	4,759	1,235	49	76	54	73	58	77	53	
	Pittsburgh	43	83.8	56	9.0	10.4	7.3	5,829	726	48	80	58	77	66	82	54	
RI	Providence	42	73.2	55	10.4	10.9	9.4	5,754	714	45	75	55	71	56	76	55	
SC	Columbia	48	68.5	60	6.8	7.2	6.3	2,594	2,074	42	86	51	81	53	87	53	
SD	Sioux Falls	50	71.2	60	11.0	10.9	9.8	7,812	747	45	81	67	78	72	83	62	
TN	Memphis	43	67.7	60	8.8	10.0	7.5	3,041	2,187	69	80	61	77	65	83	61	
	Nashville	54	71.8	67	8.0	9.1	6.5	3,677	1,652	43	82	64	77	67	86	64	
TX	Dallas-Fort Worth	42	63.0	55	10.7	11.0	9.7	2,370	2,568	45	79	62	77	65	77	56	
	El Paso	53	47.1	66	8.8	8.3	8.3	2,543	2,254	48	56	27	63	34	60	29	
	Houston	26	75.3	39	7.6	8.1	6.6	1,525	2,893	39	88	68	84	70	90	67	
UT	Salt Lake City	69	65.8	79	8.8	7.5	9.5	5,631	1,066	48	67	43	79	69	50	21	
VT	Burlington	52	84.1	65	9.0	9.7	8.0	7,665	489	43	77	58	73	64	78	53	
VA	Norfolk	47	71.2	60	10.5	11.4	8.9	3,368	1,612	60	78	58	74	58	81	59	
	Richmond	50	72.9	60	7.7	8.1	6.9	3,919	1,435	74	82	53	79	56	84	55	
WA	Seattle-Tacoma	51	84.4	60	8.8	9.5	8.1	4,797	173	49	84	62	82	74	81	49	
	Spokane	48	76.4	61	8.9	8.7	8.6	6,820	394	49	78	52	86	79	64	26	
WV	Charleston	47	82.2	61	5.8	6.9	4.8	4,644	978	61	84	56	78	63	90	59	
WI	Milwaukee	55	75.3	68	11.5	12.6	9.7	7,087	616	48	79	68	75	70	80	65	
WY	Cheyenne	60	71.2	51	12.9	15.1	10.4	7,388	273	49	65	45	57	50	68	37	
PR	San Juan	40	80.0	53	8.3	8.3	9.6	-	5,426	53	81	65	78	67	79	65	

- Represents zero. <sup>1</sup> Percent of days that are either partly cloudy or cloudy. <sup>2</sup> Airport data for sunshine.

Source: U.S. National Oceanic and Atmospheric Administration, *Comparative Climatic Data*, annual. See also

- <<http://www.ncdc.noaa.gov/oa/climate/online/ccd/clpcdy.txt>>; <<http://www.ncdc.noaa.gov/oa/climate/online/ccd/wndspd.txt>>;
- <<http://www.ncdc.noaa.gov/oa/climate/online/ccd/nrmhdd.txt>>; <<http://www.ncdc.noaa.gov/oa/climate/online/ccd/nrmcdd.txt>>;
- <<http://www.ncdc.noaa.gov/oa/climate/online/ccd/reihum.txt>>.