

**Table 24. Estimated U.S. Emissions of Nitrous Oxide, 1990 and 1995-2003**

Source	1990	1995	1996	1997	1998	1999	2000	2001	2002	P2003
<b>Thousand Metric Tons Nitrous Oxide</b>										
<b>Energy</b>										
Mobile Combustion .....	139	175	179	176	182	182	182	177	177	178
Stationary Combustion .....	45	47	49	49	48	49	50	49	49	50
<b>Total .....</b>	<b>183</b>	<b>222</b>	<b>227</b>	<b>225</b>	<b>230</b>	<b>231</b>	<b>232</b>	<b>226</b>	<b>226</b>	<b>228</b>
<b>Agriculture</b>										
Nitrogen Fertilization of Soils .....	604	601	587	604	616	613	601	598	586	581
Crop Residue Burning .....	2	2	2	2	2	2	2	2	2	2
Solid Waste of Domesticated Animals ..	209	222	220	216	212	211	209	208	207	205
<b>Total .....</b>	<b>814</b>	<b>825</b>	<b>809</b>	<b>822</b>	<b>830</b>	<b>825</b>	<b>811</b>	<b>807</b>	<b>795</b>	<b>788</b>
<b>Waste Management</b>										
Waste Combustion .....	1	1	1	1	1	1	1	1	1	1
Human Sewage in Wastewater .....	16	17	17	17	18	18	19	19	19	19
<b>Total .....</b>	<b>16</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>
<b>Industrial Processes .....</b>	<b>96</b>	<b>111</b>	<b>116</b>	<b>74</b>	<b>58</b>	<b>57</b>	<b>56</b>	<b>47</b>	<b>51</b>	<b>45</b>
<b>Total .....</b>	<b>1,110</b>	<b>1,175</b>	<b>1,170</b>	<b>1,138</b>	<b>1,137</b>	<b>1,132</b>	<b>1,119</b>	<b>1,100</b>	<b>1,092</b>	<b>1,082</b>
<b>Million Metric Tons Carbon Dioxide Equivalent</b>										
<b>Energy</b>										
Mobile Combustion .....	41.1	51.9	52.9	52.1	53.8	54.0	53.8	52.5	52.3	52.7
Stationary Combustion .....	13.2	13.8	14.4	14.5	14.3	14.5	14.9	14.4	14.6	14.8
<b>Total .....</b>	<b>54.2</b>	<b>65.7</b>	<b>67.3</b>	<b>66.6</b>	<b>68.2</b>	<b>68.5</b>	<b>68.7</b>	<b>66.9</b>	<b>66.8</b>	<b>67.5</b>
<b>Agriculture</b>										
Nitrogen Fertilization of Soils .....	178.6	178.0	173.9	178.9	182.2	181.4	177.7	176.9	173.5	172.1
Crop Residue Burning .....	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.5	0.5
Solid Waste of Domesticated Animals ..	61.9	65.6	65.1	63.8	62.9	62.4	61.8	61.4	61.2	60.7
<b>Total .....</b>	<b>241.0</b>	<b>244.1</b>	<b>239.5</b>	<b>243.2</b>	<b>245.7</b>	<b>244.3</b>	<b>240.1</b>	<b>238.9</b>	<b>235.2</b>	<b>233.3</b>
<b>Waste Management</b>										
Waste Combustion .....	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Human Sewage in Wastewater .....	4.6	5.0	5.1	5.1	5.2	5.4	5.6	5.6	5.7	5.8
<b>Total .....</b>	<b>4.8</b>	<b>5.3</b>	<b>5.4</b>	<b>5.4</b>	<b>5.4</b>	<b>5.6</b>	<b>5.8</b>	<b>5.9</b>	<b>5.9</b>	<b>6.0</b>
<b>Industrial Processes .....</b>	<b>28.6</b>	<b>32.9</b>	<b>34.3</b>	<b>21.8</b>	<b>17.2</b>	<b>16.8</b>	<b>16.6</b>	<b>14.0</b>	<b>15.2</b>	<b>13.4</b>
<b>Total .....</b>	<b>328.7</b>	<b>347.9</b>	<b>346.5</b>	<b>337.0</b>	<b>336.4</b>	<b>335.2</b>	<b>331.2</b>	<b>325.6</b>	<b>323.2</b>	<b>320.2</b>

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 2002*, DOE/EIA-0573(2002) (Washington, DC, October 2003). 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](http://www.ipcc.ch/pub/guide.htm); and U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2002*, EPA-430-R-04-003 (Washington, DC, April 2004), web site <http://yosemite.epa.gov/oar/globalwarming.nsf/content/ResourceCenterPublicationsGHGEmissionsUSEmissionsInventory2004.html>.