Table 23. Estimated U.S. Emissions of Nitrous Oxide, 1990-2002

Source	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	P2002
Thousand Metric Tons Nitrous Oxide													
Energy													
Mobile Combustion	156	165	175	180	190	200	198	201	203	221	214	215	214
Stationary Combustion	45	44	45	46	46	47	49	49	48	49	50	49	49
Total	**200**	**209**	**220**	**226**	**237**	**247**	**247**	**250**	**251**	**270**	**264**	**263**	**263**
Agriculture													
Nitrogen Fertilization of Soils	604	609	624	613	667	601	587	604	616	613	601	598	583
Crop Residue Burning	2	2	2	1	2	2	2	2	2	2	2	2	2
Solid Waste of Domesticated Animals	209	211	214	216	220	222	220	216	213	211	209	208	207
Total	**814**	**821**	**839**	**831**	**888**	**825**	**809**	**822**	**830**	**826**	**812**	**807**	**791**
Waste Management													
Waste Combustion	1	1	1	1	1	1	1	1	1	1	1	1	1
Human Sewage in Wastewater	16	16	16	16	17	17	17	17	18	18	19	19	19
Total	**17**	**17**	**17**	**17**	**18**	**18**	**18**	**18**	**18**	**19**	**20**	**20**	**20**
Industrial Processes	**96**	**99**	**95**	**100**	**110**	**111**	**116**	**74**	**58**	**58**	**57**	**47**	**50**
Total	**1,128**	**1,146**	**1,171**	**1,174**	**1,253**	**1,200**	**1,190**	**1,164**	**1,158**	**1,173**	**1,153**	**1,138**	**1,125**
Million Metric Tons Carbon Dioxide Equivalent													
Energy													
Mobile Combustion	46.1	48.9	51.7	53.3	56.3	59.2	58.6	59.5	60.0	65.5	63.2	63.5	63.5
Stationary Combustion	13.2	13.1	13.3	13.5	13.7	13.8	14.4	14.5	14.3	14.5	14.9	14.4	14.5
Total	**59.3**	**61.9**	**65.0**	**66.8**	**70.1**	**73.0**	**73.0**	**74.0**	**74.3**	**80.0**	**78.2**	**78.0**	**78.0**
Agriculture													
Nitrogen Fertilization of Soils	178.6	180.1	184.6	181.6	197.4	178.0	173.9	178.9	182.2	181.4	177.7	176.9	172.5
Crop Residue Burning	0.5	0.5	0.5	0.4	0.6	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.5
Solid Waste of Domesticated Animals	62.0	62.5	63.2	64.0	65.0	65.7	65.2	63.9	62.9	62.4	61.9	61.5	61.2
Total	**241.1**	**243.1**	**248.3**	**246.0**	**263.0**	**244.1**	**239.6**	**243.3**	**245.7**	**244.4**	**240.2**	**238.9**	**234.2**
Waste Management													
Waste Combustion	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3
Human Sewage in Wastewater	4.6	4.8	4.8	4.9	5.0	5.0	5.1	5.1	5.2	5.4	5.6	5.6	5.7
Total	**4.9**	**5.0**	**5.1**	**5.1**	**5.3**	**5.3**	**5.4**	**5.4**	**5.4**	**5.7**	**5.9**	**5.9**	**6.0**
Industrial Processes	**28.6**	**29.4**	**28.2**	**29.7**	**32.7**	**32.9**	**34.3**	**21.8**	**17.2**	**17.2**	**17.0**	**14.0**	**14.9**
Total	**333.8**	**339.3**	**346.7**	**347.6**	**371.0**	**355.3**	**352.3**	**344.4**	**342.6**	**347.2**	**341.2**	**336.8**	**333.1**

P = preliminary data.

Notes: Data in this table are revised from the data contained in the previous EIA report, *Emissions of Greenhouse Gases in the United States 2001*, DOE/EIA-0573(2001) (Washington, DC, December 2002). Totals may not equal sum of components due to independent rounding.

Sources: Estimates presented in this chapter. Emissions calculations based on Intergovernmental Panel on Climate Change, *Greenhouse Gas Inventory Reference Manual: Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*, Vol. 3 (Paris, France, 1997), pp. 4.81-4.94, web site www.ipcc.ch/pub/guide.htm; and U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2001*, EPA-430-R-03-004 (Washington, DC, April 2003), web site http://yosemite.epa.gov/oar/globalwarming.nsf/content/ResourceCenterPublicationsGHGEmissionsUSEmissionsInventory2003.html.