

California Greenhouse Gas Inventory (millions of metric tonnes of CO<sub>2</sub> equivalent) — By IPCC Category

Last Updated: November 19, 2007

|  | 1990          | 1991          | 1992          | 1993          | 1994          | 1995          | 1996          | 1997          | 1998          | 1999          | 2000          | 2001          | 2002          | 2003          | 2004          |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <i>(CO<sub>2</sub> equivalence based upon IPCC Fourth Assessment Report's Global Warming Potentials)</i> |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| <b>Categories Included in the Inventory.</b>   |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| <b>1 - Energy</b>  | <b>387.00</b> | <b>372.63</b> | <b>374.15</b> | <b>369.89</b> | <b>380.76</b> | <b>367.84</b> | <b>364.91</b> | <b>381.33</b> | <b>395.93</b> | <b>401.55</b> | <b>400.11</b> | <b>416.28</b> | <b>407.81</b> | <b>405.34</b> | <b>421.38</b> |
| <b>1A - Fuel Combustion Activities</b>   | <b>381.19</b> | <b>366.93</b> | <b>368.89</b> | <b>364.39</b> | <b>375.52</b> | <b>363.02</b> | <b>359.89</b> | <b>376.34</b> | <b>391.00</b> | <b>396.61</b> | <b>395.28</b> | <b>411.35</b> | <b>402.79</b> | <b>400.31</b> | <b>416.28</b> |
| <b>1A1 - Energy Industries</b>   | <b>157.34</b> | <b>150.29</b> | <b>151.31</b> | <b>151.48</b> | <b>157.36</b> | <b>145.41</b> | <b>140.99</b> | <b>154.50</b> | <b>159.56</b> | <b>157.38</b> | <b>152.50</b> | <b>167.89</b> | <b>152.26</b> | <b>159.84</b> | <b>166.44</b> |
| 1A1a - Main Activity Electricity and Heat Production   | 115.844       | 108.838       | 110.639       | 112.936       | 120.612       | 106.525       | 99.200        | 108.157       | 115.070       | 116.793       | 111.602       | 124.900       | 111.234       | 115.680       | 123.201       |
| 1A1ai - Electricity Generation   | 90.499        | 83.080        | 82.392        | 84.048        | 91.231        | 77.385        | 68.649        | 77.445        | 83.177        | 84.459        | 79.120        | 95.666        | 78.490        | 86.011        | 93.109        |
| 1A1aii - Combined Heat and Power Generation (CHP)  | 25.346        | 25.758        | 28.247        | 28.888        | 29.380        | 29.140        | 30.551        | 30.712        | 31.893        | 32.333        | 32.482        | 29.235        | 32.745        | 29.669        | 30.092        |
| 1A1b - Petroleum Refining  | 27.635        | 28.216        | 27.326        | 27.711        | 27.038        | 26.483        | 28.620        | 28.137        | 28.694        | 26.827        | 28.027        | 28.105        | 28.840        | 29.850        | 29.112        |
| 1A1c - Manufacture of Solid Fuels and Other Energy Industries  | 13.858        | 13.239        | 13.345        | 10.835        | 9.712         | 12.399        | 13.170        | 18.207        | 15.798        | 13.761        | 12.872        | 14.887        | 12.186        | 14.310        | 14.122        |
| 1A1cii - Other Energy Industries   | 13.858        | 13.239        | 13.345        | 10.835        | 9.712         | 12.399        | 13.170        | 18.207        | 15.798        | 13.761        | 12.872        | 14.887        | 12.186        | 14.310        | 14.122        |
| <b>1A2 - Manufacturing Industries and Construction</b>   | <b>24.24</b>  | <b>22.14</b>  | <b>20.29</b>  | <b>19.74</b>  | <b>20.94</b>  | <b>20.76</b>  | <b>20.04</b>  | <b>20.41</b>  | <b>21.60</b>  | <b>22.32</b>  | <b>23.56</b>  | <b>23.95</b>  | <b>20.68</b>  | <b>18.66</b>  | <b>19.46</b>  |
| 1A2c - Chemicals   | 0.961         | 0.857         | 0.659         | 0.529         | 0.612         | 0.602         | 0.633         | 0.536         | 0.724         | 0.572         | 0.700         | 0.602         | 1.110         | 0.663         | 0.677         |
| 1A2d - Pulp, Paper and Print   | 1.915         | 1.652         | 1.158         | 1.282         | 1.681         | 1.723         | 1.993         | 1.627         | 1.628         | 1.506         | 1.385         | 1.685         | 1.129         | 1.045         | 1.115         |
| 1A2e - Food Processing, Beverages and Tobacco  | 3.072         | 3.266         | 3.230         | 3.282         | 3.255         | 3.157         | 3.126         | 3.146         | 3.530         | 3.637         | 3.599         | 3.305         | 3.457         | 3.172         | 3.397         |
| 1A2f - Non-Metallic Minerals   | 5.125         | 4.956         | 4.942         | 4.874         | 4.849         | 4.845         | 5.047         | 5.189         | 5.393         | 5.369         | 5.495         | 5.455         | 5.361         | 5.320         | 5.402         |
| 1A2g - Transport Equipment   | 0.534         | 0.531         | 0.528         | 0.513         | 0.514         | 0.474         | 0.434         | 0.446         | 0.487         | 0.511         | 0.500         | 0.457         | 0.419         | 0.293         | 0.259         |
| 1A2h - Machinery   | 1.334         | 1.243         | 1.168         | 1.172         | 1.143         | 1.160         | 1.199         | 1.233         | 1.316         | 1.294         | 1.246         | 1.146         | 1.185         | 1.029         | 1.086         |
| 1A2i - Mining (excluding fuels) and Quarrying  | 0.028         | 0.031         | 0.041         | 0.036         | 0.038         | 0.308         | 0.344         | 0.325         | 0.318         | 0.321         | 0.331         | 0.309         | 0.300         | 0.332         | 0.103         |
| 1A2j - Wood and Wood Products  | 0.236         | 0.219         | 0.232         | 0.255         | 0.261         | 0.397         | 0.351         | 0.306         | 0.312         | 0.303         | 0.302         | 0.336         | 0.163         | 0.138         | 0.109         |
| 1A2k - Construction  | 0.667         | 0.653         | 0.628         | 0.635         | 0.638         | 0.635         | 0.643         | 0.657         | 0.678         | 0.651         | 0.643         | 0.581         | 0.605         | 0.623         | 0.763         |
| 1A2l - Textile and Leather   | 0.378         | 0.349         | 0.354         | 0.391         | 0.427         | 0.432         | 0.451         | 0.478         | 0.516         | 0.560         | 0.571         | 0.480         | 0.576         | 0.565         | 0.564         |
| 1A2m - Non-specified Industry.   | 9.049         | 7.485         | 6.597         | 6.010         | 6.668         | 6.242         | 4.994         | 5.628         | 5.820         | 6.713         | 7.881         | 8.805         | 5.683         | 4.772         | 5.504         |
| <b>1A3 - Transport</b>   | <b>149.95</b> | <b>145.92</b> | <b>152.13</b> | <b>147.98</b> | <b>150.34</b> | <b>153.94</b> | <b>155.50</b> | <b>157.78</b> | <b>160.99</b> | <b>165.40</b> | <b>169.24</b> | <b>173.19</b> | <b>179.33</b> | <b>175.21</b> | <b>181.87</b> |
| 1A3a - Civil Aviation  | 5.132         | 4.688         | 4.093         | 3.671         | 3.881         | 4.013         | 4.212         | 3.915         | 3.887         | 3.748         | 3.512         | 4.183         | 3.417         | 3.055         | 3.059         |
| 1A3aii - Domestic Aviation   | 5.113         | 4.669         | 4.079         | 3.658         | 3.868         | 4.003         | 4.202         | 3.906         | 3.877         | 3.736         | 3.500         | 4.173         | 3.374         | 3.011         | 3.016         |
| 1A3b - Road Transportation   | 137.917       | 134.409       | 141.661       | 139.340       | 140.366       | 143.469       | 144.969       | 148.280       | 151.223       | 155.785       | 159.245       | 162.188       | 168.905       | 165.395       | 171.427       |
| 1A3bi - Cars   | 63.712        | 62.318        | 65.606        | 63.542        | 62.530        | 62.917        | 62.865        | 63.200        | 63.239        | 63.845        | 65.412        | 65.220        | 66.979        | 62.011        | 63.051        |
| 1A3bii - Light-duty Trucks   | 44.714        | 44.512        | 47.640        | 48.122        | 48.854        | 50.669        | 51.960        | 53.884        | 56.218        | 58.924        | 60.513        | 63.600        | 67.931        | 67.968        | 72.080        |
| 1A3biii - Heavy-duty Trucks and Buses  | 29.027        | 27.120        | 27.993        | 27.283        | 28.610        | 29.515        | 29.762        | 30.882        | 31.459        | 32.701        | 32.998        | 32.984        | 33.549        | 34.816        | 35.646        |
| 1A3biv - Motorcycles   | 0.428         | 0.422         | 0.389         | 0.357         | 0.329         | 0.328         | 0.324         | 0.252         | 0.238         | 0.237         | 0.244         | 0.319         | 0.361         | 0.526         | 0.585         |
| 1A3c - Railways  | 2.331         | 2.463         | 2.236         | 1.970         | 2.131         | 2.428         | 2.593         | 2.567         | 2.699         | 2.798         | 3.067         | 2.900         | 3.041         | 2.785         | 3.189         |
| 1A3d - Water-borne Navigation  | 2.208         | 2.258         | 2.300         | 2.345         | 2.427         | 2.489         | 2.562         | 2.653         | 2.743         | 2.837         | 2.937         | 3.038         | 3.146         | 3.255         | 3.367         |
| 1A3di - International Water-borne Navigation (International Bunkers)                                     | 0.548         | 0.579         | 0.611         | 0.644         | 0.683         | 0.724         | 0.766         | 0.809         | 0.854         | 0.901         | 0.950         | 1.001         | 1.055         | 1.110         | 1.169         |
| 1A3dii - Domestic Water-borne Navigation   | 1.660         | 1.679         | 1.690         | 1.701         | 1.744         | 1.766         | 1.797         | 1.844         | 1.888         | 1.935         | 1.986         | 2.036         | 2.091         | 2.145         | 2.199         |
| <b>1A4 - Other Sectors</b>   | <b>48.28</b>  | <b>47.80</b>  | <b>44.46</b>  | <b>44.46</b>  | <b>46.06</b>  | <b>42.21</b>  | <b>42.69</b>  | <b>43.04</b>  | <b>48.50</b>  | <b>50.68</b>  | <b>49.02</b>  | <b>45.50</b>  | <b>44.92</b>  | <b>44.01</b>  | <b>46.36</b>  |
| 1A4a - Commercial/Institutional  | 14.036        | 13.612        | 11.479        | 11.118        | 11.719        | 11.202        | 11.178        | 11.303        | 12.297        | 12.964        | 12.802        | 11.515        | 11.432        | 11.916        | 12.340        |
| 1A4b - Residential   | 29.740        | 30.322        | 28.651        | 29.146        | 29.867        | 27.274        | 27.380        | 26.777        | 31.471        | 32.263        | 30.660        | 28.640        | 28.575        | 27.971        | 29.153        |
| 1A4c - Agriculture/Forestry/Fishing/Fish Farms   | 4.507         | 3.862         | 4.332         | 4.198         | 4.478         | 3.733         | 4.133         | 4.961         | 4.733         | 5.448         | 5.555         | 5.348         | 4.913         | 4.125         | 4.862         |
| <b>1A5 - Non-Specified</b>   | <b>1.38</b>   | <b>0.78</b>   | <b>0.69</b>   | <b>0.73</b>   | <b>0.82</b>   | <b>0.70</b>   | <b>0.68</b>   | <b>0.60</b>   | <b>0.35</b>   | <b>0.84</b>   | <b>0.95</b>   | <b>0.82</b>   | <b>5.61</b>   | <b>2.60</b>   | <b>2.16</b>   |
| <b>1B - Fugitive Emissions from Fuels</b>  | <b>5.81</b>   | <b>5.70</b>   | <b>5.26</b>   | <b>5.49</b>   | <b>5.24</b>   | <b>4.82</b>   | <b>5.02</b>   | <b>4.99</b>   | <b>4.93</b>   | <b>4.95</b>   | <b>4.83</b>   | <b>4.92</b>   | <b>5.02</b>   | <b>5.03</b>   | <b>5.10</b>   |
| <b>1B2 - Oil and Natural Gas</b>   | <b>3.50</b>   | <b>3.36</b>   | <b>2.94</b>   | <b>3.14</b>   | <b>3.08</b>   | <b>3.01</b>   | <b>3.07</b>   | <b>2.98</b>   | <b>2.89</b>   | <b>2.88</b>   | <b>2.88</b>   | <b>3.00</b>   | <b>2.95</b>   | <b>2.98</b>   | <b>3.03</b>   |
| 1B2a - Oil   | 0.166         | 0.093         | 0.086         | 0.079         | 0.080         | 0.085         | 0.065         | 0.052         | 0.053         | 0.069         | 0.064         | 0.030         | 0.035         | 0.035         | 0.035         |
| 1B2aiii - All Other  | 0.166         | 0.093         | 0.086         | 0.079         | 0.080         | 0.085         | 0.065         | 0.052         | 0.053         | 0.069         | 0.064         | 0.030         | 0.035         | 0.035         | 0.035         |
| 1B2b - Natural Gas   | 1.792         | 1.763         | 1.731         | 1.712         | 1.691         | 1.662         | 1.612         | 1.570         | 1.529         | 1.494         | 1.504         | 1.533         | 1.552         | 1.584         | 1.612         |
| <b>1B3 - Other Emissions from Energy Production</b>  | <b>2.31</b>   | <b>2.34</b>   | <b>2.33</b>   | <b>2.35</b>   | <b>2.15</b>   | <b>1.80</b>   | <b>1.95</b>   | <b>2.01</b>   | <b>2.03</b>   | <b>2.06</b>   | <b>1.95</b>   | <b>1.93</b>   | <b>2.07</b>   | <b>2.05</b>   | <b>2.07</b>   |

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|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>2 - Industrial Processes and Product Use</b>                        | <b>18.32</b> | <b>17.36</b> | <b>16.98</b> | <b>18.09</b> | <b>18.95</b> | <b>20.87</b> | <b>22.63</b> | <b>24.76</b> | <b>26.42</b> | <b>27.33</b> | <b>28.93</b> | <b>28.94</b> | <b>30.31</b> | <b>31.52</b> | <b>32.80</b> |
| <b>2A - Mineral Industry</b>   | <b>4.85</b>  | <b>4.85</b>  | <b>4.85</b>  | <b>4.82</b>  | <b>4.85</b>  | <b>4.89</b>  | <b>5.01</b>  | <b>5.15</b>  | <b>5.28</b>  | <b>5.42</b>  | <b>5.57</b>  | <b>5.65</b>  | <b>5.73</b>  | <b>5.82</b>  | <b>5.90</b>  |
| 2A1 - Cement Production  | 4.62         | 4.64         | 4.66         | 4.68         | 4.70         | 4.72         | 4.86         | 5.00         | 5.15         | 5.29         | 5.43         | 5.52         | 5.60         | 5.68         | 5.77         |
| 2A2 - Lime Production  | 0.23         | 0.21         | 0.19         | 0.14         | 0.15         | 0.17         | 0.15         | 0.15         | 0.14         | 0.14         | 0.14         | 0.14         | 0.13         | 0.13         | 0.13         |
| <b>2B - Chemical Industry</b>  | <b>2.32</b>  | <b>1.91</b>  | <b>1.79</b>  | <b>1.51</b>  | <b>1.66</b>  | <b>1.61</b>  | <b>1.26</b>  | <b>1.21</b>  | <b>1.40</b>  | <b>1.21</b>  | <b>1.37</b>  | <b>1.18</b>  | <b>1.23</b>  | <b>1.25</b>  | <b>1.31</b>  |
| 2B2 - Nitric Acid Production   | 0.51         | 0.52         | 0.53         | 0.37         | 0.42         | 0.47         | 0.28         | 0.28         | 0.27         | 0.26         | 0.26         | 0.21         | 0.23         | 0.22         | 0.22         |
| <b>2D - Non-Energy Products from Fuels and Solvent Use</b>             | <b>2.29</b>  | <b>1.92</b>  | <b>2.03</b>  | <b>2.04</b>  | <b>1.90</b>  | <b>1.78</b>  | <b>1.58</b>  | <b>1.63</b>  | <b>1.92</b>  | <b>2.18</b>  | <b>1.85</b>  | <b>1.64</b>  | <b>1.78</b>  | <b>1.56</b>  | <b>1.37</b>  |
| 2D1 - Lubricant Use  | 1.13         | 1.01         | 1.03         | 1.05         | 1.10         | 1.08         | 1.05         | 1.11         | 1.16         | 1.17         | 1.15         | 1.06         | 1.04         | 0.96         | 0.98         |
| 2D2 - Paraffin Wax Use   | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         |
| 2D4 - Other (please specify)   | 1.16         | 0.91         | 1.00         | 0.99         | 0.80         | 0.70         | 0.53         | 0.52         | 0.76         | 1.01         | 0.70         | 0.58         | 0.74         | 0.59         | 0.39         |
| <b>2E - Electronics Industry</b>                                       | <b>0.71</b>  | <b>0.71</b>  | <b>0.71</b>  | <b>0.88</b>  | <b>0.98</b>  | <b>1.23</b>  | <b>1.35</b>  | <b>1.54</b>  | <b>1.72</b>  | <b>1.71</b>  | <b>1.47</b>  | <b>1.03</b>  | <b>0.99</b>  | <b>0.97</b>  | <b>1.06</b>  |
| <b>2F - Product Uses as Substitutes for Ozone Depleting Substances</b> | <b>0.04</b>  | <b>0.08</b>  | <b>0.41</b>  | <b>1.03</b>  | <b>2.05</b>  | <b>4.32</b>  | <b>6.04</b>  | <b>7.77</b>  | <b>8.90</b>  | <b>10.00</b> | <b>11.02</b> | <b>12.13</b> | <b>13.32</b> | <b>14.59</b> | <b>15.87</b> |
| <b>2G - Other Product Manufacture and Use</b>                          | <b>3.07</b>  | <b>2.78</b>  | <b>2.55</b>  | <b>2.93</b>  | <b>2.71</b>  | <b>2.30</b>  | <b>2.44</b>  | <b>2.20</b>  | <b>1.90</b>  | <b>1.87</b>  | <b>1.68</b>  | <b>1.62</b>  | <b>1.60</b>  | <b>1.52</b>  | <b>1.55</b>  |
| 2G1 - Electrical Equipment   | 2.46         | 2.21         | 2.00         | 2.37         | 2.12         | 1.64         | 1.78         | 1.58         | 1.27         | 1.20         | 1.09         | 1.09         | 1.00         | 0.98         | 0.97         |
| 2G1b - Use of Electrical Equipment                                     | 2.458        | 2.207        | 1.996        | 2.370        | 2.120        | 1.645        | 1.778        | 1.580        | 1.272        | 1.204        | 1.088        | 1.092        | 1.000        | 0.984        | 0.971        |
| 2G4 - Other (Please specify)   | 0.61         | 0.58         | 0.56         | 0.56         | 0.59         | 0.65         | 0.66         | 0.62         | 0.62         | 0.66         | 0.60         | 0.53         | 0.60         | 0.54         | 0.58         |
| <b>2H - Other</b>  | <b>5.05</b>  | <b>5.12</b>  | <b>4.65</b>  | <b>4.88</b>  | <b>4.80</b>  | <b>4.76</b>  | <b>4.95</b>  | <b>5.25</b>  | <b>5.31</b>  | <b>4.93</b>  | <b>5.96</b>  | <b>5.69</b>  | <b>5.65</b>  | <b>5.81</b>  | <b>5.74</b>  |
| 2H3 - Other (please specify)   | 5.05         | 5.12         | 4.65         | 4.88         | 4.80         | 4.76         | 4.95         | 5.25         | 5.31         | 4.93         | 5.96         | 5.69         | 5.65         | 5.81         | 5.74         |
| <b>3 - Agriculture, Forestry and Other Land Use</b>                    | <b>21.06</b> | <b>20.26</b> | <b>20.62</b> | <b>20.36</b> | <b>20.99</b> | <b>22.10</b> | <b>21.04</b> | <b>21.12</b> | <b>20.94</b> | <b>22.09</b> | <b>23.02</b> | <b>23.08</b> | <b>25.44</b> | <b>25.72</b> | <b>25.61</b> |
| <b>3A - Livestock</b>  | <b>13.76</b> | <b>13.64</b> | <b>13.87</b> | <b>13.22</b> | <b>13.92</b> | <b>14.32</b> | <b>13.40</b> | <b>14.02</b> | <b>13.89</b> | <b>14.82</b> | <b>15.09</b> | <b>15.67</b> | <b>16.19</b> | <b>16.58</b> | <b>16.42</b> |
| <b>3A1 - Enteric Fermentation</b>                                      | <b>7.94</b>  | <b>7.71</b>  | <b>7.82</b>  | <b>7.41</b>  | <b>7.72</b>  | <b>7.84</b>  | <b>7.32</b>  | <b>7.50</b>  | <b>7.49</b>  | <b>7.86</b>  | <b>7.95</b>  | <b>8.09</b>  | <b>8.32</b>  | <b>8.42</b>  | <b>8.35</b>  |
| 3A1a - Cattle  | 7.441        | 7.203        | 7.318        | 6.927        | 7.204        | 7.330        | 6.829        | 7.018        | 7.021        | 7.384        | 7.478        | 7.622        | 7.853        | 7.966        | 7.901        |
| 3A1ai - Dairy Cows   | 4.324        | 4.424        | 4.551        | 4.221        | 4.538        | 4.609        | 4.231        | 4.469        | 4.499        | 4.821        | 5.005        | 5.195        | 5.436        | 5.550        | 5.578        |
| 3A1aii - Other Cattle  | 3.117        | 2.779        | 2.767        | 2.706        | 2.666        | 2.721        | 2.598        | 2.548        | 2.523        | 2.563        | 2.473        | 2.427        | 2.417        | 2.416        | 2.323        |
| 3A1c - Sheep   | 0.200        | 0.203        | 0.199        | 0.179        | 0.216        | 0.204        | 0.184        | 0.176        | 0.160        | 0.166        | 0.162        | 0.161        | 0.151        | 0.146        | 0.136        |
| 3A1d - Goats   | 0.004        | 0.004        | 0.004        | 0.005        | 0.005        | 0.006        | 0.006        | 0.006        | 0.008        | 0.009        | 0.010        | 0.012        | 0.013        | 0.013        | 0.013        |
| 3A1f - Horses  | 0.286        | 0.287        | 0.288        | 0.289        | 0.288        | 0.289        | 0.290        | 0.290        | 0.291        | 0.295        | 0.295        | 0.295        | 0.295        | 0.295        | 0.295        |
| 3A1h - Swine   | 0.007        | 0.008        | 0.010        | 0.010        | 0.010        | 0.009        | 0.008        | 0.008        | 0.008        | 0.007        | 0.006        | 0.004        | 0.006        | 0.005        | 0.005        |
| <b>3A2 - Manure Management</b>   | <b>5.82</b>  | <b>5.93</b>  | <b>6.05</b>  | <b>5.81</b>  | <b>6.20</b>  | <b>6.48</b>  | <b>6.08</b>  | <b>6.52</b>  | <b>6.41</b>  | <b>6.96</b>  | <b>7.14</b>  | <b>7.57</b>  | <b>7.87</b>  | <b>8.15</b>  | <b>8.07</b>  |
| 3A2a - Cattle  | 5.454        | 5.562        | 5.666        | 5.450        | 5.836        | 6.134        | 5.752        | 6.188        | 6.107        | 6.655        | 6.869        | 7.314        | 7.604        | 7.897        | 7.830        |
| 3A2ai - Dairy Cows   | 5.116        | 5.264        | 5.392        | 5.155        | 5.573        | 5.854        | 5.509        | 5.931        | 5.843        | 6.383        | 6.590        | 7.018        | 7.299        | 7.586        | 7.524        |
| 3A2aii - Other Cattle  | 0.338        | 0.298        | 0.274        | 0.295        | 0.263        | 0.280        | 0.243        | 0.257        | 0.264        | 0.272        | 0.279        | 0.297        | 0.305        | 0.311        | 0.306        |
| 3A2c - Sheep   | 0.022        | 0.022        | 0.021        | 0.019        | 0.023        | 0.022        | 0.020        | 0.019        | 0.017        | 0.018        | 0.017        | 0.017        | 0.016        | 0.016        | 0.015        |
| 3A2d - Goats   | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        | 0.000        | 0.001        | 0.001        | 0.001        | 0.001        | 0.001        | 0.001        | 0.001        |
| 3A2f - Horses  | 0.042        | 0.042        | 0.042        | 0.042        | 0.042        | 0.032        | 0.032        | 0.032        | 0.033        | 0.032        | 0.026        | 0.026        | 0.026        | 0.026        | 0.026        |
| 3A2h - Swine   | 0.080        | 0.090        | 0.113        | 0.109        | 0.108        | 0.107        | 0.093        | 0.094        | 0.084        | 0.079        | 0.062        | 0.048        | 0.065        | 0.061        | 0.062        |
| 3A2i - Poultry   | 0.223        | 0.217        | 0.205        | 0.188        | 0.189        | 0.187        | 0.185        | 0.189        | 0.164        | 0.170        | 0.167        | 0.166        | 0.160        | 0.150        | 0.135        |
| <b>3B - Land</b>   | <b>0.22</b>  | <b>0.22</b>  | <b>0.22</b>  | <b>0.22</b>  | <b>0.22</b>  | <b>0.22</b>  | <b>0.22</b>  | <b>0.22</b>  | <b>0.22</b>  | <b>0.22</b>  | <b>0.22</b>  | <b>0.22</b>  | <b>0.22</b>  | <b>0.22</b>  | <b>0.22</b>  |
| 3B1 - Forest Land  | 0.22         | 0.22         | 0.22         | 0.22         | 0.22         | 0.22         | 0.22         | 0.22         | 0.22         | 0.22         | 0.22         | 0.22         | 0.22         | 0.22         | 0.22         |
| <b>3C - Aggregate Sources and Non-CO2 Emissions Sources on Land</b>    | <b>7.08</b>  | <b>6.39</b>  | <b>6.53</b>  | <b>6.92</b>  | <b>6.85</b>  | <b>7.56</b>  | <b>7.42</b>  | <b>6.87</b>  | <b>6.83</b>  | <b>7.05</b>  | <b>7.70</b>  | <b>7.19</b>  | <b>9.03</b>  | <b>8.93</b>  | <b>8.97</b>  |
| <b>3C1 - Emissions from Biomass Burning</b>                            | <b>0.13</b>  | <b>0.12</b>  | <b>0.11</b>  | <b>0.12</b>  | <b>0.11</b>  | <b>0.11</b>  | <b>0.10</b>  | <b>0.09</b>  | <b>0.09</b>  | <b>0.09</b>  | <b>0.10</b>  | <b>0.08</b>  | <b>0.08</b>  | <b>0.08</b>  | <b>0.09</b>  |
| 3C1b - Biomass Burning in Croplands                                    | 0.127        | 0.115        | 0.109        | 0.116        | 0.113        | 0.108        | 0.103        | 0.090        | 0.092        | 0.091        | 0.096        | 0.081        | 0.082        | 0.085        | 0.086        |
| <b>3C2 - Liming</b>  | <b>0.07</b>  | <b>0.10</b>  | <b>0.11</b>  | <b>0.07</b>  | <b>0.16</b>  | <b>0.27</b>  | <b>0.27</b>  | <b>0.35</b>  | <b>0.25</b>  | <b>0.30</b>  | <b>0.27</b>  | <b>0.16</b>  | <b>0.23</b>  | <b>0.24</b>  | <b>0.24</b>  |
| <b>3C4 - Direct N2O Emissions from Managed Soils</b>                   | <b>5.00</b>  | <b>4.51</b>  | <b>4.55</b>  | <b>4.79</b>  | <b>4.66</b>  | <b>5.08</b>  | <b>4.95</b>  | <b>4.47</b>  | <b>4.55</b>  | <b>4.65</b>  | <b>5.07</b>  | <b>4.84</b>  | <b>6.13</b>  | <b>6.05</b>  | <b>5.99</b>  |
| <b>3C5 - Indirect N2O Emissions from Managed Soils</b>                 | <b>1.39</b>  | <b>1.24</b>  | <b>1.28</b>  | <b>1.39</b>  | <b>1.32</b>  | <b>1.53</b>  | <b>1.48</b>  | <b>1.33</b>  | <b>1.37</b>  | <b>1.39</b>  | <b>1.59</b>  | <b>1.52</b>  | <b>1.93</b>  | <b>1.93</b>  | <b>1.92</b>  |

## California Greenhouse Gas Inventory (millions of metric tonnes of CO2 equivalent) — By IPCC Category

Last Updated: November 19, 2007

|   | 1990  | 1991  | 1992  | 1993  | 1994  | 1995  | 1996  | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 3C7 - Rice Cultivations                             | 0.49  | 0.43  | 0.49  | 0.54  | 0.60  | 0.57  | 0.62  | 0.64  | 0.57  | 0.62  | 0.68  | 0.58  | 0.65  | 0.63  | 0.73  |
| 4 - Waste   | 11.03 | 10.77 | 11.08 | 11.21 | 11.31 | 10.80 | 10.73 | 10.72 | 10.98 | 11.03 | 10.85 | 10.99 | 10.92 | 11.03 | 11.00 |
| 4A - Solid Waste Disposal                           | 7.45  | 7.13  | 7.39  | 7.47  | 7.49  | 6.99  | 6.87  | 6.81  | 7.03  | 6.98  | 6.72  | 6.79  | 6.69  | 6.76  | 6.69  |
| 4A1 - Managed Waste Disposal Sites                  | 7.45  | 7.13  | 7.39  | 7.47  | 7.49  | 6.99  | 6.87  | 6.81  | 7.03  | 6.98  | 6.72  | 6.79  | 6.69  | 6.76  | 6.69  |
| 4D - Wastewater Treatment and Discharge             | 3.58  | 3.64  | 3.69  | 3.74  | 3.81  | 3.81  | 3.86  | 3.91  | 3.94  | 4.06  | 4.13  | 4.20  | 4.23  | 4.27  | 4.31  |
| 4D1 - Domestic Wastewater Treatment and Discharge   | 3.18  | 3.26  | 3.32  | 3.36  | 3.40  | 3.41  | 3.44  | 3.50  | 3.55  | 3.63  | 3.68  | 3.77  | 3.73  | 3.81  | 3.84  |
| 4D2 - Industrial Wastewater Treatment and Discharge | 0.40  | 0.38  | 0.36  | 0.38  | 0.41  | 0.39  | 0.41  | 0.41  | 0.39  | 0.43  | 0.46  | 0.43  | 0.49  | 0.46  | 0.47  |

**Summary of Categories Included in the Inventory.***(using IPCC Fourth Assessment Report's GWPs)*

|  | 1990          | 1991          | 1992          | 1993          | 1994          | 1995          | 1996          | 1997          | 1998          | 1999          | 2000          | 2001          | 2002          | 2003          | 2004          |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>Gross California Emissions</b>        | <b>437.41</b> | <b>421.01</b> | <b>422.83</b> | <b>419.55</b> | <b>432.01</b> | <b>421.61</b> | <b>419.32</b> | <b>437.93</b> | <b>454.27</b> | <b>462.01</b> | <b>462.90</b> | <b>479.28</b> | <b>474.48</b> | <b>473.61</b> | <b>490.79</b> |
| <b>Sinks from Forests and Rangelands</b> | <b>-6.69</b>  | <b>-6.54</b>  | <b>-6.33</b>  | <b>-6.03</b>  | <b>-5.79</b>  | <b>-5.56</b>  | <b>-5.42</b>  | <b>-5.37</b>  | <b>-5.19</b>  | <b>-5.18</b>  | <b>-5.02</b>  | <b>-4.83</b>  | <b>-4.69</b>  | <b>-4.67</b>  | <b>-4.66</b>  |
| <b>Net California Emissions</b>          | <b>430.72</b> | <b>414.48</b> | <b>416.50</b> | <b>413.52</b> | <b>426.22</b> | <b>416.04</b> | <b>413.90</b> | <b>432.56</b> | <b>449.07</b> | <b>456.83</b> | <b>457.88</b> | <b>474.45</b> | <b>469.78</b> | <b>468.95</b> | <b>486.12</b> |

**Categories Excluded from the Inventory.***(CO2 equivalence based upon IPCC Fourth Assessment Report's Global Warming Potentials)*

|  | 1990   | 1991   | 1992   | 1993   | 1994   | 1995   | 1996   | 1997   | 1998   | 1999   | 2000   | 2001   | 2002   | 2003   | 2004   |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 - Energy   | 59.01  | 52.99  | 45.38  | 46.21  | 52.90  | 55.12  | 56.50  | 48.60  | 48.36  | 50.46  | 55.51  | 51.07  | 53.05  | 40.79  | 44.15  |
| 1A - Fuel Combustion Activities                                      | 59.01  | 52.99  | 45.38  | 46.21  | 52.90  | 55.12  | 56.50  | 48.60  | 48.36  | 50.46  | 55.51  | 51.07  | 53.05  | 40.79  | 44.15  |
| 1A3 - Transport  | 59.01  | 52.99  | 45.38  | 46.21  | 52.90  | 55.12  | 56.50  | 48.60  | 48.36  | 50.46  | 55.51  | 51.07  | 53.05  | 40.79  | 44.15  |
| 1A3a - Civil Aviation  | 33.945 | 32.411 | 31.589 | 32.939 | 36.559 | 34.984 | 38.200 | 38.265 | 39.110 | 36.616 | 38.572 | 35.527 | 38.418 | 30.835 | 32.907 |
| 1A3ai - International Aviation (International Bunkers)               | 14.593 | 13.849 | 13.320 | 13.703 | 15.152 | 14.607 | 15.901 | 15.805 | 16.148 | 15.120 | 15.783 | 14.896 | 15.676 | 12.677 | 13.479 |
| 1A3aii - Domestic Aviation   | 19.351 | 18.562 | 18.269 | 19.236 | 21.407 | 20.377 | 22.299 | 22.460 | 22.962 | 21.497 | 22.789 | 20.630 | 22.742 | 18.158 | 19.428 |
| 1A3d - Water-borne Navigation  | 25.062 | 20.579 | 13.787 | 13.269 | 16.341 | 20.133 | 18.304 | 10.332 | 9.246  | 13.848 | 16.940 | 15.543 | 14.633 | 9.953  | 11.242 |
| 1A3di - International Water-borne Navigation (International Bunkers) | 25.062 | 20.579 | 13.787 | 13.269 | 16.341 | 20.133 | 18.304 | 10.332 | 9.246  | 13.848 | 16.940 | 15.543 | 14.633 | 9.953  | 11.242 |

**Summary of Categories Excluded from the Inventory.***(using IPCC Fourth Assessment Report's GWPs)*

|                                   | 1990         | 1991         | 1992         | 1993         | 1994         | 1995         | 1996         | 1997         | 1998         | 1999         | 2000         | 2001         | 2002         | 2003         | 2004         |
|-----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>Gross California Emissions</b> | <b>59.01</b> | <b>52.99</b> | <b>45.38</b> | <b>46.21</b> | <b>52.90</b> | <b>55.12</b> | <b>56.50</b> | <b>48.60</b> | <b>48.36</b> | <b>50.46</b> | <b>55.51</b> | <b>51.07</b> | <b>53.05</b> | <b>40.79</b> | <b>44.15</b> |
| <b>Gross California Emissions</b> | <b>27.58</b> | <b>26.49</b> | <b>27.64</b> | <b>24.71</b> | <b>24.90</b> | <b>23.39</b> | <b>22.81</b> | <b>21.09</b> | <b>19.98</b> | <b>21.22</b> | <b>22.36</b> | <b>22.15</b> | <b>22.26</b> | <b>22.56</b> | <b>22.37</b> |
| <b>Net California Emissions</b>   | <b>86.59</b> | <b>79.48</b> | <b>73.02</b> | <b>70.92</b> | <b>77.80</b> | <b>78.50</b> | <b>79.31</b> | <b>69.69</b> | <b>68.33</b> | <b>71.69</b> | <b>77.88</b> | <b>73.22</b> | <b>75.32</b> | <b>63.35</b> | <b>66.52</b> |