### 1998 Fatality Rates

#### Number, percent and rate of fatal occupational injuries by selected worker characteristics, occupation and industry, 1998

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Fatalities</th>
<th>Employed</th>
<th>Fatalities</th>
<th>Relative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>(in thousands)</td>
<td>per 100,000</td>
<td>standard</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td></td>
<td>employed²</td>
<td>error³</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6,026</td>
<td>100</td>
<td>132,684</td>
<td>4.5</td>
</tr>
<tr>
<td><strong>Employee status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wage and salary workers</td>
<td>4,782</td>
<td>79</td>
<td>122,240</td>
<td>3.9</td>
</tr>
<tr>
<td>Self-employed</td>
<td>1,244</td>
<td>21</td>
<td>10,444</td>
<td>11.7</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>5,544</td>
<td>92</td>
<td>71,744</td>
<td>7.7</td>
</tr>
<tr>
<td>Women</td>
<td>482</td>
<td>8</td>
<td>60,940</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 16 years</td>
<td>33</td>
<td>1</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>16 to 17 years</td>
<td>32</td>
<td>1</td>
<td>2,764</td>
<td>1.2</td>
</tr>
<tr>
<td>18 to 19 years</td>
<td>136</td>
<td>2</td>
<td>4,383</td>
<td>3.1</td>
</tr>
<tr>
<td>20 to 24 years</td>
<td>418</td>
<td>7</td>
<td>12,923</td>
<td>3.2</td>
</tr>
<tr>
<td>25 to 34 years</td>
<td>1,233</td>
<td>20</td>
<td>31,850</td>
<td>3.9</td>
</tr>
<tr>
<td>35 to 44 years</td>
<td>1,521</td>
<td>25</td>
<td>36,543</td>
<td>4.2</td>
</tr>
<tr>
<td>45 to 54 years</td>
<td>1,271</td>
<td>21</td>
<td>27,623</td>
<td>4.6</td>
</tr>
<tr>
<td>55 to 64 years</td>
<td>835</td>
<td>14</td>
<td>12,873</td>
<td>6.5</td>
</tr>
<tr>
<td>65 years and over</td>
<td>534</td>
<td>9</td>
<td>3,725</td>
<td>14.3</td>
</tr>
<tr>
<td>Unspecified</td>
<td>13</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Race and Hispanic origin</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>5,016</td>
<td>83</td>
<td>111,863</td>
<td>4.5</td>
</tr>
<tr>
<td>Black or African American</td>
<td>591</td>
<td>10</td>
<td>14,795</td>
<td>4.0</td>
</tr>
<tr>
<td>American Indian, Aleut, Eskimo</td>
<td>28</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Asian, Pacific Islander</td>
<td>148</td>
<td>2</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Other</td>
<td>115</td>
<td>2</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Not reported</td>
<td>128</td>
<td>2</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Hispanic</td>
<td>700</td>
<td>12</td>
<td>13,381</td>
<td>5.2</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managerial and professional specialty occupations</td>
<td>637</td>
<td>11</td>
<td>38,937</td>
<td>1.6</td>
</tr>
<tr>
<td>Executive, administrative, and managerial occupations</td>
<td>408</td>
<td>7</td>
<td>19,054</td>
<td>2.1</td>
</tr>
<tr>
<td>Managers, food serving and lodging establishments</td>
<td>56</td>
<td>1</td>
<td>1,453</td>
<td>3.9</td>
</tr>
<tr>
<td>Management related occupations</td>
<td>62</td>
<td>1</td>
<td>4,700</td>
<td>1.3</td>
</tr>
<tr>
<td>Professional specially</td>
<td>229</td>
<td>4</td>
<td>19,883</td>
<td>1.2</td>
</tr>
<tr>
<td>Technical, sales, and administrative support occupations</td>
<td>678</td>
<td>11</td>
<td>38,521</td>
<td>1.8</td>
</tr>
<tr>
<td>Technicians and related support occupations</td>
<td>168</td>
<td>3</td>
<td>4,261</td>
<td>3.9</td>
</tr>
<tr>
<td>Technicians, except health, engineering and science</td>
<td>113</td>
<td>2</td>
<td>1,273</td>
<td>8.9</td>
</tr>
<tr>
<td>Airplane pilots and navigators</td>
<td>91</td>
<td>2</td>
<td>113</td>
<td>80.5</td>
</tr>
<tr>
<td>Sales occupations</td>
<td>396</td>
<td>7</td>
<td>15,850</td>
<td>2.5</td>
</tr>
<tr>
<td>Supervisors and proprietors, sales occupations</td>
<td>185</td>
<td>3</td>
<td>4,719</td>
<td>3.9</td>
</tr>
<tr>
<td>Sales workers, retail and personal services</td>
<td>152</td>
<td>3</td>
<td>6,784</td>
<td>2.2</td>
</tr>
<tr>
<td>Cashiers</td>
<td>52</td>
<td>1</td>
<td>3,025</td>
<td>1.7</td>
</tr>
<tr>
<td>Administrative support occupations, including clerical</td>
<td>114</td>
<td>2</td>
<td>18,410</td>
<td>0.6</td>
</tr>
<tr>
<td>Service occupations</td>
<td>439</td>
<td>7</td>
<td>17,836</td>
<td>2.4</td>
</tr>
<tr>
<td>Protective service occupations</td>
<td>257</td>
<td>4</td>
<td>2,417</td>
<td>10.6</td>
</tr>
<tr>
<td>Police and detectives, including supervisors</td>
<td>137</td>
<td>2</td>
<td>1,180</td>
<td>11.6</td>
</tr>
<tr>
<td>Guards, including supervisors</td>
<td>75</td>
<td>1</td>
<td>946</td>
<td>7.9</td>
</tr>
<tr>
<td>Service occupations, except protective and household</td>
<td>176</td>
<td>3</td>
<td>14,572</td>
<td>1.2</td>
</tr>
<tr>
<td>Food preparation and service occupations</td>
<td>50</td>
<td>1</td>
<td>6,071</td>
<td>0.8</td>
</tr>
<tr>
<td>Cleaning and building service occupations, except household</td>
<td>69</td>
<td>1</td>
<td>3,112</td>
<td>2.2</td>
</tr>
</tbody>
</table>
### 1998 FATALITY RATES

#### Page 2 of 3

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Fatalities</th>
<th>Employed&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Fatalities per 100,000 employed&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Relative standard error&lt;sup&gt;3&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent (in thousands)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6,026</td>
<td>100</td>
<td>132,684</td>
<td>4.5</td>
</tr>
<tr>
<td>Janitors and cleaners</td>
<td>56</td>
<td>1</td>
<td>2,233</td>
<td>2.5</td>
</tr>
<tr>
<td>Farming, forestry, and fishing occupations</td>
<td>921</td>
<td>15</td>
<td>3,502</td>
<td>25.5</td>
</tr>
<tr>
<td>Farm occupations</td>
<td>592</td>
<td>10</td>
<td>1,980</td>
<td>28.6</td>
</tr>
<tr>
<td>Farmers, except horticultural</td>
<td>277</td>
<td>5</td>
<td>935</td>
<td>29.5</td>
</tr>
<tr>
<td>Managers, farms, except horticultural</td>
<td>81</td>
<td>1</td>
<td>170</td>
<td>45.9</td>
</tr>
<tr>
<td>Farm workers</td>
<td>218</td>
<td>4</td>
<td>835</td>
<td>23.6</td>
</tr>
<tr>
<td>Related agricultural occupations</td>
<td>123</td>
<td>2</td>
<td>1,268</td>
<td>9.6</td>
</tr>
<tr>
<td>Groundskeepers and gardeners, except farm</td>
<td>108</td>
<td>2</td>
<td>924</td>
<td>11.6</td>
</tr>
<tr>
<td>Forestry and logging occupations</td>
<td>118</td>
<td>2</td>
<td>91</td>
<td>129.7</td>
</tr>
<tr>
<td>Timber cutters</td>
<td>109</td>
<td>2</td>
<td>77</td>
<td>141.6</td>
</tr>
<tr>
<td>Timber cutting and logging occupations</td>
<td>99</td>
<td>1</td>
<td>60</td>
<td>148.3</td>
</tr>
<tr>
<td>Fishers, hunters, and trappers</td>
<td>72</td>
<td>1</td>
<td>53</td>
<td>134.0</td>
</tr>
<tr>
<td>Fishers, including vessel captains and officers</td>
<td>71</td>
<td>1</td>
<td>51</td>
<td>137.3</td>
</tr>
<tr>
<td>Precision production, craft, and repair occupations</td>
<td>1,084</td>
<td>10</td>
<td>14,417</td>
<td>7.5</td>
</tr>
<tr>
<td>Mechanics and repairers</td>
<td>285</td>
<td>5</td>
<td>4,786</td>
<td>6.0</td>
</tr>
<tr>
<td>Mechanics and repairers, except supervisors</td>
<td>273</td>
<td>5</td>
<td>4,527</td>
<td>6.0</td>
</tr>
<tr>
<td>Vehicle and mobile equipment mechanics and repairers</td>
<td>136</td>
<td>2</td>
<td>1,845</td>
<td>7.4</td>
</tr>
<tr>
<td>Construction trades</td>
<td>631</td>
<td>10</td>
<td>5,594</td>
<td>11.3</td>
</tr>
<tr>
<td>Supervisors, construction occupations</td>
<td>89</td>
<td>1</td>
<td>755</td>
<td>11.8</td>
</tr>
<tr>
<td>Construction trades, except supervisors</td>
<td>542</td>
<td>9</td>
<td>4,839</td>
<td>11.2</td>
</tr>
<tr>
<td>Carpenters</td>
<td>90</td>
<td>1</td>
<td>1,346</td>
<td>6.7</td>
</tr>
<tr>
<td>Electricians</td>
<td>124</td>
<td>2</td>
<td>806</td>
<td>15.4</td>
</tr>
<tr>
<td>Roofers</td>
<td>50</td>
<td>1</td>
<td>241</td>
<td>20.7</td>
</tr>
<tr>
<td>Structural metal workers</td>
<td>52</td>
<td>1</td>
<td>63</td>
<td>82.5</td>
</tr>
<tr>
<td>Extractive occupations</td>
<td>60</td>
<td>1</td>
<td>125</td>
<td>48.0</td>
</tr>
<tr>
<td>Precision production occupations</td>
<td>108</td>
<td>2</td>
<td>3,907</td>
<td>2.8</td>
</tr>
<tr>
<td>Operators, fabricators, and laborers</td>
<td>2,151</td>
<td>36</td>
<td>18,256</td>
<td>11.8</td>
</tr>
<tr>
<td>Machine operators, assemblers, and inspectors</td>
<td>221</td>
<td>4</td>
<td>7,791</td>
<td>2.8</td>
</tr>
<tr>
<td>Machine operators, assorted materials</td>
<td>100</td>
<td>2</td>
<td>2,840</td>
<td>3.5</td>
</tr>
<tr>
<td>Fabricators, assemblers, and hand working occupations</td>
<td>79</td>
<td>1</td>
<td>2,090</td>
<td>3.8</td>
</tr>
<tr>
<td>Welders and cutters</td>
<td>65</td>
<td>1</td>
<td>588</td>
<td>11.1</td>
</tr>
<tr>
<td>Transportation and material moving occupations</td>
<td>1,257</td>
<td>21</td>
<td>5,363</td>
<td>23.4</td>
</tr>
<tr>
<td>Motor vehicle operators</td>
<td>1,020</td>
<td>17</td>
<td>4,069</td>
<td>25.1</td>
</tr>
<tr>
<td>Truck drivers</td>
<td>879</td>
<td>15</td>
<td>3,012</td>
<td>29.2</td>
</tr>
<tr>
<td>Taxicab drivers and chauffeurs</td>
<td>82</td>
<td>1</td>
<td>275</td>
<td>30.0</td>
</tr>
<tr>
<td>Material moving equipment operators</td>
<td>197</td>
<td>3</td>
<td>1,127</td>
<td>17.5</td>
</tr>
<tr>
<td>Handlers, equipment cleaners, helpers, and laborers</td>
<td>673</td>
<td>11</td>
<td>5,102</td>
<td>13.2</td>
</tr>
<tr>
<td>Construction laborers</td>
<td>335</td>
<td>6</td>
<td>821</td>
<td>40.7</td>
</tr>
<tr>
<td>Freight, stock, and material handlers</td>
<td>80</td>
<td>1</td>
<td>1,988</td>
<td>4.0</td>
</tr>
<tr>
<td>Laborers, except construction</td>
<td>192</td>
<td>3</td>
<td>1,298</td>
<td>14.7</td>
</tr>
<tr>
<td>Military</td>
<td>88</td>
<td>1</td>
<td>1,221</td>
<td>7.2</td>
</tr>
<tr>
<td>Other or not reported</td>
<td>28</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

#### Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>Fatalities</th>
<th>Employed&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Fatalities per 100,000 employed&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Relative standard error&lt;sup&gt;3&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Private industry</strong></td>
<td>5,428</td>
<td>90</td>
<td>113,066</td>
<td>4.8</td>
</tr>
<tr>
<td>Agriculture, forestry, and fishing</td>
<td>831</td>
<td>14</td>
<td>3,450</td>
<td>23.3</td>
</tr>
<tr>
<td>Agricultural production, crops</td>
<td>378</td>
<td>6</td>
<td>1,012</td>
<td>35.6</td>
</tr>
<tr>
<td>Agricultural production, livestock</td>
<td>174</td>
<td>3</td>
<td>1,092</td>
<td>15.3</td>
</tr>
<tr>
<td>Agricultural services</td>
<td>167</td>
<td>3</td>
<td>1,259</td>
<td>13.3</td>
</tr>
<tr>
<td>Landscape and horticultural services</td>
<td>110</td>
<td>2</td>
<td>877</td>
<td>12.5</td>
</tr>
<tr>
<td>Fishing, hunting, and trapping</td>
<td>75</td>
<td>1</td>
<td>56</td>
<td>132.1</td>
</tr>
<tr>
<td>Mining</td>
<td>146</td>
<td>2</td>
<td>618</td>
<td>23.6</td>
</tr>
<tr>
<td>Characteristic</td>
<td>Fatalities</td>
<td>Employed¹</td>
<td>Fatalities per 100,000 employed²</td>
<td>Relative standard error³</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>------------</td>
<td>-----------</td>
<td>---------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>(in thousands)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6,026</td>
<td>100</td>
<td>132,684</td>
<td>4.5</td>
</tr>
<tr>
<td>Oil and gas extraction</td>
<td>76</td>
<td>1</td>
<td>373</td>
<td>20.4</td>
</tr>
<tr>
<td>Construction</td>
<td>1,171</td>
<td>19</td>
<td>8,044</td>
<td>14.5</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>694</td>
<td>12</td>
<td>20,665</td>
<td>3.3</td>
</tr>
<tr>
<td>Food and kindred products</td>
<td>72</td>
<td>1</td>
<td>1,654</td>
<td>4.3</td>
</tr>
<tr>
<td>Lumber and wood products</td>
<td>170</td>
<td>3</td>
<td>861</td>
<td>19.7</td>
</tr>
<tr>
<td>Logging</td>
<td>123</td>
<td>2</td>
<td>133</td>
<td>92.5</td>
</tr>
<tr>
<td>Stone, clay, and glass products</td>
<td>50</td>
<td>1</td>
<td>592</td>
<td>8.4</td>
</tr>
<tr>
<td>Industrial machinery and equipment</td>
<td>63</td>
<td>1</td>
<td>2,479</td>
<td>2.5</td>
</tr>
<tr>
<td>Transportation equipment</td>
<td>61</td>
<td>1</td>
<td>2,364</td>
<td>2.6</td>
</tr>
<tr>
<td>Transportation and public utilities</td>
<td>909</td>
<td>15</td>
<td>7,773</td>
<td>11.8</td>
</tr>
<tr>
<td>Local and interurban passenger transit</td>
<td>85</td>
<td>1</td>
<td>552</td>
<td>15.4</td>
</tr>
<tr>
<td>Taxicabs</td>
<td>63</td>
<td>1</td>
<td>134</td>
<td>47.0</td>
</tr>
<tr>
<td>Trucking and warehousing</td>
<td>562</td>
<td>9</td>
<td>2,576</td>
<td>21.8</td>
</tr>
<tr>
<td>Water transportation</td>
<td>52</td>
<td>1</td>
<td>203</td>
<td>25.6</td>
</tr>
<tr>
<td>Transportation by air</td>
<td>74</td>
<td>1</td>
<td>832</td>
<td>8.9</td>
</tr>
<tr>
<td>Electric, gas, and sanitary services</td>
<td>83</td>
<td>1</td>
<td>1,060</td>
<td>7.8</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>228</td>
<td>4</td>
<td>5,077</td>
<td>4.5</td>
</tr>
<tr>
<td>Wholesale trade, durable goods</td>
<td>137</td>
<td>2</td>
<td>2,764</td>
<td>5.0</td>
</tr>
<tr>
<td>Wholesale trade, nondurable goods</td>
<td>91</td>
<td>2</td>
<td>2,314</td>
<td>3.9</td>
</tr>
<tr>
<td>Retail trade</td>
<td>569</td>
<td>9</td>
<td>22,010</td>
<td>2.6</td>
</tr>
<tr>
<td>Food stores</td>
<td>135</td>
<td>2</td>
<td>3,602</td>
<td>3.7</td>
</tr>
<tr>
<td>Grocery stores</td>
<td>120</td>
<td>2</td>
<td>3,113</td>
<td>3.9</td>
</tr>
<tr>
<td>Automotive dealers and service stations</td>
<td>119</td>
<td>2</td>
<td>2,221</td>
<td>3.9</td>
</tr>
<tr>
<td>New and used car dealers</td>
<td>52</td>
<td>1</td>
<td>1,226</td>
<td>4.2</td>
</tr>
<tr>
<td>Eating and drinking places</td>
<td>107</td>
<td>2</td>
<td>6,723</td>
<td>1.6</td>
</tr>
<tr>
<td>Finance, insurance, and real estate</td>
<td>92</td>
<td>2</td>
<td>8,399</td>
<td>1.1</td>
</tr>
<tr>
<td>Services</td>
<td>757</td>
<td>13</td>
<td>37,090</td>
<td>2.0</td>
</tr>
<tr>
<td>Business services</td>
<td>194</td>
<td>3</td>
<td>6,403</td>
<td>3.0</td>
</tr>
<tr>
<td>Auto repair, services, and parking</td>
<td>132</td>
<td>2</td>
<td>1,532</td>
<td>3.0</td>
</tr>
<tr>
<td>Automotive repair shops</td>
<td>107</td>
<td>2</td>
<td>1,149</td>
<td>3.3</td>
</tr>
<tr>
<td>Government</td>
<td>598</td>
<td>10</td>
<td>19,618</td>
<td>3.0</td>
</tr>
<tr>
<td>Federal</td>
<td>164</td>
<td>3</td>
<td>4,468</td>
<td>3.7</td>
</tr>
<tr>
<td>State</td>
<td>135</td>
<td>2</td>
<td>5,160</td>
<td>2.6</td>
</tr>
<tr>
<td>Local</td>
<td>295</td>
<td>5</td>
<td>9,990</td>
<td>3.0</td>
</tr>
</tbody>
</table>

¹ The fatality rates are experimental measures using employment from the Current Population Survey (CPS). The employment figures, except for military, are annual average estimates of employed civilians, 16 years of age and older, from the CPS, 1998. The resident military figure, derived from resident and civilian population data from the Bureau of the Census, was added to the CPS employment total.

² The rate represents the number of fatal occupational injuries per 100,000 employed workers and was calculated as follows: \((N/W) \times 100,000\), where \(N\) = the number of fatal work injuries, and \(W\) = the number of employed workers. There were 33 fatally injured workers under the age of 16 years that were not included in the rate calculations to maintain consistency with the CPS employment.

³ The relative standard errors of the CPS employment estimates can be used to approximate confidence ranges for the fatality rates. For example, a confidence range for the roofers rate can be approximated as follows: \(20.7 \times 0.072 \times 1.6 = 2.4\), where 20.7 = the rate, 0.072 = the relative standard error (7.2 percent), and 1.6 = the factor for a 90 percent confidence level. The confidence range for this rate is 18.3 to 23.1 (20.7 plus or minus 2.4).

NOTE: Selected rate categories had 50 or more work injury fatalities in 1998. Dashes indicate data not available or less than .5 percent. Totals for major categories may include subcategories not shown separately. Figures may not add to totals because of rounding.