National Atmospheric Deposition Program/National Trends Network
1990 Annual & Seasonal Data Summary for Site CO97
Page 1: Summary of Sample Validity and Completeness Criteria
(Printed 08/29/2000)

<table>
<thead>
<tr>
<th>Site Identification</th>
<th>Sample Validity for Annual Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Name: Buffalo Pass</td>
<td>Number of samples: 49</td>
</tr>
<tr>
<td>Site ID: CO97</td>
<td>Valid Samples: 37</td>
</tr>
<tr>
<td>State: CO</td>
<td>with precipitation: 35</td>
</tr>
<tr>
<td>County: Routt</td>
<td>with full chemistry**: 35</td>
</tr>
<tr>
<td>Operating Agency: USFS</td>
<td>without chemistry: 0</td>
</tr>
<tr>
<td>Sponsoring Agency: USFS</td>
<td>without precipitation: 2</td>
</tr>
<tr>
<td>Latitude: 40:32:16</td>
<td>Invalid Samples: 12</td>
</tr>
<tr>
<td>Longitude: 106:40:35</td>
<td>with precipitation: 12</td>
</tr>
<tr>
<td>Elevation: 3234 m</td>
<td>missing precipitation data: 0</td>
</tr>
</tbody>
</table>

Summary Period Information

<table>
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<tr>
<th>First summary period day</th>
<th>Winter*</th>
<th>Spring*</th>
<th>Summer</th>
<th>Fall*</th>
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<tbody>
<tr>
<td>Last summary period day</td>
<td>01/02/1991</td>
<td>02/26/1990</td>
<td>05/29/1990</td>
<td>09/04/1990</td>
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<td>Summary period duration</td>
<td>365</td>
<td>90</td>
<td>92</td>
<td>98</td>
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<tr>
<td>Measured precipitation (cm)</td>
<td>75.9</td>
<td>21.2</td>
<td>24.9</td>
<td>17.2</td>
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<tr>
<td>Valid samples with full chemistry**:</td>
<td>35</td>
<td>12</td>
<td>9</td>
<td>9</td>
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<tr>
<td>Valid field pH measurements</td>
<td>20</td>
<td>6</td>
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</table>

NADP/NTN Completeness Criteria

<table>
<thead>
<tr>
<th>1.Summary period with valid samples (%)</th>
<th>Annual*</th>
<th>Winter*</th>
<th>Spring*</th>
<th>Summer</th>
<th>Fall*</th>
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</thead>
<tbody>
<tr>
<td>71.2</td>
<td>92.2</td>
<td>70.7</td>
<td>78.6</td>
<td>53.8</td>
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<tr>
<td>2.Summary period with precip coverage (%)</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
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<tr>
<td>3.Measured precipitation with valid samples (%)</td>
<td>76.9</td>
<td>99.6</td>
<td>85.6</td>
<td>91.0</td>
<td>41.2</td>
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<td>4.Collector efficiency (%)</td>
<td>57.1</td>
<td>29.5</td>
<td>42.2</td>
<td>97.5</td>
<td>72.5</td>
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<tr>
<td>Precip with full chemistry and valid field pH (%)</td>
<td>53.5</td>
<td>56.2</td>
<td>60.0</td>
<td>68.9</td>
<td>33.6</td>
</tr>
</tbody>
</table>

* = Data do not meet NADP/NTN Completeness Criteria for this period.
** = Valid samples for which all Laboratory Chemical measurements were made (The ONLY samples described by the percentile distributions in the Statistical Summary of Precipitation Chemistry for Valid Samples).
*** = Measured precipitation for sample periods during which precipitation occurred and for which complete valid laboratory chemistry data are available.
### 1990 Annual & Seasonal Data Summary for Site CO97

#### Page 2: Statistical Summary of Precipitation Chemistry for Valid Samples

### Precipitation-Weighted Mean Concentrations

<table>
<thead>
<tr>
<th></th>
<th>Ca</th>
<th>Mg</th>
<th>K</th>
<th>Na</th>
<th>NH₄</th>
<th>NO₃</th>
<th>Cl</th>
<th>SO₄</th>
<th>H(lab)</th>
<th>H(fld)</th>
<th>pH(lab)</th>
<th>pH(fld)</th>
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</thead>
<tbody>
<tr>
<td>Annual*</td>
<td>0.21</td>
<td>0.029</td>
<td>0.013</td>
<td>0.067</td>
<td>0.16</td>
<td>0.89</td>
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<td>0.84</td>
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<tr>
<td>Winter*</td>
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<td>0.028</td>
<td>0.012</td>
<td>0.076</td>
<td>0.07</td>
<td>0.66</td>
<td>0.10</td>
<td>0.61</td>
<td>7.26E-03</td>
<td>1.29E-02</td>
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<td>4.89</td>
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<tr>
<td>Spring*</td>
<td>0.22</td>
<td>0.032</td>
<td>0.009</td>
<td>0.064</td>
<td>0.18</td>
<td>1.00</td>
<td>0.10</td>
<td>0.94</td>
<td>1.11E-02</td>
<td>2.08E-02</td>
<td>4.96</td>
<td>4.68</td>
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<tr>
<td>Summer</td>
<td>0.13</td>
<td>0.019</td>
<td>0.013</td>
<td>0.041</td>
<td>0.21</td>
<td>0.85</td>
<td>0.09</td>
<td>0.83</td>
<td>1.12E-02</td>
<td>2.72E-02</td>
<td>4.95</td>
<td>4.57</td>
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<tr>
<td>Fall*</td>
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<td>0.019</td>
<td>0.013</td>
<td>0.047</td>
<td>0.11</td>
<td>0.79</td>
<td>0.08</td>
<td>0.67</td>
<td>9.53E-03</td>
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<td>5.02</td>
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### Deposition

<table>
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<tr>
<th></th>
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<th>Mg</th>
<th>K</th>
<th>Na</th>
<th>NH₄</th>
<th>NO₃</th>
<th>Cl</th>
<th>SO₄</th>
<th>H(lab)</th>
<th>H(fld)</th>
<th>pH(lab)</th>
<th>pH(fld)</th>
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</thead>
<tbody>
<tr>
<td>Annual*</td>
<td>1.60</td>
<td>0.220</td>
<td>0.099</td>
<td>0.508</td>
<td>1.20</td>
<td>6.72</td>
<td>0.77</td>
<td>6.37</td>
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<td>1.49E-01</td>
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<tr>
<td>Winter*</td>
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<td>0.059</td>
<td>0.025</td>
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<td>1.40</td>
<td>0.21</td>
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<td>1.54E-02</td>
<td>2.73E-02</td>
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<tr>
<td>Spring*</td>
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<td>0.080</td>
<td>0.022</td>
<td>0.159</td>
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<td>0.25</td>
<td>2.34</td>
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<td>5.17E-02</td>
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<tr>
<td>Summer</td>
<td>0.22</td>
<td>0.033</td>
<td>0.022</td>
<td>0.071</td>
<td>0.36</td>
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<td>0.15</td>
<td>1.44</td>
<td>1.92E-02</td>
<td>4.69E-02</td>
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<tr>
<td>Fall*</td>
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<td>0.034</td>
<td>0.023</td>
<td>0.084</td>
<td>0.20</td>
<td>1.42</td>
<td>0.14</td>
<td>1.20</td>
<td>1.71E-02</td>
<td>1.59E-02</td>
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#### Weekly Sample Concentrations

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<tr>
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<th>K</th>
<th>Na</th>
<th>NH₄</th>
<th>NO₃</th>
<th>Cl</th>
<th>SO₄</th>
<th>H(lab)</th>
<th>H(fld)</th>
<th>pH(lab)</th>
<th>pH(fld)</th>
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<tbody>
<tr>
<td>Minimum value</td>
<td>0.04</td>
<td>0.006</td>
<td>0.003</td>
<td>0.009</td>
<td>0.02</td>
<td>0.03</td>
<td>0.03</td>
<td>0.23</td>
<td>2.82E-04</td>
<td>1.35E-03</td>
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<tr>
<td>Percentile 10</td>
<td>0.05</td>
<td>0.009</td>
<td>0.003</td>
<td>0.023</td>
<td>0.05</td>
<td>0.44</td>
<td>0.05</td>
<td>0.42</td>
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<td>4.36</td>
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<tr>
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<td>0.013</td>
<td>0.007</td>
<td>0.036</td>
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<td>0.59</td>
<td>2.88E-03</td>
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<td>0.030</td>
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<td>4.94</td>
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<td>0.27</td>
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<td>5.87</td>
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<tr>
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<td>0.24</td>
<td>0.035</td>
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<td>0.107</td>
<td>0.21</td>
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#### Other Parameters

<table>
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<tr>
<th>Measured Precipitation cm</th>
<th>Conductivity uS/cm</th>
<th>Equivalence Ratios</th>
<th>Cation Anion</th>
<th>Cation Anion</th>
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<tr>
<td>SO₄</td>
<td>SO₄+NO₃</td>
<td>H</td>
<td>Anion</td>
<td>SO₄</td>
</tr>
<tr>
<td>Minimum value</td>
<td>0.06</td>
<td>3.2</td>
<td>0.50</td>
<td>1.67</td>
</tr>
<tr>
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<td>0.23</td>
<td>4.2</td>
<td>0.67</td>
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<td>0.38</td>
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<td>0.83</td>
<td>2.04</td>
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<td>1.40</td>
<td>8.5</td>
<td>1.18</td>
<td>3.31</td>
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<tr>
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<td>20.66</td>
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Please see page 1 for footnotes.