

126     **Table SI-1.** Meteorological and sample variables recorded during fog events. Sample masses are volume-weighted means.

| Date and Time | End Time | Duration (min) | Temperature (°C) | Wind Dir. (Deg) | Sample Mass (g) |
|---------------|----------|----------------|------------------|-----------------|-----------------|
| 6/30/14 5:02  | 8:00     | 175            | 20.4             | 247.5           | 20.76           |
| 7/1/14 7:21   | 9:16     | 116            | 21.4             | 135             | 211.23          |
| 7/1/14 9:16   | 12:05    | 169            | 19.9             | 135             | 47.67           |
| 7/2/14 4:45   | 6:15     | 90             | 20.4             | 135             | 74.34           |
| 7/2/14 6:15   | 7:45     | 90             | 19.1             | 90              | 66.05           |
| 7/2/14 7:45   | 9:15     | 90             | 19.1             | 90              | 54.31           |
| 7/2/14 9:14   | 11:30    | 135            | 20.1             | 90              | 22.59           |
| 7/6/14 3:16   | 6:40     | 205            | 21.1             | 0               | 2.44            |
| 7/14/14 20:45 | 22:45    | 120            | 24.3             | 157.5           | 18.52           |
| 7/18/14 2:46  | 4:45     | 120            | 23.2             | 202.5           | 33.96           |
| 7/18/14 5:15  | 7:15     | 120            | 21.5             | 135             | 23.06           |
| 7/18/14 9:14  | 10:15    | 60             | 21.9             | 90              | 2.20            |
| 7/20/14 6:15  | 8:15     | 120            | 22.3             | 112.5           | 74.32           |

127

128

129 **Table SI-2.** Concentrations of measured inorganic species during fog events. Unless specified, units of chemical species are  $\mu\text{M}$ , with the  
 130 exception of that for pH (unitless).

| Date and Time | pH   | $\text{NH}_4^+$ | $\text{SO}_4^{2-}$ | $\text{NO}_3^-$ | $\text{NO}_2^-$ | Cl <sup>-</sup> | $\text{Ca}^{+2}$ | $\text{Na}^+$ | $\text{Mg}^{+2}$ | $\text{K}^+$ | S(IV) | Charge Balance (+/-) |
|---------------|------|-----------------|--------------------|-----------------|-----------------|-----------------|------------------|---------------|------------------|--------------|-------|----------------------|
| 6/30/14 5:02  | 3.54 | 2914            | 606.2              | 1674            | 1.6             | 111             | 114              | 70            | 56               | 88           | 2.17  | 1.14                 |
| 7/1/14 7:21   | 4.14 | 253             | 72.0               | 185             | 0.3             | 22              | 19               | 24            | 13               | 16           | 0.250 | 1.02                 |
| 7/1/14 9:16   | 4.37 | 632             | 155.0              | 370             | 2.2             | 30              | 34               | 20            | 15               | 18           | 0.684 | 1.08                 |
| 7/2/14 4:45   | 3.77 | 2076            | 601.8              | 873             | 1.9             | 90              | 33               | 71            | 48               | 73           | 1.40  | 1.10                 |
| 7/2/14 6:15   | 3.93 | 2153            | 601.3              | 792             | 1.7             | 118             | 19               | 63            | 44               | 72           | 1.39  | 1.14                 |
| 7/2/14 7:45   | 3.98 | 2723            | 742.2              | 1050            | 1.9             | 140             | 46               | 88            | 50               | 89           | 1.87  | 1.16                 |
| 7/2/14 9:14   | 3.67 | 3840            | 1072               | 1638            | 3.1             | 219             | 34               | 2921          | 53               | 97           | 1.89  | 1.76                 |
| 7/6/14 3:16   | n.m. | 4044            | 2272               | 4897            | 4.1             | 900             | 175              | 2445          | 276              | 171          | n.m.  | 0.73                 |
| 7/14/14 20:45 | 5.00 | 6088            | 1645               | 2247            | 5.6             | 381             | 138              | 213           | 120              | 172          | 6.27  | 1.18                 |
| 7/18/14 2:46  | 3.69 | 1113            | 451.6              | 687             | 0.3             | 418             | 110              | 425           | 91               | 79           | 4.92  | 1.00                 |
| 7/18/14 5:15  | 3.74 | 650             | 355.7              | 758             | 1.4             | 489             | 180              | 487           | 88               | 41           | 1.67  | 0.87                 |
| 7/18/14 9:14  | n.m. | 668             | 273.2              | 383             | 2.1             | 279             | 86               | 275           | 40               | 96           | n.m.  | 1.07                 |
| 7/20/14 6:15  | 3.48 | 1750            | 592.3              | 772             | 1.2             | 95              | 18               | 59            | 52               | 62           | 3.49  | 0.98                 |

131  
 132  
 133 **Table SI-3.** Concentrations of measured TOC and low molecular mass organic acids during fog events. Units of organic acids are  $\mu\text{M}$ .

| Date and Time | TOC (ppmC) | Acetate | Propionate | Formate | MSA  | Pyruvate | Valerate | Succinate | Malonate | Maleate | Oxalate | Glutarate | Total Organic Acids |
|---------------|------------|---------|------------|---------|------|----------|----------|-----------|----------|---------|---------|-----------|---------------------|
| 6/30/14 5:02  | 24.7       | 121     | 0.929      | 115     | 18.6 | 15.2     | 0.943    | 47.6      | 24.8     | 58.8    | 69.4    | 3.30      | 476                 |

|               |      |      |       |      |      |      |       |      |      |      |      |      |      |
|---------------|------|------|-------|------|------|------|-------|------|------|------|------|------|------|
| 7/1/14 7:21   | 3.60 | 160  | 1.07  | 101  | 1.79 | 0.79 | 0.245 | 3.31 | 1.48 | 3.04 | 5.86 | 0.92 | 280  |
| 7/1/14 9:16   | 4.66 | 40.8 | 0.998 | 84.1 | 1.77 | 1.19 | 0.676 | 6.58 | 3.00 | 3.87 | 8.16 | 1.16 | 152  |
| 7/2/14 4:45   | 14.2 | 66.9 | 1.06  | 81.0 | 9.15 | 6.86 | 1.27  | 29.7 | 11.0 | 15.3 | 54.8 | 8.42 | 286  |
| 7/2/14 6:15   | 20.2 | 67.6 | 1.16  | 110  | 7.50 | 6.61 | 0.838 | 26.6 | 9.19 | 12.5 | 49.5 | 8.58 | 301  |
| 7/2/14 7:45   | 24.8 | 91.2 | 1.20  | 129  | 7.50 | 10.7 | 1.63  | 36.8 | 11.2 | 16.2 | 58.2 | 12.4 | 376  |
| 7/2/14 9:14   | 21.3 | n.m. | n.m.  | n.m. | n.m. | n.m. | n.m.  | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. |
| 7/6/14 3:16   | n.m. | n.m. | n.m.  | n.m. | n.m. | n.m. | n.m.  | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. |
| 7/14/14 20:45 | n.m. | 202  | 1.36  | 532  | 12.9 | 5.02 | 3.78  | 52.6 | 22.5 | 42.2 | 110  | 18.3 | 1002 |
| 7/18/14 2:46  | n.m. | 19.3 | 0.418 | 35.8 | 7.18 | 3.58 | 0.213 | 9.15 | 7.45 | 19.6 | 29.7 | 5.59 | 138  |
| 7/18/14 5:15  | n.m. | 59.0 | 0.353 | 26.6 | 6.05 | 5.35 | 0.337 | 6.21 | 6.21 | 21.3 | 18.6 | 2.78 | 153  |
| 7/18/14 9:14  | n.m. | 640  | 0.528 | 42.7 | 6.71 | 38.8 | 0.436 | 6.19 | 6.05 | 20.6 | 16.2 | 4.61 | 783  |
| 7/20/14 6:15  | 8.97 | 49.7 | 0.600 | 57.6 | 6.12 | 7.03 | 1.01  | 26.8 | 14.7 | 18.4 | 35.7 | 5.51 | 223  |

134

135

136 **Table SI-4.** Concentrations of measured organic species during fog events. Unless specified, units of chemical species are  $\mu\text{M}$ . Pinonate was also  
137 quantified, but no measurable values were found within fog samples. Grey, italicized values: Not significantly different from 0 because value was  
138 less than LOD or less than uncertainty (95% CI).

| Date and Time | Peroxides | Formaldehyde | 2-Methyl-4,6-Dinitrophenol | 4-Nitrophenol | 2,4-Dinitrophenol | 2-Methyl-4-Nitrophenol | Benzoate | Salicylate | Adipate | Pinate | Azelate |
|---------------|-----------|--------------|----------------------------|---------------|-------------------|------------------------|----------|------------|---------|--------|---------|
| 6/30/14 5:02  | 1.1       | 21           | 0                          | 0.04          | 0.02              | 0.00007                | 0.03     | 0.11       | 0.15    | 0.01   | 0.04    |
| 7/1/14 7:21   | 3.7       | 6            | 0                          | 0             | 0                 | 0                      | 0        | 0          | 0       | 0      | 0       |
| 7/1/14 9:16   | 15.2      | 3            | 0                          | 0             | 0.008             | 0                      | 0.02     | 0.07       | 0.04    | 0.009  | 0.002   |
| 7/2/14 4:45   | 0.6       | 4            | 0.00002                    | 0             | 0.024             | 0                      | 0.06     | 0.06       | 0.10    | 0.006  | 0.03    |
| 7/2/14 6:15   | 0.4       | 4            | 0.0004                     | 0             | 0.04              | 0                      | 0.08     | 0.06       | 0.11    | 0.007  | 0.04    |
| 7/2/14 7:45   | 0.6       | 6            | 0.0012                     | 0.05          | 0.06              | 0.00004                | 0.11     | 0.10       | 0.14    | 0.01   | 0.04    |
| 7/2/14 9:14   | 0.4       | 7            | n.m.                       | n.m.          | n.m.              | n.m.                   | n.m.     | n.m.       | n.m.    | n.m.   | n.m.    |
| 7/6/14 3:16   | n.m.      | n.m.         | n.m.                       | n.m.          | n.m.              | n.m.                   | n.m.     | n.m.       | n.m.    | n.m.   | n.m.    |
| 7/14/14 20:45 | 58.9      | 9            | 0.004                      | 0.14          | 0.07              | 0.04                   | 0.14     | 0.15       | 0.14    | 0.009  | 0.04    |
| 7/18/14 2:46  | 1.0       | 3            | 0                          | 0             | 0.0001            | 0                      | 0.001    | 0.03       | 0.15    | 0.02   | 0.03    |
| 7/18/14 5:15  | 0.6       | n.m.         | 0                          | 0             | 0                 | 0                      | 0.000003 | 0.03       | 0.16    | 0.005  | 0.09    |
| 7/18/14 9:14  | n.m.      | n.m.         | 0                          | 0             | 0                 | 0                      | 0.00008  | 0.02       | 0.02    | 0.0000 | 0       |
|               |           |              |                            |               |                   |                        |          |            |         | 3      |         |
| 7/20/14 6:15  | 3.7       | 3            | 0                          | 0             | 0.0001            | 0                      | 0.02     | 0.06       | 0.05    | 0.03   | 0       |