

# MN18 Fernberg

The MN18 NTN site, sponsored by the U.S. Environmental Protection Agency and operated by the USDA Forest Service, is one of the oldest sites in the NADP network. The site began collecting acid rain data on November 18, 1980, but had been collecting ozone data for a number of years prior to that. Interest quickly built in Minnesota concerning acid rain, which led to the state passing the first acid rain regulation in the nation in 1982. The site has had many cooperative partners through the years including university researchers and the environmental agencies of Ontario and Canada. In more recent times the site added visibility (IMPROVE) monitoring with: photos (1985–1991), aerosol sampling (1991–present) and a nephelometer (1993–1997). The NADP/MDN site MN18, sponsored jointly by the Minnesota Pollution Control Agency and USDA Forest Service, began sampling March 5, 1995. In 2005, a continuous  $PM_{2.5}$  monitor (BAM 1020) was added along with a digital camera or “haze cam.”

MN18, located in Superior National Forest about 20 miles east of Ely in northeastern Minnesota, sees extremes in weather. The state record low temperature of  $-60^{\circ}$  F. was set only 30 miles away in 1996, while the summer can see temperatures exceeding  $100^{\circ}$  F.

Trent Wickman is the current site supervisor, but overseeing all of the changes at the site has been Chris Barton (pictured below), who has helped maintain the site since 1979. She officially began operating MN18 in May 1994. Through it all, Chris has accumulated many good stories. She conscientiously maintains the equipment and provides data that is crucial to the management of the Boundary Waters Canoe Area Wilderness, a protected Class I area under the Clean Air Act.




*Superior National Forest website: <http://www.fs.fed.us/r9/forests/superior/>*



*Site information by Trent Wickman*

*Photos by Advanced Technology Systems, Inc.*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<p>October 2007</p> <p>S M T W T F S</p> <p>1 2 3 4 5 6</p> <p>7 8 9 10 11 12 13</p> <p>14 15 16 17 18 19 20</p> <p>21 22 23 24 25 26 27</p> <p>28 29 30 31</p>	<h1>November 2007</h1>				<p>December 2007</p> <p>S M T W T F S</p> <p>1</p> <p>2 3 4 5 6 7 8</p> <p>9 10 11 12 13 14 15</p> <p>16 17 18 19 20 21 22</p> <p>23 24 25 26 27 28 29</p> <p>30 31</p>	
<p>WA99 operator reported on 11/5/2004, "Dropped bucket avoiding wasp nest under NADP collector. Lid was not securely fastened. Most of sample lost. Sorry."</p> 		<p>Before winter storms begin, check your sensor heater performance: sprinkle a few flakes of snow onto the sensor plate. It should melt in seconds and cause the motor unit to start running. If the snow doesn't melt, the ambient sensor heater is out, and it will have to be replaced. Call the CAL if you need it replaced.</p>		<p><b>1</b> 305/060</p>	<p><b>2</b> 306/059</p> <p><i>CA66 1999</i></p>	<p><b>3</b> 307/058</p>
<p><b>4</b> 308/057</p> <p><i>CO94 1986</i></p>	<p><b>5</b> 309/056</p> <p><i>SD04 2002</i></p>	<p><b>6</b> <b>Week 45</b></p> <p><i>Reminder:</i> Change dry side bucket and clean foam lid seal.</p> <p><i>CA50 2001</i></p>	<p><b>7</b> 311/054</p>	<p><b>8</b> 312/053</p>	<p><b>9</b> 313/052</p>	<p><b>10</b> 314/051</p> <p><i>ME98 1981</i></p>
<p><b>11</b> 315/050</p> <p><i>MS19 1986</i> <i>UT09 1997</i></p>	<p><b>12</b> 316/049</p> <p>Veteran's Day observed CAL closed</p>	<p><b>13</b> <b>Week 46</b></p>	<p><b>14</b> 318/047</p>	<p><b>15</b> 319/046</p> <p><i>NM12 1984</i></p>	<p><b>16</b> 320/045</p> <p><i>LA12 1982</i></p>	<p><b>17</b> 321/044</p>
<p><b>18</b> 322/043</p> <p><i>MN18 1980</i></p>	<p><b>19</b> 323/042</p>	<p><b>20</b> <b>Week 47</b></p> <p><i>ME09 1979</i></p>	<p><b>21</b> 325/040</p> <p><i>SC05 2000</i> <i>PA47 2002</i></p>	<p><b>22</b> 326/039</p> <p>Thanksgiving Day CAL closed</p> <p><i>ID11 1983</i></p>	<p><b>23</b> 327/038</p> <p>CAL closed for Thanksgiving holiday</p>	<p><b>24</b> 328/037</p>
<p><b>25</b> 329/036</p> <p><i>NY96 2003</i></p>	<p><b>26</b> 330/035</p> <p><i>NC45 1985</i> <i>GA33 2002</i></p>	<p><b>27</b> <b>Week 48</b></p>	<p><b>28</b> 332/033</p> <p><i>MI48 2000</i></p>	<p><b>29</b> 333/032</p> <p><i>KY03 1983</i> <i>ND11 1983</i> <i>SD99 1983</i></p>	<p><b>30</b> 334/031</p>	<p>Check your raingage clock batteries before winter begins.</p>