THE HISTORY OF METEOROLOGICAL OBSERVATION IN THE TWIN CITIES

The story of continuous weather observation in the Twin Cities dates back to August 1819 when a company of American soldiers of the Fifth Infantry under the command of Lt. Col. Henry Leavenworth established temporary headquarters at Cantonment New Hope at the confluence of the Mississippi and St. Peter's (now the Minnesota) rivers. Observations were taken at New Hope until May 20, 1820, when the unit moved to a spring near the Fort that they called the Cold Water Camp. Observation forms call the location near and at the Fort by the name Fort St. Anthony until 1825, when it became known as Fort Snelling. For most of the time, the thermometer (a reliable Fisher Thermometer) was located at the northeast end of the hospital building.

From the beginning, observations were made by the Surgeon at internationally appointed times daily at the Fort until April 30, 1858. By this time, however, observations were being made in Minneapolis at a station run by Dr. Charles Anderson. On January 1, 1859, Dr. D. D. Patterson of the First Baptist Church of St. Paul at 9th and Wacouta (the parish is still there -- you can see it at the Wacouta exit off Interstate 35E) made observations until March 17, 1876.

However, observations were resumed at Fort Snelling on April 1, 1867 after a break of only 9 years, 11 months. They continued to February 29, 1892, and were not resumed in the vicinity of the Fort until January 27, 1934, a period of 41 years, 10 months, 27 days. Since that date in 1934, the observations have been made at Minneapolis-St. Paul International Airport by the National Weather Service, adjacent to the Fort.

During the interim, the old United States Weather Bureau made observations in downtown St. Paul from November 1, 1870 to July 20, 1933, and in downtown Minneapolis from November 6, 1890 to April 10, 1938. A station began operation at St. Paul Downtown Airport on November 8, 1926 and continues observations there to the present. Weather at that station is observed about 16 hours a day, as it now is at Crystal Airport in Crystal and Flying Cloud Airport in Eden Prairie. There are also numerous private observatories, including mine. The most complete private observatory is probably that of Mr. Paul Oxley in Rosemount, which monitors many weather variables not ordinarily observed. Dr. Donald Baker of the University of Minnesota observes soil temperatures to great depths. The National Weather Service station at International Airport, however, continues to be the number 1 station in the Twin Cities.

An important station, however, is that of the Akin family in Farmington. This station has been at the same place for 93 years, with grandfather, father, and son as the only three observers. Mr. Jerome Akin is the current observer.

Temperature values on this calendar based on data from 1819 to the present. Precipitation values based on data from 1836 to the present.

THE CALENDAR FOR THIS YEAR IS THE SAME AS THAT FOR 1758, 1769, 1775, 1786, 1797, 1809, 1815, 1826, 1837, 1843, 1854, 1865, 1871, 1882, 1893, 1899, 1905, 1922, 1933, 1939, 1961, 1967, 1989, 1995, 2006, 2017, 2023, 2034, 2045, 2051.

As a special tribute, we list here the persons in charge of meteorological observations in the Twin Cities from 1819 to the present. Preference is given station nearest Fort Snelling-Airport complex, the site for 109 of the past 159 years.

Edward Purcell	Aug 1819 - Sep 1821
Robert W. McMillan	Oct 1821 - Mar 1825
E. James	Apr 1825 - Jun 1825
B. F. Harney	Jul 1825 - May 1826
R. E. Wood	Jun 1826 - Apr 1827
J. P. E. McMahon	May 1827 - Mar 1828
R. E. Wood	Apr 1828 - Mar 1833
N. S. Jarvis	Apr 1833 - Mar 1836
J. Emerson	Apr 1836 - Sep 1837
J. J. B. Wright	Oct 1837 - Sep 1838
J. Emerson	Oct 1838 - Mar 1840
George F. Turner	Apr 1840 - Apr 1843
Thomas S. Williamson	May 1843 - Jun 1843
George F. Turner	Jul 1843 - Aug 1846
R. S. Hanes	Sep 1846 - Apr 1847
George F. Turner	May 1847 - Jul 1848
A. Martin	Aug 1848 - May 1849
A. N. Laren	Jun 1849 - May 1852
A. E. Ames	Jun 1852 - Jul 1852
Thomas R. Potts	Aug 1852 - Mar 1853
Charles McDougall	Apr 1853 - Oct 1854
Thomas R. Potts	Nov 1854
G. Porin	Dec 1854 - May 1855
Jonathan E. Summ	Jun 1855 - Jul 1856
Owen P. Marsh	Aug 1856
Edward Swift	Sep 1856 - Oct 1856
Julian Logan	Nov 1856
Edward Swift	Dec 1856 - May 1857
George M. Kellogg	Jun 1857 - Jul 1857
J. Frazier Head	Aug 1857 - Apr 1858
Charles Anderson	May 1858 - Dec 1858
D. D. Patterson	Jan 1859 - Feb 1867
A. K. Smith	Mar 1867 - Apr 1868
Thomas R. Potts	May 1868 - Jun 1868
C. E. Munn	Jul 1868 - Sep 1868
C. T. Alexander	Oct 1868 - May 1869
M. D. Wolverton	Jun 1869 - Sep 1869
A. Hegen	Oct 1869 - Sep 1875
Charles C. Byrne	Oct 1876 - Jun 1880
Charles Richards	Jul 1880
Robert B. Burham	Aug 1880
P. F. Harvey	Sep 1880
W. C. Spencer	Oct 1880--Mar 1881
P. F. Harvey	Apr 1881
W. C. Spencer	May 1881 - Sep 1884
C. H. Alden	Oct 1884 - May 1886
H. O. Perley	Jun 1887
William Kundler	Jul 1887 -Aug 1887
W. H. Forwood	Sep 1887 - Apr 1888
William Kundler	May 1888 - Mar 1889
Edgar A. Mearns	Apr 1889 - May 1889
C. E. Sutton	Jun 1889 - Jul 1889
Edgar A. Mearns	Aug 1889
W. H. Forwood	Sep 1889 - Mar 1890
Edgar A. Mearns	Apr 1890 - May 1890
C. K. Winne	Jun 1890 - Feb 1892
T. S. Outram	Mar 1892 - Dec 1906
Ulysses G. Purssell	Jan 1907 - Aug 1934
Martin R. Hoyde	Sep 1934 - Dec 1955
William J. Ziegler	Oct 1937 - cDec 1943
James Mack	cJan 1944 - cFeb 1951
Phillip Kenworthy	cMar 1951-Dec 1968
Joseph H. Strub Jr.	Jan 1969 - May 1976
John V. Graff	Jun 1976 - Present

A CHAT WITH THE MAKER OF THIS CALENDAR ON THE HISTORY OF HIS OPERATION

This year, 1978, marks the 24th year that I have been a professional meteorologist. It marks the tenth year in which I have been a full-time consulting meteorologist, and the tenth year of the publishing of the Twin Cities Weather Calendar. We have been around quite a bit longer than that -- long enough to remember the hot summer of 1936 and the November 11th storm of 1940. Indeed, these two events sparked our interest in weather history. Weather history remains our specialty to this day -- perhaps you share this interest.

As a history buff in general, I believe that we can avoid hardship in the future by learning from the past. Weather events never exactly repeat themselves, but there are many parallels and conclusions that we can draw by understanding the past. We will certainly have ruinous drought and multi-million dollar tornadoes and blizzards in the future -- and another decade of chronically cold weather as in the 1880's -- the question is whether we will be prepared to deal with these events. But the positive aspects of our climate are even more important -- a single rainstorm can add many millions of dollars to the pockets of Minnesotans, and other millions to the state treasury through higher tax collections from the increased incomes. How can we take advantage of weather knowledge?

To address all of the above, a main program is a continuing study of Minnesota weather history. I devote about a quarter of the year to the study of the records of the past, going back to 1819 locally. In addition, I am continually involved with modern data-gathering techniques that yield information not available from the instrumentation of the past. Indeed, most of my research work during my first 15 years as a meteorologist was in the area of radar and satellite meteorology as a pioneer in those fields. To this day, I am a regular attendant at national meetings on radar and satellite meteorology, and have presented about a dozen papers on these subjects. We purchase and keep on file all of the warm-season weather radar films taken at the Minneapolis-St. Paul International Airport by the National Weather Service. These pictures are taken about once every 12 minutes -- more often when severe weather is occurring. In addition, thanks to the National Weather Service, we keep on file the satellite pictures, taken at the rate of one every half hour.

Another program I have is analyzing in detail the major severe storms and blizzards hitting Minnesota. While having extensive files of raw data, my main function is creating and storing analyzed data -- such as the storm analyses and climatological information.

My operation is principally research oriented, although I do a bit of forecasting for special projects. Clients are mainly agribusiness, farmers, engineering firms, state and local government and architecture and design firms.

Writing, of course, is a big part of my story. I have authored two books on Minnesota weather and climate, and each year write a Minnesota weather almanac-calendar that is financed by the Freshwater Biological Research Foundation, headquartered in Navarre, Minnesota.

Specialization in our own state's weather has me firmly anchored in Minnesota. I have seen many weather people come and go -- there is scarcely an old-timer left. I was here yesterday, am here today, and, the Lord willing, will be here tomorrow. It is my hope to be busy here into the 2000's. Beyond that, I hope that this Twin Cities Weather Calendar will survive for centuries -- at least as long as these Cities stand here around the walls of Old Fort Snelling.