## Table 11.4 Nitrous Oxide Emissions, 1980-2009

(Thousand Metric Tons of Nitrous Oxide)

	Energy Sources			Waste Management			Agricultural Sources					
Year	Mobile Combustion <sup>1</sup>	Stationary Combustion <sup>2</sup>	Total	Waste Combustion	Human Sewage in Wastewater	Total	Nitrogen Fertilization of Soils	Crop Residue Burning	Solid Waste of Domesticated Animals	Total	Industrial Processes <sup>3</sup>	Total
1980	60	44	104	1	10	11	364	1	75	440	88	642
1981	63	44	106	1	10	11	364	2	74	440	84	641
1982	67	42	108	1	10	11	339	2	74	414	80	614
1983	71	43	114	1	11	11	337	1	75	413	79	617
1984	86	45	132	1	11	11	355	2	74	431	87	661
1985	98	46	143	1	11	12	344	2	73	419	88	662
1986	107	45	152	1	11	12	329	2	71	402	86	652
1987	120	46	166	1	12	13	328	1	71	400	90	669
1988	138	48	185	1	12	13	329	1	71	401	95	694
1989	146	49	195	1	12	13	336	1	70	407	98	713
1990	88	47	135	1	12	13	432	1	66	499	96	743
1991	93	46	139	1	13	14	429	1	66	497	98	748
1992	96	47	143	1	13	14	445	2	66	512	95	764
1993	100	48	148	1	13	14	439	1	68	508	100	770
1994	104	48	152	1	13	15	462	2	68	532	110	808
1995	125	49	174	1	13	15	423	1	69	494	110	793
1996	129	51	180	1	14	15	418	2	68	487	115	797
1997	126	51	178	1	14	15	417	2	69	487	72	752
1998	128	51	179	1	14	15	422	2	69	493	57	744
1999	124	51	175	1	15	16	421	2	69	492	56	738
2000	122	53	175	1	15	16	412	2	70	484	56	731
2001	117	51	168	1	15	16	405	2	71	477	46	708
2002	115	51	166	1	15	16	403	2	70	474	50	706
2003	114	51	165	1	15	16	414	2	69	485	45	711
2004	114	52	167	1	15	17	446	2	69	517	45	745
2005	109	53	162	1	16	17	455	2	70	526	45	750
2006	107	52	159	1	16	17	457	2	71	530	46	751
2007	106	52	159	1	16	17	471	2	71	544	47	767
2008	101	51	151	1	16	17	468	2	71	541	41	750
2009	97	46	143	1	16	18	468	2	70	540	36	737

 $<sup>^{\</sup>rm 1}$  Emissions from passenger cars and trucks; air, rail, and marine transportation; and farm and construction equipment.

not included. • Totals may not equal sum of components due to independent rounding. Web Page: For related information, see http://www.eia.gov/environment/.

Sources: U.S. Energy Information Administration (EIA), *Emissions of Greenhouse Gases in the United States 2009* (March 2011), Table 22; and EIA estimates based on the Intergovernmental Panel on Climate Change's *Guidelines for National Greenhouse Gas Inventories* (2006 and revised 1996 guidelines)—see <a href="http://www.ipcc-nggip.iges.or.jp/public/gl/invs6.html">http://www.ipcc-nggip.iges.or.jp/public/gl/invs6.html</a>; and the U.S. Environmental Protection Agency's <a href="http://www.epa.gov/climatechange/emissions/usinventoryreport.html">http://www.epa.gov/climatechange/emissions/usinventoryreport.html</a>.

<sup>&</sup>lt;sup>2</sup> Consumption of coal, petroleum, natural gas, and wood for heat or electricity.

<sup>&</sup>lt;sup>3</sup> Adipic acid production (primarily for the manufacture of nylon fibers and plastics), and nitric acid production (primarily for fertilizers).

Notes: • Data for this table are not available for 2010. • Emissions are from anthropogenic sources. "Anthropogenic" means produced as the result of human activities, including emissions from agricultural activity and domestic livestock. Emissions from natural sources, such as wetlands and wild animals, are